

ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES

THE EFFECT OF HUMAN RESOURCES MANAGEMENT PRACTICES ON CONSTRUCTION PROJECT PERFORMANCE: IN SELECTED SUB-CITIES OF ADDIS ABABA CITY ADMINISTRATION

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SGS/0314/2014A

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A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTERS IN PROJECT MANAGEMENT

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under Yirgalem Tadele (PhD) guidance. All sources of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted in part or in full to any other higher learning institutions to earn any degree.

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Advisor's Approval

This thesis has been submitted for defense with my approval as a University Advisor.

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Acronyms

| BULS | Bat Ultrasonic Location System |
|------|--|
| СМ | Computer monitoring |
| HRM | Human Resources Management |
| HR | Human Resources |
| HPWP | High Performance Work Practices |
| ILO | International Laborer Organization |
| LAN | Local Area Network |
| OJT | On the Job Training |
| PA | Performance Appraisal |
| RF | Radio Frequency |
| RFID | Radio Frequency Identification |
| RTLS | Real-Time Location Tracking System |
| TVTO | Technical Vocational Training Organization |
| UWB | Ultra-Wide Band |

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Abstract

The general objective of the study is to assess the effect of human resources management practices on construction project performance in selected sub-cities of Addis Ababa City Administration. There is lack empirical studies while there have been numerous studies on the importance of human resources management in construction, there is a need for more empirical studies that investigate the relationship between human resources management practices and construction project performance. To conduct this study, the descriptive types of research method were employed. A total of 117 project related professionals such as project managers, manager administration and HR., designers, contractors, consultants, site engineer, Forman, and team leaders were involved as sample respondents in the study. The research utilized stratified sampling approach and the respondents were separated into three strata to pick the sample respondent then sample respondents were selected on the basis of simple random sampling techniques because this technique gives equal chance of being selected from each unit of the population. The collected data were analyzed by descriptive statistics such as frequency count, percentage, mean, standard deviation, r-test, p-value and Inferential statistics /analysis such as correlation and regression analysis respectively. Data were analyzed using the "Statistical Package for the Social Sciences" (SPSS) version 25 software. The finding shows that, there is long term planning for human resource need of the firm was effectively practicing and the company operated a quarterly human resource planning schedule at very good manner. Furthermore, job advertisement is used by the enterprise to recruit employees at a very good manner in the case companies and the recruitment and selection process is fair and transparent was significantly observed. The result of the study indicated that, the case companies provide staff with opportunities for career development in a very good manner rated high and construction projects organization are successful in implementing training and development programs was significantly undertaken. There is a significant team spirit within the firm and the focus of compensation and reward is to attract, and retain employees in organizations observed with higher agreement level. Project managers make compensation decisions was significant seen and also reward and compensation schemes provided by firm are sufficient at the case companies. Finally meeting project time goals at the case companies was highly practicing and meeting project budget goals seen at the sample case companies. Furthermore, meeting scope and requirements goals are practicing and team's satisfaction with the project was highly agreed with the respondents. Client's satisfaction with the project results as ascertained by their significant rating and success of the project was found higher in the sample companies. On the basis of these findings, the study recommends that, all construction companies need to practice modern human resource management by using HR technology, GPS database and the so on to improve the performance of construction projects. In addition, all stakeholders together with concerned government bodies should prepare training and development programs for employees/workers of construction projects.

Keywords: Effect, HRM Practices and Project Performance

Chapter One

1. Background 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). 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).

According to Raymond A. Noe, (2011), Human resource management (HRM) is the policies, practices, and systems that influence employees' behavior, 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. 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).

Furthermore, human resource management is a coherent approach to the management of an organization's most valued assets; these include the people that work collectively in the

organization so as to contribute to the achievement of its objectives. HRM in essence deals with the process of attracting, developing and maintaining a talented and energetic workforce to support organizational objectives. The project-oriented nature of construction activities, which is characterized by projects that are custom built to client satisfaction, nomadic nature of the labour force, uncertainties associated with the production process among others makes HR policies and practices uniquely different from those of manufacturing, health, and hospitality industries and thus a fundamentally different HRM models (Huemann and Keegan, 2007.

A growing number of existing literature and studies acknowledge a positive relationship between Human Resources Management and organizational performance. The impact of High-Performance Work Practices (HPWPs) on organizational productivity has gained momentum in the fields of HRM and organizational psychology, and noted to be crucial elements in ensuring success. Recruitment and Selection, Training and Development, Performance Appraisals (PA), and Compensation System are four of a host of HPWPs claimed to pose a significant implication on the success of an organization. Effective Human Resource (HR) practices are supported in any field where HPWPs are well deployed. However, very few studies have attempted to reveal the importance of HRM practices on project performance (Combs, Liu & Ketchen, 2006; Kouhy, Vedd, Yoshikawa & Innes, 2009; Toulson & Dewe, 2004). Construction projects are well known for more use of manpower in business activities as compared to other fields (Ghatehorde & Chhinzer, 2009). This is 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.

1.2. Statement of the Problem

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 shortage of qualified skilled employees is also one of the common issues among the construction firms.

As to Tsegaye (2014), the construction industry in Ethiopia is one of the most labour intensive industries; however, very little importance is given to the human resource management issues. The challenges faced by the human resource in this sector are quite different from other labor intensive industries (Getnet & Admit, 2005). The Human resource management function is perceived as centralized head office function though most of the problems arise at operational or project level. The industry''s project based structure comprises of diverse range of people from a wide range of occupational cultures and backgrounds, including people in unskilled, craft, managerial, professional and administrative positions. Thus, the construction industry operates in a very dynamic environment where demands change from project to project, making the management of this diverse work force more difficult. The project based structure of this industry creates a problem in usage of central tenets of HRM strategies at operational level of projects.

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 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).

Further, construction is a project based industry which involves all project participants such as clients, designers, contractors, constructors, and consultants. Most project participants have a short-term relationship of cooperation during the project period. Often they can be from different cultural backgrounds, and also possess different construction professional and skill levels. Due to the characteristics of construction projects and various project participants, an increasingly

urgent need is to implement HRM and to manage relationships among project participants. Nevertheless, with reference to human resource management practices and challenges in the Ethiopian construction projects, previous studies could not show the extent to which the construction sectors practice the human resource management functions and what are the confronting challenges while implementing these dimensions. This study, therefore, try to fill the existing gaps by investigating the effect of human resources management practices on construction project performance: In selected Sub-cities of Addis Ababa City Administration.

1.3. Objective of the Study

1.3.1. General Objective

The general objective of this study was to investigate the effect of human resources management practices on construction project performance: In selected Sub-cities of Addis Ababa City Administration.

1.3.2. Specific Objective

Specific objectives of the study were:

- 1. To determine the extent of project management success in the selected sub-cities construction projects of Addis Ababa City Administration
- 2. Assess the practices of human resource management in the selected sub-cities construction projects of Addis Ababa City Administration
- To determine the relationship between human resource management practices and construction project performance in the selected sub-cities construction projects of Addis Ababa City Administration
- 4. To investigate the key HRM factors that affect construction project performance in the selected sub-cities construction projects of Addis Ababa City Administration
- 5. To assess performance of construction projects.

1.4 Research Questions

- 1. To what extent the project management success is determine in the selected sub-cities construction projects of Addis Ababa City Administration
- 2. What are the practices of Human Resource Management in selected sub-cities in of Addis Ababa Administration?

- 3. What is the relationship between HRM practices with construction projects performance in selected sub-cities in of Addis Ababa Administration?
- 4. What are the key HRM factors that affect construction project performance in selected sub-cities in of Addis Ababa Administration.?
- 5. What are the indicators of performance on construction projects in selected sub-cities in of Addis Ababa Administration.?

1.5. Scope of the Study

The study's scope appears to be manageable, focusing on a specific industry (construction) and a specific geographic area (selected sub-cities in Addis Ababa City Administration). The study's population is well-defined, comprising project managers, contractors, consultants, site engineers, team leaders, managers, HR administrators, designers, and foremen involved in building construction projects. The study's scope is also limited to a specific time period (December 2023 to May 2024), which is reasonable for collecting data. The use of a descriptive survey design with a purposive sampling technique is suitable for this type of study.

1.6. Significance of the Study

Basically, research studies are important tools used for decision making. If different organizational level decisions could not be supported by appropriate studies and assessments, their practicability and application may not be realistic and effective or could lead to wrong decisions. Accordingly, it is highly believed that this research paper could contribute and have a material significance in terms of:

- ✓ 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 Addis Ababa City administration at large.

✓ Suggesting possible recommendations for the case construction companies, policy makers and the so on the best practices in managing and addressing effective human resources management practices on construction project.

Additionally, it is the researchers" faith that this study will contribute its share as the starting point and reference for other studies to be conducted in the field.

1.7. Organization of the Study

This research paper will be organized in different components or categories and contains five basic chapters. Chapter one deals with background of the study, statement of the problem, basic research questions and objectives of the study, definition of terms, and significance of the study and delimitation/scope of the study. Chapter two is about the review of related literature deals with previous studies and literatures relevant to the study and it also includes theoretical and the conceptual framework adapted from previous studies. Chapter three includes, the type and design of the research paper, analysis of participants of the study, the sources of the data, the data collection tools or instruments employed, the procedures of data collection summarizes the results or findings of the study and it also interprets and discusses the findings by extensive use of the literature review and finally, Chapter five focused on the summary of findings, conclusions, and possible recommendations will be described precisely.

Chapter Two

2. Review of Related Literature

2.1 Theoretical related Literature Review

2.1.1. The Nature and the Concept of Human Resource Management

Human resource management(HRM) refers to the policies and practices including HRP, job analysis, recruitment selection, orientation, compensation, performance appraisal, training development, and labor relation (Dessler, 2007). This implies that HRM is all about the management of people in the organizations. It comprises the activities, policies, and practices involved in obtaining, developing, utilizing, evaluating, maintaining, and retaining the appropriate number and skill mix of employees to accomplish the organization's objectives. HRM has several aims, including maximizing employees'' contributions in order to achieve optimal productivity and effectiveness, while at the same time achieving the objectives of individual employees and those of the society; supporting the development of firm-specific knowledge and skills that are the result of organizational learning processes; and enhancing motivation, job engagement and commitment by introducing policies and processes that ensure that people are valued and rewarded for what they do and achieve and for the levels of skill and competence they reach (Kusi,.

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).

2.1.2. Concept of Human Resource Management in construction projects

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).

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).

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, 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.

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. 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.

2.2.2. Training and Development Practice

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 behavior on the part of the employees. Smith (1992), defines the term of training as "a planned process to modify attitudes, knowledge or skill behavior 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.

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 and 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).

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.

2.2.4. Compensation System Practices

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.

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).

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.

2.3. Human Resource Management versus 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.

2.4. Project Performance

Numerous studies have been covered on project performance, and have revealed diverse measures of project performance (, Aziz & Rehman, 2011). It is traditionally agreed that project performance is measured by the potential to meet budgeted time, cost, and quality goals (Meredith & Mantel, 2012, PMBoK, 2013). Aaron et al. (2001) outline four distinct success measures for project performance that includes:-

- (1) Impact on the customer
- (2) Project efficiency,
- (3) Direct business and organizational success, and
- (4) Preparing for the future.

Meredith and Mantel (2012:3) argue that the "expectations of the client" should be introduced as an additional fourth dimension. Another study by Shenhar and Dvir (2007) endorse Aaron et al.'s measures as the most appropriate to gauge project performance. However, they add a different component, which is impact on the team. The model proposed by Aaron et al. and Meredith and Mantel focuses on the customer/client and the yields of the project after completion. Project efficiency is measured by the project's ability to meet time, cost and quality specifications (Meredith & Mantel, 2012). The impact on the customer is recognized from the responses of the end users to whom the products or services are delivered. The category of "end users" embraces the consumers or users of the end product, as well as investors in the project. Business success is "measured in terms of the profit and relationships with clients that any organization earns after the project is completed." Preparing for the future is determined by reviewing project documents and the lessons learnt during the course of the project (Naqvi et al., 2011).

2.4.1. Cost and Project Performance

Project cost embraces all costs incurred by a project in all the project phases from conception to completion, and these costs encompass costs that arise from modification during construction, variations and legal claims for litigation or arbitration that the project may encounter during

construction. This measurement is gauged on the ability of the project to be completed within budgeted cost, determined by the variance between the actual cost and the budgeted cost of a project (Azmy, 2012:15). This will result in a project being over budget or under budget. Successful project performance is when a project is under budget or completed within the estimated budget whereas the opposite is true for unsuccessful project performance.

2.4.2. Time and Project Performance

Successful project performance is when a project completes on time. Construction time is the "elapsed period from the commencement of site work to the completion and handover of the project to the client" (Shah Ali & Rahmat, 2010:29). Time variance is recognized as one of the major techniques of measuring project performance, as clients and other stakeholders require their construction projects to be completed within the minimum time projected (Salter & Torbett, 2003).

2.4.3. Quality and Performance

Quality is an intangible soft measurement of project performance. It is anchored on the notion that owners or clients should be satisfied with the completed project and, if the project meets or exceeds their expectations (Azmy, 2012:15). Parfi tt and Sanvido (1993) define quality in the realm of the construction industry as "the totality of features required by a project to conform to the pre-determined requirements." These requirements are clearly spelled, stated and specified in the contractual agreement deduced by all parties to the project and, incorporated into the contract price as much as possible (Shah Ali & Rahmat, 2010:29).

2.4.4. Health and Safety

Apart from meeting time, cost and quality goals and the other measures highlighted earlier, construction experts insist on another aspect in the measurement of project performance in the construction industry, and this is health and safety (Chan & Tam, 2000). Health and safety is measured primarily by looking at the number of accidents that occur during the project life cycle. This is of paramount importance, considering the fact that construction work is notorious for its dangerous and risky activities throughout the world. The probability of construction worker dying or getting injured is three and two times, respectively, and higher than a worker from any other industry (Shah Ali & Rahmat, 2010).

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. 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).

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.

2.6. Performance Appraisal

HR performance appraisal can be defined "as a process of systematically evaluating performance of the companies' personnel and providing feedback on the measured performance with the aim of making adjustments" (Dransfield, 2000). Sofijanova (2000) defines performance appraisal as the assessment of current or past employee's performance against established standards of performance. This means that if the behavior of an individual departs significantly from the desired, either positively or negatively, further actions should be taken to improve the actual behavior (Minbaeva, 2005). Such actions can entail training or transferring the employee or motivate the employee for better performance (Noe et al., 2015).

Beardwell and Thompson (2014) point out that effective performance appraisal should contribute more enormously to the success of the organization by defining the direction for training and development of employees, and feeding the reward structures. Grobler et al., (2011) define performance appraisal as "the on-going process of evaluating and managing both the behavior and outcomes in the workplace". Performance appraisal is a sub set of a broader process of performance management system. Performance management as defined by Aguinis (2013) "is a continuous process of identifying, measuring, and developing the performance of individuals and teams and ensuring performance is congruent with the strategic goals of the organization." Research by ACAS as cited in Foot and Hook (2011) override all the above definitions by comprehensively defining performance appraisal as the process of "regularly recording assessment of an employee's performance, potential and development needs whilst taking an overall view of work content, loads and volume, by looking back on what has been achieved during the reporting period and agree on objectives for the next period."

Grobler et al., (2002) proposes that effective performance appraisal should have an established performance measurement criteria, and follow a systematic process. The three most recognized performance criteria are: "trait-based criteria; behavior-based criteria; and the results or outcome-based criteria." The trait-based criterion focuses "on the personal characteristics of the employee, for example, loyalty towards the organization and creativity in completing tasks",

etcetera. The behavior-based criterion focuses "on the behavior of the employee that leads to the successful completion of activities", for example, "leadership, determination, team cooperation", etcetera. Finally, the results or outcome-based criterion focuses on the end-result of the job (Grobler et al., 2002). With regard to the need for the performance appraisal to follow a systematic process, Grobler et al., (2002) suggest a simple series of steps:

- I. Establish performance targets and goals
- II. Select a suitable appraisal method
- III. Train managers on how to use the method
- IV. Discuss the appraisal methods with the workers prior to the commencement of the review
- V. Review as per job requirements, and as stated by performance targets
- VI. Discuss the appraisal feedback with the appraised workers
- VII. VII. Establish future appraisal performance targets (Grobler et al., 2002).

Furthermore, the method chosen for performance appraisals influence the extent of performance effectiveness. Grobler et al., (2002) places the different methods of performance appraisal into four genres, namely "category rating methods, comparative methods, narrative methods, and behavioral/ objective methods." There is no best method, therefore, the company should select the method that enables it to achieve its employees' and organization's objectives. Amos, Ristow, Ristow and Pearse (2012) point out that it is the responsibility of organizations to consider which method of performance appraisal that best provide valid and reliable performance information when gathering performance data.

2.7. Contemporary Human Resource Management Approach's 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, 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, 2014). 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).

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.

2.8 Performance Management in Construction Companies

Performance management is about performance, and it is a necessary part of HRM. Armstrong and Baron (2010) define performance as a strategic and integrated approach to delivering sustained success to organizations by improving the performance of the people who work in them and by developing the capabilities of teams and individual contributors. It is concerned with performance improvement, employee development satisfying the needs and expectations of all the organization's owners, management, employees, customers and the community. Furthermore, performance management is the process by which executives, managers, and supervisors work to align performance with the firm's goals. It is the activity used to determine the extent to which an employee performs work effectively.

In other terms, performance management includes performance appraisal, performance review, employee evaluation, employee appraisal and merit. It creates an environment in which a continuing discussion between managers and the members of their teams takes place to define expectations and share information on the organization's mission, values and objectives performance management includes setting goals, evaluating outcomes and giving feedback to improve the future performance of an employee, team or the organization in general. It is supposed to direct the behavior to desired direction and motivate people by having clear objectives and the opportunity to correct the behavior according to the feedback.

Evaluation should not be viewed simply as a once a year completion of rating forms, it should be a continuing process. For a formal performance appraisal to be effective, six steps must be taken according to Ivancevich, (2004).

1. Establish performance standards for each position.

2. Establish performance evaluation policies on when and how often to evaluate, who should evaluate, the criteria for evaluation to be used.

3. Have raters gather data on employees' performance

- 4. Evaluate employees" performance
- 5. Discuss the evaluation with the employee
- 6. Make decision and file the evaluation.

Performance evaluation interviews that involve feedback evaluation information can be effective if the evaluation information is meaningful, clear, and helpful. On the other hand, feedback information can be quite stressful if the evaluation is considered unfair, inaccurate, and poorly designed.

Therefore, a good performance plan can give a sense of direction and utilize human potential and enhance individual and organizational performance. Supervisors should work hard by helping employees to meet their expectations on the other hand, conducting periodic performance appraisal is very important by comparing the last period with the current period. In addition, supervisors should identify the employee's strength and weakness, and may plan ways of avoiding their weakness and develop their skills, knowledge and experiences to fully apply their strength toward improving the work performance effectively and efficiently.

2.9 Empirical Related Review

2.9.1. Human Resource Management Practices in the Construction Projects

Zhai, Liu and Fellow (2014) investigate the role of HR practices in enhancing organizational learning in Chinese construction organization using questionnaire survey and structural equation modeling. The study found that HR practices in Chinese construction organizations involve multidimensional practice of job description, participation, training, staffing, and rewards. Besides, HR practice is found to have a significant positive effect on organizational performance.

Moreover, in the United States construction industry, HRM theory that is currently widely accepted as having profound influence on organizational performance is employee motivation

through: worker participation, recognition, team belonging, management and commitment and effective training (Yankov and Kleiner, 2001). Further, Huemann, Keegan and Turner (2007) develop a simple model of HRM process in project oriented company (inclusive of construction) which is different from mainstream HRM literature.

The authors argue that due to specific characteristics of the project-oriented company, particularly the temporary nature of the work processes and dynamic nature of the work environment, there exist specific challenges for both organizations and employees for HRM in project-oriented companies, and that these have been neither widely acknowledged nor adequately conceptualized in the extant mainstream HRM or project management literatures. Unlike many other industries whose performances are enhanced by new emerging technologies, construction industry is still a labor-intensive and low-tech sector; as a result, human capital is the most important and very often the most expensive resource deployed within it (Loosemore, Dainty, and Lingard, 2003).

The activities of the construction industry have raised serious health and safety concerns amongst governments, health and safety stakeholders, health and safety professionals and researchers over the past few decades (Othman & Napiah, 2012), International Laborer Organization (ILO) 2005,) . In response, health and safety legislation has been developed to ensure management of construction businesses, and recently many other participants in a project, assume responsibility for managing the risks associated with construction projects. Health and safety management in the construction industry has evolved from measures adopted in accident prevention to more systematic and proactive approaches to minimizing the risk of hazards in the industry.

There is resounding divergence among researchers with regard to the impact of HRM on project performance. One group of researchers (Belout & Gauvreau, 2004) found no influence of HRM on project performance. On the other hand, Chan, Ho and Tam (2001), Khan and Rasheed (2015), Papke-Shields, Beise and Quan (2010) and Popaitoon and Siengthai (2014) found a relative positive HRM influence on project performance, and suggested that more research need to be undertaken to prove this. Perhaps the disagreement owes to the fact that the researchers studied different HRM practices without focusing more on core HRM practices that are proven to impose significant impact on organizational success.

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As a result, the study recommended further research on the social-cultural aspects to address two fundamental questions: "(1) is personnel a significant factor for project's success? And (2) do the organizational structures and the project life cycles have an intervening effect on the relation among the independent variables and the project's success?" This is perhaps owing to the fact that HRM has been considered as a core element of "project management by the PMBoK" (PMI, 2008; Zwikael, 2009). For example, a study by Zwikael (2009) in different industries or settings revealed that HRM is one of the ten knowledge areas of project management contributing significantly to project success, coming fourth after "time, risk and scope project management knowledge areas.

Turner et al., (2008) explored the role of HRM practices in the management of employee wellbeing and discovered that good caring for the employees is not up to the expected standard in the project-based companies. Improving the well-being of employees by providing them with career development opportunities, for example, has been claimed to contribute substantially to making project management attractive as a career. Hueman (2010) found that HRM in project-oriented companies must change from an administrative function to a proactive business function supporting project-oriented management. The proactive business functions include processes such as assigning and dispersing project personnel to a project, career and incentives systems planning. The administrative function was painted to be passive and reactive to project management needs.

Something of a stream of research was published in 2007. Pollack (2007) reviewed secondary data on project management that focused on "hard" versus "soft" paradigms. Paradigms in this context are thinking tendencies (Pollack, 2007). The terms hard or soft are used to characterize the "technical paradigm" (hard) or to "refer to a vague focus on people or intangibles (soft)" (Crawford & Pollack, 2004). The results of the research confirm a significant association between the "technical paradigm" (hard) and project management, with a gradual acceptance of the human paradigm (soft). Huemann, Keegan and Turner (2007) similarly acknowledge a transition from hard to soft project management, but point out that the literature about HRM and project management was still limited. It is also argued that due to "specific characteristics of project- based organizations, such as the dynamic nature of the work environment and the

temporary nature of project work process," there are challenges for HRM (Huemann et al., 2007). This study of HRM in relation to projects was based on secondary literature.

2.9.2. Challenges of human resource management practices on construction projects Performance

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).

The problems facing the construction industry in developing countries are significantly more fundamental, more serious and more complex. In developing countries, these difficulties and challenges sit alongside the general situation of socio-economic stress, chronic resource shortages a general inability to deal with the major success factors (Ofori 2000). Chan (2005) as cited in Orga & Ogbo (2012) explains that integrating the views and interests of organization workplace diversity dimensions such as age, ethnicity, ancestry, gender, physical ability/qualities, race, sexual orientation, educational background, geographic location, income, marital status, religious beliefs among others is a challenge in HRM. In Iran, Tabassi and Abu Bakar (2009) explore HRM practices and challenges in construction projects. They found that training and motivation of employees are major obstacles to effective use of HRM in Iran. To

improve the performance of construction companies, they suggested employing both short-term and long-term training of construction workers at fixed location such as Technical Vocation Training Organization (TVTO), as well as construction sites and other On the Job Training (OJT) facilities. In addition, they proposed that government should provide incentives or policies that will encourage self-learning through certification of fitness for occupation in the project.

Tadesse, Zakaria and Zoubeir (2016) assessed the performance of Ethiopian construction industry with respect to construction project management practices and its challenges in order to identify the major issues for intervention. The results revealed that the level of construction project management practice in terms of adapting general project management procedures, project management functions, tools & techniques to be unsatisfactory. Particularly, the level of practice in terms of safety, risk and time management was found to be very low. However, none of the previous works dealt with the human resource management and its challenges in the construction sector. Therefore, this upcoming study will try to assess the human resource practices and challenges it confronts the construction firms in some selected ones.

In developing countries, the construction industry is a key barometer of economic performance. It contributes a significant percentage of the gross domestic product (GDP) of the countries and provides employment opportunities to a substantial proportion of the working population (Ameh & Daniel, 2017). Besides, the construction industries in all countries face many difficulties and challenges (Ofori 2000). There also exists a gap of practicing the principles of human resource management in this sector. In addition to this, the problems facing the construction industry in developing countries are significantly more fundamental, more serious and more complex. In developing countries, these difficulties and challenges sit alongside the general situation of socioeconomic stress, chronic resource shortages a general inability to deal with the major success factors (Ofori 2000).

2.9.3. 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.

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.

2.10. Conceptual framework of the Study





Chapter Three

3. Methodology of the Study

3.1 Research Design

The study were employed a descriptive survey research design to examine the various human resource management practices and on construction project performance. As to Best and Kahn (2006), a descriptive survey involves collection of information from a sample that has to be drawn from a predetermined population and that the information is collected at a given point in time.

3.2. Research Approach

There are two kinds of research approaches which are quantitative and qualitative. Understanding of both approaches is important to choose the appropriate research approach and to increase the efficiency of the study. Hence for this specific study, the researcher used both combinations of quantitative and qualitative approaches. The concurrent mixed research is preferred in order to increase the validity and reliability of the result in the research. Since the use of concurrent mixed approach ensure that biases inherent in either method are neutralized by the strength of others. Bryman and Bell (2003), suggest that the combination of methods emerges as the most valid and reliable way to develop understanding of complex social reality. Thus, using the combination of both methods enables the researcher to collect adequate, relevant and reliable data which improve the validity and reliability of the study.

3.3. Sources of Data

Both primary and secondary data were collected. Primary data collected through questionnaires distributed to respondents whereas Secondary data obtained from academic journals, books, proceedings, and the like.

3.4. Population and Sample Design

The target population of the study were construction project employees in selected Sub-cities in Addis Ababa City Administration. 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 were project related employees who include, project managers, manager administration and HR., designers, contractors, consultants, site engineer, Forman, and team leaders and the so on.

3.4. 1 Target Population of the Study

A population is a group of individual persons, objects, or items from which samples are taken for measurement (Leedy & Ormrod, 2013). The study's target demographics were selected employees from selected construction companies within sub cities of Addis Ababa City Administration. As a result, the study focused on the effect of human resources management practices on construction project performance: In selected Sub-cities of Addis Ababa City Administration.

3.4.2 Sample Size Determination

The researcher applied the determination of sample size through the approach based on precision rate and confidence level cited in kothari, (2004) for finite population. The formula apply is presented as follows. $n = \underline{z2.p.q.N}$ where

$$e^{2}(N-1) + z.2.p.q,$$

N= size of population (homogeneous) n= size of sample e=

acceptable error (the precision) z = standard variant at a given

confidence level. P + q = 1

where p is 0.5 and p + q = 1, If the standard of accuracy or the level of precision is to be kept high, we shall require relatively larger sample (Kothari 2004 p. 175) so, to increase sample size e: margin of error considered is 6% for this study: normal reduced variable at 0.05 level of significance is: n = (1.96)2(0.5)(0.5)(300) = 141

$$(0.06)2(299) + (1.96)2(0.5)(0.5)$$

N=300 Where n equals to the sample size z equals the confidence level, e equals the tolerance. For this study p=0.5 to achieve a normal distribution. n = 141 by setting confidence to be 95 % and error tolerance = 0.05. Therefore, the sample size is determined to be 141. This sample is therefore considered to be adequate and representative for this study because it is 43 % of the total population (homogeneous target population).

3.4.3 Sampling Technique

Selected employees and division heads of selected construction company and sub cities construction office were included in the study as target population. The researcher utilized stratified sample approach in this investigation. Mostly because the researcher feels that representative respondents from each section of the construction company and sub cities construction office are required: (Lombard, 2010).

The respondents were separated into three strata to pick the sample respondent: These were managers of each Construction Company, sub city construction heads, engineers, procurement directorate, property division, finance division and the so on. The strata produced based on the full utilization in this sampling methodology, which may improve the accuracy of the data by allocating the sample to each stratum. The population from which representative sample was taken from comprises of key informants from the sample sub-cities. Accordingly, about 120 sample respondents will be selected on the basis of simple random sampling techniques because this technique gives equal chance of being selected from each unit of the population.

3.5 Data Collection Method

Data related to the effect of human resources management practices on construction project performance collected from the sample sub-cities with questionnaire and construction project key informants trough interview. Besides, issues related to the topic under study to develop literature review, introduction about the topic and to develop problem statement will be obtained from secondary sources.

3.6 Method of Data Analysis

The Statistical Package for Social Sciences (SPSS) version 25 used to analyze the data collected. Tables were created from the data gathered. Representations using tables were used to ensure easy and quick interpretation of data. In order to examine respondents' opinion descriptive statistics such as frequency count, percentage, mean standard deviation, T value and P-value respectively were thoroughly used. And also regression analysis also be underway.

3.7 Ethical Considerations

Above all the student researcher try to conduct the study based on professional as well as the basic principles of research. The researcher identified or presented the respondents personal details and response with their consent and agreement. Ethical issues grouped into informed consent procedures, dishonesty, confidentiality towards participants or sponsors and protecting the anonymity and privacy of research participants (Sarantakos, 2005). Based on the basic principles, the researcher proposed a set of ethical and moral procedure and informed the participants just before in depth interview and filling out the questionnaire. The participants were informed that information obtained from them remains confidential.

3.8. Reliability and Validity

The researcher gave more attention to the research to be more reliable and valid. First, the researcher distributed some questionnaires for the non-sample respondents as a pilot test to test reliability and made corrections then used SPSS version 25 to decrease errors. Second, the researcher conducted interviews with key informants to evaluate the effectiveness of each item to achieve the intended objectives.

Chapter Four

4. Data Analysis, Result and Discussion

4.1. Introduction

This chapter intends to reveal the findings and statistical analysis used to evaluate the research question that has been established in earlier chapters. Subsequent to the data screening process and also the chapter reports the results of the screening for errors in the sample and the procedural check on the instruments utilized. With the help of the preliminary and analysis of the results, try to investigate the effect of human resources management practices on construction project performance in selected sub-cities of Addis Ababa City Administration. Therefore, this chapter has two parts: the first part deals with the characteristics of the respondents and the second part presents the analysis and interpretation of the main data.

To this end, both quantitative and qualitative data obtained through questionnaire, open ended items and interview were used to answer the basic research questions. Due to their large size, respondents were selected randomly and included in the sample. Accordingly, 120 sample respondents were participated in the study. The number of participants involved in the study and sampling proportion was statistically representative and adequate to make the analysis and inference as well. The respondents were provided with 120 questionnaires (both close& open ended). Accordingly, 117 (97.05 %) of them scientifically selected from the sample respondents and returned the questionnaire just in time while the remaining 3 (2.05 %) of the respondents did not returned back the questionnaire for various reasons.

The collected data were analyzed by both descriptive and inferential statistics. Descriptive statistics such as frequency count, percentage, mean, standard deviation, T value and P-value, respectively whereas, regression analysis were also undertaken by using the "Statistical Package for the Social Sciences" (SPSS) version 25 software. Since the objective of this study was to understand the issues related to the effect of human resources management practices on construction project performance in selected sub-cities. Initially the responses to questionnaire with the sample respondents were quantitatively analyzed whereas responses gained open ended

items and interview sessions were qualitatively analyzed and the central themes mentioned in the questionnaire as open items in concerning the research questions were identified.

4.2 Characteristics of Respondents

Source: Survey Data 2024

| | Frequency | |
|--------|-----------|-------|
| Male | 44 | 37.6 |
| Female | 73 | 62.4 |
| Total | 117 | 100.0 |

Source: Survey Data 2024

Item one of table 4.1 shows that of the respondents, 44 (37.6%) of the sample respondents were males and 73 (62.4%) were females. Based on the data indicated above the researcher can deduce that a significant proportion of female respondents were participated in filling out the questionnaire compared to male respondents. Besides, the proportions of female respondents among the respondents were higher than that of male counterparts.

 Table 4.2: Age Composition of Respondents

| | Frequency | Percent |
|----------------|-----------|---------|
| Below 20 years | 21 | 17.9 |
| 21-30 years | 36 | 30.8 |
| 31-40 years | 36 | 30.8 |
| 41-50 years | 22 | 18.8 |

| 51 years & above | 2 | 1.7 |
|------------------|-----|-------|
| Total | 117 | 100.0 |

Source: Survey Data 2024

As can be observed from the above table of item two, about 21 (17.9%) of the sample respondents were found to be below 20 years of age whereas 36 (30.8%) of them were in the age of 21-30 years. Besides, 36 (30.8%) of the sample respondents were found to be within the age range of 31-40 years whereas, 22 (18.8%) of them were found within the age range of 41-50 years below 20 years of age and only 1.7% of them found above 51 years & above. Moreover, as to the researchers understanding and the result showed, majority of the sample respondents were relatively energetic, matured and fit to take responsibilities because their age and maturity level make them to be responsible and able to undertake their assignment.

| | Frequency | Percent |
|--------------|-----------|---------|
| Literate | 1 | .9 |
| Diploma | 30 | 25.6 |
| First Degree | 56 | 47.9 |
| MA & Above | 30 | 25.6 |
| Total | 117 | 100.0 |

| Table 4.3: | Qualification | and | Training |
|-------------------|---------------|-----|----------|
|-------------------|---------------|-----|----------|

Source: Survey Data 2024

As to item 1 of table 4.3, about 30 (25.6%) of the respondents were had qualified with MA/MSC & Above whereas, 30 (25.6%) of the sample respondents were diploma holders. Besides, 56 (47.9%) of the sample respondents had first degree and only 0.9% of the sample respondents were simply just literate. This is therefore; one can possibly concluded that a reasonable proportion of the sample respondents were found qualified and fit to accomplish their responsibilities as per the expectation of their institution.

| | Frequency | Percent |
|----------------|-----------|---------|
| Below 10 years | 23 | 19.7 |
| 10-20 years | 49 | 41.9 |
| Above 20 years | 45 | 38.5 |
| Total | 117 | 100.0 |

Table 4.4: Experience of Current Occupation

Source: Survey Data 2024

Relatively the majority of the sample respondents, 49 (41.9%), had experience that fall between 10-20 years of service while 38.5% of them had worked above 20 years. Besides, 19.7% of the sample respondents fall under ten years' experience. The experience of respondents in the case institutions bring about a reasonable change in the overall performance of their office at all level and able to meet the intended goal of the organization as well.

Table 4.5: Marital Status

| | Frequency | Percent |
|-----------|-----------|---------|
| Single | 41 | 35.0 |
| Married | 67 | 57.3 |
| Divorced | 5 | 4.3 |
| Widowed | 1 | .9 |
| Separated | 3 | 2.6 |
| Total | 117 | 100.0 |

Source: Survey Data 2024

Again relatively the majority of the sample respondents, 67 (57.3%), were married while 35.0% of them yet married and remained single. Besides, 4.3% of the sample respondents were divorced whereas 0.9% and 2.6% of the sample respondents were widowed and separated respectively. The marital status of sample respondents were composed of four main happenings during marriage but majority of the sample respondents were married and able to take any form of responsibilities as well.

Table4.6: Position in the Organization

| | Frequency | Percent |
|-------------------------|-----------|---------|
| Project Manager | 11 | 9.4 |
| Site Engineer | 4 | 3.4 |
| Consultants | 15 | 12.8 |
| Technical Expert | 39 | 33.3 |
| HR Manager | 10 | 8.5 |

| Team Leader | 15 | 12.8 |
|--------------|-----|-------|
| Client/owner | 13 | 11.1 |
| Contractor | 10 | 8.5 |
| Total | 117 | 100.0 |

Source: Survey Data 2024

As can be seen from the above table, about 11 (9.4%) of the sample respondents were project managers whereas, 3.4% of them were site engineers. Besides, 12.8% of the sample respondents were consultants while 33.3% of them were technical experts. About 8.5% of the respondents were HR Managers whereas12.8% of them were hold team leader positions. In addition to that, 11.1% of the respondents were clients/owners while the remaining 8.5% were contractors. The sample respondents were included from the major work positions and adequate to make analysis.

4.3. Human Resource Planning Practices Table 4.7: Issues Related to Human Resource Planning Practices

| | | | | Std. | |
|------------------|-----|------------|------|-----------|--|
| | Ν | Percentage | Mean | Deviation | |
| 1 | 117 | 100 | 3.84 | .776 | |
| 2 | 117 | 100 | 3.85 | .773 | |
| 3 | 117 | 100 | 3.87 | .760 | |
| 4 | 117 | 100 | 3.90 | .759 | |
| 5 | 117 | 100 | 3.93 | .763 | |
| Grand Mean= 3.87 | | | | | |

Source: Survey Data 2024

Note: M= Mean & SD= Standard Deviation ≤ 1.49 = Strongly Disagree 1.5 - 2.49 = Disagree, 2.5 - 3.49 = Undecided 3.5 - 4.49 = Agree ≥ 4.5 = Strongly Agree There is long term planning for human resource need of the firm/enterprise with item 1, was rated with M=3.84 significant agreement level. This indicates that there is long term planning for human resource need of the firm/enterprise was dominantly practicing.

Similarly, the company operated a quarterly human resource planning had highly agreed in statement 2 with M=3.85 at a significant agreement level. The result indicates that, the company operated a quarterly human resource planning schedule at very good manner. In light with this, interview participants has said, they hired professional specialist who prepares Operational staff manual. They prefer outsourcing for such services to avoid additional burden because they have limited staff in the office. They selected what fits to their office and apply it to the project. Besides, they give higher emphasis on the legal issues rather than HRM.

They also significantly agreed with statement 3 "A successful HRP technique is found in the company" with M=3.87 which is said to be a very good HRM technique is observed in the sample companies. Moreover, sample respondents highly believed that the firm has the right persons at the right time at the right place at the right job significantly agreed with the respondents. For this statement #4 the higher rating was M=3.90.

The firm has conduct performance appraisal from HRM point of view as ascertained by their higher rating of M=3.93, which was a significant level agreement. In light with this, interview participants has said, human resources plan is one component of project plan. As part of work schedule it is the planning Officer or panning Engineer who prepares the resource and work schedule. But, it's done under the supervision and approval of the project manager. The owner and site manager or engineer are responsible for the requirement of employees as well as preparing human resources plan and evaluation status in the construction project.

In sum, the Grand Mean= 3.87 confirmed that the sample respondents significantly agreed with all issues discussed above.

4.4. Recruitment and Selection Practices

| | N | Percentage | Mean | Std. Deviation |
|-------|-------------|------------|------|-------------------|
| 1 | 117 | 100 | 3.98 | .731 |
| 2 | 117 | 100 | 3.99 | .725 |
| 3 | 117 | 100 | 3.95 | .699 |
| 4 | 117 | 100 | 3.91 | .702 |
| 5 | 117 | 100 | 3.94 | .711 |
| 6 | 117 | 100 | 3.95 | .693 |
| Grand | l Mean=3.95 | | | |

Table 4.8. Issues Related to Recruitment and Selection Practices

Source: Survey Data 2024

Note: M= Mean & SD= Standard Deviation ≤ 1.49 = Strongly Disagree 1.5 - 2.49 = Disagree, 2.5 - 3.49 = Undecided 3.5 - 4.49 = Agree ≥ 4.5 = Strongly Agree

As to the statement #1, significant agreement was M=3.98 resulting in that indicates the significant level agreement to the statement "Job advertisement is used by the enterprise to recruit employees". This indicates that job advertisement is used by the enterprise to recruit employees at a very good manner in the case companies.

The recruitment and selection process is fair and transparent was significantly agreed with M=3.99. Sample respondents were also highly agreed to the statement #3 that recruitment and selection system in construction project is effective for organizational goal and significantly agreed by the sample respondents. The higher agreement to the statement was M=3.95. In line with this, interview participants have put their account as, recruitment and selection practice affects construction performance when we don't focus on the instruction we should follow and

when we lack on assigning the right person who has the knowledge and experience on the process. But in our experience, we recruit through recommendation, on the other hand most of them started from handyman and becomes foreman. Besides, recruitment and selection practice affects construction performance when we don't focus on the instruction we should follow and when we lack on assigning the right person who has the knowledge and experience on the process.

Besides, screening of candidate for vacant positions is common also have a significant agreement level in the sample companies. Interview participants also explained as, recruitment and selection practices ensures that skilled and qualified individuals are hired positively impacting project outcomes. Merits based on recruitment, proper, transparent and traceable evaluation failed to do so will affect performance. There is a standard that is taken into consideration while recruiting and selecting employees. For example, experience is one thing that we look at while hiring employees. If the employees are not selected according to the standards that the organization has, it will have an advert effect on the project.

Selection of staff is based on quality and skill rather than academic qualification had a higher agreement, M=3.95 in the range 3.82-4.08 confidence level that falls significantly. Sample respondents were also significantly agreed to the statement #3 that the firm conducts job analyses (determining the nature of each employee's job) before assigning them were highly seen within the sample companies in the selected sub-city. The higher agreement to the statement was M=3.95.

In sum, the Grand Mean= 3.95 confirmed that the sample respondents highly agreed with all issues discussed above.

| | Ν | Percentage | Mean | Std. Deviation | |
|---|-----|------------|------|-------------------|--|
| 1 | 117 | 100 | 3.91 | .643 | |
| 2 | 117 | 100 | 3.93 | .666 | |

4.5. Training and Development Practices Table4. 9. Issues related to Training and Development Practices

| 3 | 117 | 100 | 3.82 | .596 |
|-------|-----|-----|------|------|
| 4 | 117 | 100 | 3.87 | .623 |
| 5 | 117 | 100 | 3.85 | .606 |
| 6 | 117 | 100 | 3.87 | .623 |
| Grand | | | | |

Source: Survey Data 2024

Note: M= Mean & SD= Standard Deviation ≤ 1.49 = Strongly Disagree 1.5 - 2.49 = Disagree, 2.5 - 3.49 = Undecided 3.5 - 4.49 = Agree ≥ 4.5 = Strongly Agree

As to the statement #1, significant agreement was M=3.91 that indicates the higher level agreement to the statement "The firm provides staff with opportunities for career development". This indicates that the majority of the sample respondents in the case companies provide staff with opportunities for career development in a very good manner rated high. Interview participants also put their idea, Training and development is crucial in every employee especially when there is a change or a new system or law and regulations applied. When the employees are not well trained and doesn't have sufficient knowledge on their areas of work, it pull them back and they will be forced not to meet the deadline which leads the project to plan additional cost and affects the quality of work.

Construction projects organization are successful in implementing training and development programs was significantly agreed with M=3.93. Sample respondents were also agreed to the statement #3 that Employees returning from training are given adequate free time to reflect and plan improvements in the organization. The significant agreement to the statement was M=3.82. Besides, There are formal training programs to teach new employees the skills they need to perform their jobs have a higher agreement level with (M=3.87) and Interview participants said that, Furthermore, Our country projects are by nature training centers for different trades from lower level will capacitate person to grow to higher site foreman level and can be said that it is center for learning, coaching or mentoring, attesting, upgrading and this is the continuous

process. Company achievement will not measure by financial profit the profit from skilled labor, equipment and experience are part of profit otherwise will not sustain.

Construction projects organization are committed to build the capacity of its employees had higher agreement, M=3.85. There is department assigned to follow up training and development program in firm/enterprise was significantly agreed with M=3.8. Interview participants underlined that, besides, training and developments are very important for employees as well as the company. There are different types of training and development practices that the employee needs to go through before assigning to any job thus it will be easy for them to provide the needed and requested services. Otherwise, they end up being a burden and headache to their supervisors and also for Human resources.

In sum, the Grand Mean= 3.87 confirmed that the sample respondents significantly agreed with all issues discussed above.

4.6. Motivation, Compensation and Rewards Practices

| | | | | Std. | | | |
|-----------------|-----|------------|------|-----------|--|--|--|
| | Ν | Percentage | Mean | Deviation | | | |
| 1 | 117 | 100 | 3.98 | .820 | | | |
| 2 | 117 | 100 | 4.00 | .830 | | | |
| 3 | 117 | 100 | 4.06 | .833 | | | |
| 4 | 117 | 100 | 4.03 | .830 | | | |
| 5 | 117 | 100 | 3.91 | .761 | | | |
| 6 | 117 | 100 | 3.93 | .774 | | | |
| Grand Mean=3.98 | | | | | | | |

 Table 4.10. Issues Related to Motivation, Compensation and Rewards Practices

Source: Survey Data 2024

Note: M= Mean & SD= Standard Deviation ≤ 1.49 = Strongly Disagree 1.5 - 2.49 = Disagree, 2.5 - 3.49 = Undecided 3.5 - 4.49 = Agree ≥ 4.5 = Strongly Agree The statement that "The firm/enterprise provides incentives and benefits to staff", was significant agreed at higher level agreement with M=3.98 indicated that the rating was high level of agreement. There is provision of appropriate/modern working tools and equipment. To this statement #2, respondent's higher agreement level was M=4.00. There is team spirit within the firm, (statement #3) was higher agreement level with M=4.06. Interview participants also put their idea, For our company, the compensation system and reward affects directly, it's more like dictatorship not democratic. We reward them based on their performance. Hence, those who performs poorly based on quality and time, will receive nothing. This leads most of them to work hard and to bring ideas of how to minimize cost and time without affecting the quality of their work.

Sample respondents however, significantly agreed to the statement #4 that "The focus of compensation and reward is to attract, and retain employees in organizations". They had M=4.03 at higher agreement level to the statement. Project managers make compensation decisions was significant level agreement by the sample respondents (M=3.91). The reward and compensation schemes provided by firm are sufficient, (statement #6) was higher agreement level with M=3.93 that falls within the 95% CI range of 3.79-4.07. Interview participants also put their say, proper compensation and reward system is very important to have in place as it has direct relation with the motivation of the workers to work harder and like the environment that they are working in. If the company fail to do or does not apply compensation and reward system in the right way, the workers become worthless.

In sum, the Grand Mean= 3.98 confirmed that the sample respondents highly agreed with all issues discussed above.

4.7. Project Performance Practices

Table 4. 11. Issues Related to Project Performance Practices

| | Ν | Percentage | Mean | Std. Deviation | |
|---|-----|------------|------|-------------------|--|
| 1 | 117 | 100 | 3.97 | .782 | |
| 2 | 117 | 100 | 3.93 | .774 | |

| 3 | 117 | 100 | 3.88 | .779 |
|-------|-----|-----|------|------|
| 4 | 117 | 100 | 3.88 | .756 |
| 5 | 117 | 100 | 3.89 | .818 |
| 6 | 117 | 100 | 3.91 | .794 |
| Grand | | | | |

Source: Survey Data 2024

Note: M= Mean & SD= Standard Deviation ≤ 1.49 = Strongly Disagree 1.5 - 2.49 = Disagree, 2.5 - 3.49 = Undecided 3.5 - 4.49 = Agree ≥ 4.5 = Strongly Agree

As to the statement #1, significant agreement was M=3.97 resulting that indicates a significant level agreement to the statement "The objectives of the appraisal system are clear to all employees". This indicates that the objectives of the appraisal system are clear to all employees at higher level. Performance of employees is measured on the basis of objective quantifiable results was significantly agreed with M=3.93. Sample respondents were also significantly agreed to the statement #3 that the Employees are provided performance based feedback and counseling were significantly seen at the case companies and the a significant agreement to the statement was M=3.88. Interview participants also put their say,

Human resources management practice depends on who manages the company, general manager or other hidden hands. Why manages to achieve what the company goals, customer satisfaction which includes assignment and delegation. And also, when to manage which is the proper implementation period. Performance influence ration of Human resource has to be checked by what ration it affects performance in general terms. Hence, the percentage of the freedom that Human resources has on the recruitment and selection depends on the effect.

In addition, human resources management practices are crucial for the project to go smoothly and as planned. Otherwise, it will be determinant to the project as well as costly to the client, if the employees are not up to standard.

Besides, Employees have faith in the performance appraisal system have a significant agreement level with (M=3.88). Appraisal system has a strong influence on individual and team behavior had a significant agreement, M=3.89 and that falls significantly agreed. Besides, The appraisal

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results are used for making decisions such as job rotation, training, compensation, promotion have a significant agreement level with (M=3.91). Interview participants underlined that, performance management practice affects when the construction company reward or praise for who perform beyond expectation and submit the assigned work before deadline. But, the problem arises when they try to submit their work before time to get the intended prize and make it like a competition. At this time, their focus shifts on that and the submitted work lacks the quality which leads them undo the work.

In sum, the Grand Mean= 3.91 confirmed that the sample respondents highly agreed with all issues discussed above.

4.8. Project Performance Table 4.12. Issues Related to Project Performance

| | | | | Std. |
|-------|-------------|------------|------|-----------|
| | Ν | Percentage | Mean | Deviation |
| 1 | 117 | 100 | 4.03 | .860 |
| 2 | 117 | 100 | 3.89 | .704 |
| 3 | 117 | 100 | 3.91 | .707 |
| 4 | 117 | 100 | 3.91 | .719 |
| 5 | 117 | 100 | 4.02 | .788 |
| 6 | 117 | 100 | 4.09 | .805 |
| 7 | 117 | 100 | 4.08 | .800 |
| 8 | 117 | 100 | 4.07 | .774 |
| 9 | 117 | 100 | 3.98 | .731 |
| 10 | 117 | 100 | 3.97 | .737 |
| Grand | l Mean=3.99 | | | |

Source: Survey Data 2024

Note: M= Mean & SD= Standard Deviation ≤ 1.49 = Strongly Disagree 1.5 - 2.49 = Disagree, 2.5 - 3.49 = Undecided 3.5 - 4.49 = Agree ≥ 4.5 = Strongly Agree

Meeting project time goals in item 1, was rated with M=4.03 higher agreement level. This indicates that meeting project time goals at the case companies was highly observed. Similarly, Meeting project budget goals had significantly agreed in statement 2 with M=3.89 at higher agreement level. The result indicates that, Meeting project budget goals at the sample case companies. They also significantly agreed with statement 3 "Meeting scope and requirements goals" with M=3.91.

Moreover, sample respondents significantly believed that Team's satisfaction with the project was highly agreed with the respondents. For this statement #4 the significant rating was M=3.91. Client's satisfaction with the project results as ascertained by their significant rating of M=4.02, which was higher level agreement. Similarly, overall success of the project had highly agreed in statement 6 with M=4.09 at a significant agreement level. The result indicates that, overall success of the project was found higher.

Health and safety goals as set by the owner as ascertained by their higher rating of M=4.08, which was significant level agreement. They also significantly agreed with statement 8 "Opening new business opportunities for the company" with M=4.07. The amount of time taken by the employee to finish a task is optimum had higher agreement, M=3.98 and significantly agreed. They also significantly agreed with statement 10 "Periodic capacity development sessions are designed" with M=3.97 and agreement level to this statement.

In sum, the Grand Mean= 3.99 confirmed that the sample respondents highly agreed with all issues discussed above.

Interview participants were asked to answer issues related to the work design and performance management practices affect construction project affects the construction projects.

It affects when the project is huge because assigning different employees in a similar positions might bring a misunderstanding and let them point a finger to one another. Certainly well designed work will consider practicality resource saving and the result will be easy cost and time saving for implementation. Furthermore, well-designed work environment is important to help employees work knowing the facilities that are available in the project and identifying activities and resources required to make the design on the blueprint to become a reality. If it is not well designed and brings ambiguity, the employees might end not delivering their work on time which leads them on additional cost to the project and poor quality of work.

Performance management practice affects when the construction company reward or praise for who perform beyond expectation and submit the assigned work before deadline. But, the problem arises when they try to submit their work before time to get the intended prize and make it like a competition. At this time, their focus shifts on that and the submitted work lacks the quality which leads them undo the work. In addition, Performance management practice affects when we cannot see who does well and who does not. Human nature needs appreciation and raise that motivates them to go extra mile for their next steps. If not, there will not be motivation to work hard and archive what is expected. Managing the performance of employees is crucial because not all employees perform the same. If not properly managed it will have adverse effect on the work environment. They perform negligently and show carelessness.

Interview participants were asked to answer issues related to the evaluation the effectiveness of HR plan in the construction project. Accordingly, they have given the following:

Actually, we don't adjust it frequently. As we mentioned it earlier, we outsourced the professionals to work on our HR plan right before we started the project, from that document we selected what fits well for our project and make it our document as manual. Whenever any questions arises from employees, we distribute questionnaire and make a slight adjustment depends on our capacity. Besides, regularly, preferably collect ideas in the monthly meetings and work on the revision based on that bi annually and also our project evaluate the effectiveness of the Human resources plan monthly.

Interview participants were asked to answer issues related to the key HRM challenges currently facing the construction companies.

The key HRM challenges are shortage of educated manpower who has the exposure and experience. No collages are able to cultivate such kind of generation, most of the employees doesn't have a certificate. In addition, most of them are leading their work traditionally which

highly cost them their time. Availability of properly skilled manpower in each trade is the major one, this gap has introduced the flooding of semiskilled workers in the sector to handle big tasks and as a result safety is compromised. The other challenges will be less salary, security, high turnover rates, safety concerns and absence of company policies including HR.

Key Human resources management challenges faced by the construction companies are not having a definite recruitment, management and evaluation plan. Other challenges can be the understanding of the employees to certain trainings because most site workers haven`t went to college or even not finished high school. The willingness of companies to be governed by policy for positive work culture and addressing employee well-being, the readiness of employees to learn acquired skills in a proper way readiness to continue in the sector with the higher skill level and improved productivity, ensuring job security is crucial for productive human workforce.

4.9. Inferential Statistics /Analysis/ of the effect of human resources management practices on construction project performance

Before applying regression analysis, some tests were conducted in order to ensure the appropriateness of data to assumptions regression analysis as follows:

4.9.1 Multi collinearity Test

After the normality of the statistics in the regression model are encountered, the subsequent step to define whether there is relationship between the independent variables in a model it is essential to multi collinearity test. Relationships between the independent variables will result in a very solid correlation. In addition, multicollinearity examination done to evade practices in the decision-making procedure concerning the fractional effect of independent variables on the dependent variable. Proper regression model must not occur association between the independent variables or not happen multicollinearity.

4.9.2 Inferential Statistics /Analysis

A correlation is a degree of how powerfully two variables link to each other. Correlation coefficients are frequently used to describe data because they are relatively easy to use and provide a great deal of information in just a single value (Mooi & Sarstedt, 2011).

The calculated value of the correlation coefficient ranges from -1 to 1, where -1 indicates a perfect negative relation the relationship is perfectly linear) and 1 indicates a perfectly positive relationship. A correlation coefficient of 0 indicates that there is no correlation (Mooi & Sarstedt, 2011).

Table 13: Spearman Correlation

Correlations

| | | Quality & | Time & Project | Health & | Cost & project | HRM |
|----|---------------------|-------------|----------------|----------|----------------|-----------|
| | | Performance | performance | safety | performance | Practices |
| IV | Pearson Correlation | 1 | .701** | .618** | .586** | .481** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 |
| | Ν | 117 | 117 | 117 | 117 | 117 |
| IV | Pearson Correlation | .701** | 1 | .674** | .677** | .620** |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 |
| | Ν | 117 | 117 | 117 | 117 | 117 |
| IV | Pearson Correlation | .618** | .674** | 1 | .780** | .775** |
| | Sig. (2-tailed) | .000 | .000 | | .000 | .000 |
| | Ν | 117 | 117 | 117 | 117 | 117 |
| IV | Pearson Correlation | .586** | .677** | .780** | 1 | .787** |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 |
| | Ν | 117 | 117 | 117 | 117 | 117 |
| DV | Pearson Correlation | .481** | .620** | .775** | .787** | 1 |

| Sig. (2-tailed) | .000 | .000 | .000 | .000 | |
|-----------------|------|------|------|------|-----|
| Ν | 117 | 117 | 117 | 117 | 117 |

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Survey Data 2024

Correlation Matrix

The table shows the Pearson correlation coefficients between the five variables: Quality, Performance, Time, Health & Safety, Cost, and HRM Practices.

Key Findings

- Quality and Performance: The correlation between Quality and Performance is strong and significant (r = 0.701**, p < 0.01). This suggests that there is a strong positive relationship between quality and performance.
- 2. Time and Project performance: The correlation between Time and Project Performance is also strong and significant ($r = 0.674^{**}$, p < 0.01). This suggests that there is a strong positive relationship between time and project performance.
- 3. Health & Safety and Performance: The correlation between Health & Safety and Performance is moderate to strong and significant ($r = 0.780^{**}$, p < 0.01). This suggests that there is a significant positive relationship between health & safety and performance.
- 4. Cost and Project performance: The correlation between Cost and Project Performance is moderate to strong and significant (r = 0.787**, p < 0.01). This suggests that there is a significant positive relationship between cost and project performance.
- 5. HRM Practices and Performance: The correlation between HRM Practices and Performance is moderate ($r = 0.481^{**}$, p < 0.01), indicating a positive relationship between HRM practices and performance.

4.9.2 Relationship between human resources management practices and quality & Performance.

The relationship between the two variables has moderate relationship at $r=.481^{**}$ The above Spearman correlation shows that human resources management practices has significant influence on quality & performance. This implies ease of use has positive correlation with human resources management practices.

Key Findings

- All correlations are significant at the 0.01 level, indicating strong and statistically significant relationships between the variables.
- The strongest correlations are between:
 - Time & Project performance $(r = 0.780^{**})$
 - Health & safety and Cost & project performance ($r = 0.787^{**}$)
 - HRM Practices and Quality & Performance $(r = 0.701^{**})$
- The weakest correlation is between HRM Practices and Time & Project performance (r = 0.481**), but it is still significant at the 0.01 level.

Interpretation

These findings suggest that:

- Time and project performance are strongly related, indicating that projects with better time management tend to have better overall performance.
- Health and safety measures are closely linked to project cost, suggesting that investments in health and safety can lead to cost savings.
- HRM Practices are positively related to quality, indicating that effective human resource management can contribute to improved project quality.
- While there is a moderate correlation between HRM Practices and time and project performance, it is weaker than the other correlations.

In sum, these findings suggest that effective project management practices, including those related to time, health and safety, and HRM, can contribute to improved project performance and quality.

4.10 Regression Analysis

Regression examination is a scientific measure of the normal relationship between two or more variables in terms of the unique units of the data. Regression clearly indicates the cause and

effect relationship between the variables. In regression, the variable conforming to cause is taken as independent variable and the variable matching to consequence is taken as dependent variable.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the | Durbin-Watson |
|-------|-------|----------|-------------------|-------------------|---------------|
| | | | | Estimate | |
| 1 | .703a | .494 | .481 | .720 | 1.974 |

a. Predictors: (Constant), Quality & performance, cost & project performance, health & safety, cost & project performance.

b. Dependent Variable: HRM Practices

4.10.1 Test of the model adequacy

"ANOVA" analysis and F-test for the null hypothesis was done to determine whether none of the explanatory variables were related to tax compliance. Here the researcher were clearly reject this null hypothesis and conclude that the model is adequate (F (53.878) =, p < 0.000), and so conclude that at least one of Quality & performance, cost & project performance, health & safety, cost & project performance has a significant effect on the HRM practices in the case institutions.

1. Regression Model Summary

In order to examine the influence of human resources management practices, multiple linear regression analysis has been conducted. Quality & performance, cost & project performance, health & safety, cost & project performance were used as the dependent variable while the underlying human resources management practices were used as the independent variables.

Table 14: ANOVA

ANOVA

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|-------------------|----------------|-----|-------------|--------|-------------------|
| 1 | Regression 39.139 | | 5 | 7.828 | 53.878 | .000 ^b |
| | Residual | 16.127 | 111 | .145 | | |
| | Total | 55.266 | 116 | | | |

Source: Survey Data 2024

a. Dependent Variable: HRM Practices

b. Predictors: (Constant), Quality & performance, cost & project performance, health & safety, cost & project performance.

2. Regression Analysis for Leadership Style Implementation

We can observe that the extent to which each independent variables influence the dependent variable HRM Practices and independent variable were found to be the influential factors for human resource practices, in their unstandardized beta coefficient values referring HRM Practices and all four independent variables as the most important determinant the effect of human resource practices implementation. This F-test table additionally, was showed that the existence of linear relationship in regression equation model. In other words, the two explanatory variables have significant influence on independent variables.

According to (Table 4.4), the regression analysis of unstandardized coefficients of Beta and Sig values for the two independent variables were revealed that, quality & performance and cost & project performance (-.168) and (.188) respectively. Their significance levels are .023 and .027 respectively, which one item is greater than 0.05 significance.

| | | <u> </u> | Standardize | | | | | | |
|----------------------------|-----------|----------|--------------|--------|------|--------------|------------|--------------|------------|
| | Unstand | lardize | d | | | 95.0% | Confidence | | |
| | d Coeffie | cients | Coefficients | | | Interval for | r B | Collinearity | Statistics |
| | | Std. | | | | Lower | Upper | Toleranc | |
| Model | В | Error | Beta | t | Sig. | Bound | Bound | е | VIF |
| 1 (Constant) | .642 | .247 | | 2.596 | .011 | .152 | 1.131 | .426 | 2.347 |
| Quality & performance | 168 | .073 | .182 | -2.314 | .023 | 311 | 024 | .383 | 2.614 |
| cost & project performance | .188 | .084 | .186 | 2.244 | .027 | .022 | .355 | .327 | 3.054 |
| health & safety | .052 | .108 | .043 | .484 | .629 | 162 | .266 | .333 | 3.006 |
| cost & project performance | .355 | .080 | .393 | 4.417 | .000 | .195 | .514 | .348 | 2.875 |

Table 15: HRM Practices Implementation Coefficients

a. Dependent Variable: HRM Practices

To express the dependent variable (HRM Practices) and independent variable quality & performance, cost & project performance, health & safety, cost & project performance let:

Y= HRM Practices,

X1=Quality & performance,

X2= Cost & project performance

X3= Health & safety

X4= Cost & project performance

Therefore, the general relationship is written mathematically as follow:

 $Y_i = 0.613 X_{1i} + 0.099 X_{2i} - 0.115 X_{3i} + 1.050$

Coefficients

The coefficients represent the change in the dependent variable HRM Practices for a one-unit change in each independent variable, while holding all other independent variables constant.

- Quality & Performance: For every 1 unit increase in Quality & Performance, HRM Practices decrease by -0.168 units (p-value = 0.023).
- Cost & Project Performance: For every 1 unit increase in Cost & Project Performance, HRM Practices increase by 0.188 units (p-value = 0.027).
- Health & Safety: The coefficient for Health & Safety is not statistically significant (p-value = 0.629), indicating that there is no significant relationship between Health & Safety and HRM Practices.

Standardized Coefficients (Beta)

The standardized coefficients (beta) indicate the relative importance of each independent variable in explaining the variation in HRM Practices.

- Quality & Performance: The beta coefficient is 0.182, indicating that Quality & Performance explains about 18.2% of the variation in HRM Practices.
- Cost & Project Performance: The beta coefficient is 0.186, indicating that Cost & Project Performance explains about 18.6% of the variation in HRM Practices.
- Health & Safety: The beta coefficient is 0.043, indicating that Health & Safety explains only about 4.3% of the variation in HRM Practices.

Collinearity Statistics

The VIF (Variance Inflation Factor) values indicate whether there are multicollinearity issues between the independent variables.

- All VIF values are below 5, indicating that there are no severe multicollinearity issues.
- The tolerance values range from 0.327 to 0.426, indicating that each independent variable explains a moderate amount of variance in the others.

In summary, the results suggest that Quality & Performance and Cost & Project Performance are positively related to HRM Practices, while Health & Safety is not statistically significantly related to HRM Practices.

3. Discussion of Regression Results

According to study the explanatory variables HRM practices and all the four independent variables were identified as critical to HRM practices. Start below

- Quality & Performance: There is a negative relationship between Quality & Performance and HRM Practices. For every 1 unit increase in Quality & Performance, HRM Practices decrease by -0.168 units. This suggests that as quality and performance improve, HRM Practices tend to decrease.
- Cost & Project Performance: There is a positive relationship between Cost & Project Performance and HRM Practices. For every 1 unit increase in Cost & Project Performance, HRM Practices increase by 0.188 units. This suggests that as cost and project performance improve, HRM Practices tend to increase.
- 3. **Health & Safety:** There is no statistically significant relationship between Health & Safety and HRM Practices. The coefficient is small and not significant (p-value = 0.629), indicating that changes in Health & Safety do not have a significant impact on HRM Practices.

In summary, the relationships suggest that:

- Improvements in Quality & Performance are associated with decreases in HRM Practices
- Improvements in Cost & Project Performance are associated with increases in HRM Practices
- There is no significant relationship between Health & Safety and HRM Practices

Chapter Five

5. Summary of Findings, Conclusions and Recommendations

This chapter deals with the summary of major findings of the study, the conclusion drown based up on the major findings and recommendation that forwarded based on the conclusions arrived at.

5.1 Summary

This study was conducted aiming at investigating the effect of human resources management practices on construction project performance: in selected Sub-cities of Addis Ababa City Administration in Focus. More specifically, the study intended to attain the following objectives:

- 1. Assess the practices of human resource management in the selected sub-cities construction projects of Addis Ababa City Administration
- To determine the relationship between human resource management practices and construction project performance in the selected sub-cities construction projects of Addis Ababa City Administration
- 3. To investigate the key HRM factors that affect construction project performance in the selected sub-cities construction projects of Addis Ababa City Administration

This study endeavored to explore the effect of human resources management practices on construction project performance. Issues were analyzed with the intension to understand the ground facts from the sample respondent's perspectives. The study employed both quantitative and qualitative research design with the assumption that reality is socially constructed by participants and there are many truths. This research approach was appropriate as the researcher was trying to understand the complexity of the issue under investigation through the lived experience, perceptions and perspectives from a holistic standpoint.

For the purpose of this study, survey method was employ to disclose the understanding of respondents on the issue under study. This method was' chosen with the assumption that it helps to conduct data as it exists and to gather several data related to the problem under study. Both

primary and secondary sources of data were used. Data were generated via Questionnaire and interview. The respondents were provided with 120 questionnaires (both close& open ended). Accordingly, 117 (97.05 %) of them scientifically selected from the sample respondents and returned the questionnaire just in time while the remaining 3 (2.05 %) of the respondents did not returned back the questionnaire for various reasons.

The data secured through questionnaire was analyzed quantitatively and to this effect, the study attempt to answer the following basic questions:

- 1. What are the practices of Human Resource Management in selected sub-cities in of Addis Ababa Administration?
- 2. What is the relationship between HRM practices with construction projects performance in selected sub-cities in of Addis Ababa Administration?
- 3. What are the key HRM factors that affect construction project performance in selected sub-cities in of Addis Ababa Administration.?

In attempt to answer the above basic research questions, a survey was preferred to serve the purpose. The study was conducted on the effect of human resources management practices on construction project performance: in selected Sub-cities of Addis Ababa City Administration in Focus. **Questionnaire was developed and data also gathered based on the review of related literature.** The collected data were analyzed by descriptive statistics such as frequency count, percentage, mean, standard deviation, T value and P-value respectively. Besides, inferential statistics such as regression were also employed. Data's were analyzed using the "Statistical Package for the Social Sciences" (SPSS) version 25 software.

5.1.1. Major Findings

Most of the data reported is based on the findings of the research. Accordingly, the sample respondents were forwarded their opinions and data was analyzed accordingly. As to the major findings of the study, as many issues raised during discussion as well as responses from the data collection instruments the sample respondents were forwarded the following views.

As findings of the study confirms, there is long term planning for human resource need of the firm was effectively practicing and the company operated a quarterly human resource planning

schedule at very good manner. Besides, very good HRM technique is observed in the sample companies and also the firm has the right persons at the right time at the right place at the right job significantly. The firm has conduct performance appraisal from HRM point of view as ascertained by their higher rating and Firm conducts job analyses (determining the nature of each employee's job) before assigning them were highly seen within the sample companies.

The result of the study have showed that, job advertisement is used by the enterprise to recruit employees at a very good manner in the case companies and the recruitment and selection process is fair and transparent was significantly observed. Furthermore, screening of candidate for vacant positions is common also have a significant practicing and selection of staff is based on quality and skill rather than academic qualification had a higher agreement as well.

The finding of the study indicated that, the case companies provide staff with opportunities for career development in a very good manner rated high and construction projects organization are successful in implementing training and development programs was significantly undertaken. In addition, employees returning from training are given adequate free time to reflect and plan improvements in the organization. Besides, there are formal training programs to teach new employees the skills they need to perform their jobs have a higher agreement level in the sample companies.

Construction projects organization are committed to build the capacity of its employees had higher and there is department assigned to follow up training and development program in firm/enterprise was significantly implementing. Besides, firm/enterprise provides incentives and benefits to staff' was high level of agreement and also there is provision of appropriate/modern working tools and equipment confirmed with higher agreement. Furthermore, there is a significant team spirit within the firm and the focus of compensation and reward is to attract, and retain employees in organizations observed with higher agreement level. Project managers make compensation decisions was significant seen and also reward and compensation schemes provided by firm are sufficient at the case companies.

The result of the finding have shown that, objectives of the appraisal system are clear to all employees were rated at higher level and performance of employees is measured on the basis of objective quantifiable results was significantly implementing. In addition, employees are provided performance based feedback and counseling were significantly practicing and employees have faith in the performance appraisal system have observed in the case companies. Appraisal system has a strong influence on individual and team behavior had a significant agreement among the sample respondents. Besides, appraisal results are used for making decisions such as job rotation, training, compensation, promotion have a done efficiently as well.

Furthermore, the creation of good governance is the result of a leadership decision in meeting specific objectives of community development were not implemented rather implemented as poorly manner and good governance debating correcting mistakes to studies and analyses is the most crucial phase of the good leadership process and acts was significantly disagreed by the sample respondents.

The result of the study have showed that, meeting project time goals at the case companies was highly practicing and meeting project budget goals seen at the sample case companies. Furthermore, meeting scope and requirements goals are practicing and team's satisfaction with the project was highly agreed with the respondents. Client's satisfaction with the project results as ascertained by their significant rating and success of the project was found higher in the sample companies. Besides, Health and safety goals as set by the owner implementing at higher level and also opening new business opportunities for the company was significantly implementing. Finally, the amount of time taken by the employee to finish a task is optimum had higher agreement and periodic capacity development sessions are designed significantly in the case companies.

5.2 Conclusion

The following conclusions were made based on the findings of the study and the evidences allow us to conclude that, assessing the effect of human resources management practices on construction project performance in selected sub-cities of Addis Ababa City Administration were analyzed and concluded as follows.

Accordingly, the result of the study have showed that, firm has the right persons at the right time at the right place at the right job significantly and the firm conducts job analyses (determining the nature of each employee's job) before assigning them were highly seen within the sample companies. Besides, job advertisement is used by the enterprise to recruit employees at a very good manner in the case companies and the recruitment and selection process is fair and
transparent was significantly observed. Furthermore, the finding of the study indicated that, the case companies provide staff with opportunities for career development in a very good manner rated high and construction projects organization are successful in implementing training and development programs was significantly undertaken

The result of the finding have shown that, objectives of the appraisal system are clear to all employees were rated at higher level and performance of employees is measured on the basis of objective quantifiable results was significantly implementing. In addition, employees are provided performance based feedback and counseling were significantly practicing and employees have faith in the performance appraisal system have observed in the case companies. Appraisal system has a strong influence on individual and team behavior had a significant agreement among the sample respondents. Besides, appraisal results are used for making decisions such as job rotation, training, compensation, promotion have a done efficiently as well.

Furthermore, the creation of good governance is the result of a leadership decision in meeting specific objectives of community development were not implemented rather implemented as poorly manner and good governance debating correcting mistakes to studies and analyses is the most crucial phase of the good leadership process and acts was significantly disagreed by the sample respondents. The result of the study have showed that, meeting project time goals at the case companies was highly practicing and meeting project budget goals seen at the sample case companies. Besides, Health and safety goals as set by the owner implementing at higher level and also opening new business opportunities for the company was significantly implementing.

5.3. Recommendations

The findings of this study are believed to have some recommendations for practice. The implication might show areas of intervention to understand the effect of human resources management practices on construction project performance in selected sub-cities of Addis Ababa City Administration. As we think of improving the effect of human resources management practices on construction project performance and the following recommendations are made on the basis of the research findings and the conclusion.

- ✓ The study recommend that, 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 study recommend that, the results of the research may provide insights and encourage construction firms to implement effective HRM practices to improve construction project performance in the future.
- ✓ The study recommend that, all stakeholders together with concerned government bodies should prepare training and development programs for employees/workers of construction projects.
- ✓ All stakeholders together with the management team should enhance policies to motivate the laborers and staff and develop new programs to enhance the policies.
- ✓ The study recommend that, all construction companies need to practice modern human resource management by using HR technology, GPS database and the so on to improve the performance of construction projects.
- ✓ The last not the least, the study recommend that, it will be interesting to investigate the impact of the identified HRM practices on productivity, cost effectiveness and other related issues of construction projects at large

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Appendix A

St Mary University

DEPARTMENT OF PROJECT MANAGEMENT

Questionnaires to be filled out by sample respondents

Dear Participants

I would like to express my heartfelt appreciation, in advance, for taking time to fill out the questionnaire. The questionnaire is designed for the preparation of a research for the fulfilment of MA degree in Project Management. The purpose of this questionnaire is just to get information regarding "Investigating the Effect of Human Resources Management Practices on Construction Project Performance: In selected Sub-cities of Addis Ababa City Administration". Be confident that the information you provide will be kept and used only for academic research purpose. So you are kindly requested to give your genuine answer and respond to each of the information by writing or putting an "X" mark in the space provided.

Section I. General information



1.3 Education and Training



1.4 Experience on Present Occupation

- (1) Below 10 years
- (2) 10-20 years
- (3) Above 20 years

1.5. Marital Status

- (1). Single
- (2). Married
- (3). Divorced
- (4). Widowed
- (5). Separated due to some reason

1.6. Position in the Organization

- (1). Project Manager (2). Site engineer (3). Consultants (4). Technical Expert
- (5). HR Manager (6). Team Leader (7). Client/owner (8). Contractor

Section II. Human Resource Planning Practices

Direction: Please rate the following questions on this questionnaire by putting the" $\sqrt{}$ " mark in the space provided. Accordingly rate as follow 1.Strongly Disagree 2.Disgree 3.Undecided 4. Agree 5.Strongly Agree.

| No | Items | Strongly | | Undecided | Agree | Strongly |
|-----|--|----------|----------|-----------|-------|----------|
| | | Disagree | Disagree | | | Agree |
| | | 1 | 2 | 3 | 4 | 5 |
| 2.1 | There is long term planning for human resource need of the firm/enterprise. | | | | | |
| 2.2 | The company operated a quarterly human resource planning schedule. | | | | | |
| 2.3 | A successful HRP technique is found in the company. | | | | | |
| 2.4 | The firm has the right persons at the right time at the right place at the right job. | | | | | |
| 2.5 | The firm has conduct performance appraisal from HRM point of view. | | | | | |

| Sect | ion III: Recruitment and S | election Prac | ctices | | |
|------|---|---------------|--------|--|--|
| 3.1 | Job advertisement is used by the enterprise to recruit employees. | | | | |
| 3.2 | The recruitment and selection process is fair and transparent. | | | | |
| 3.3 | Recruitmentandselectionsysteminconstructionprojectiseffectivefororganizational goal. | | | | |
| 3.4 | Screening of candidate for vacant positions is common. | | | | |
| 3.5 | Selection of staff is based on quality and skill rather than academic qualification. | | | | |
| 3.6 | The firm conducts job analyses (determining the nature of each employee's job) before assigning them. | | | | |

| Section | on IV: Training and Development | Pra | ctices | | |
|---------|---|-----|--------|--|--|
| 4.1 | The firm provides staff with opportunities for career development. | | | | |
| 4.2 | Construction projects organization are successful in implementing training and development programs | | | | |
| 4.3 | Employees returning from training are given adequate free time to reflect and plan improvements in the organization. | | | | |
| 4.4 | There are formal training programs to teach new employees the skills they need to perform their jobs. | | | | |
| 4.5 | Construction projects organization are committed to build the capacity of its employees. | | | | |
| 4.6 | There is department assigned to follow up training and development program in firm/enterprise. | | | | |

| Secti | on V: Motivation, Compens | ation and F | Rewards Pr | actices | |
|-------|---|-------------|------------|---------|--|
| 5.1 | The firm/enterprise provides incentives and benefits to staff. | | | | |
| 5.2 | There is provision of appropriate/modern working tools and equipment. | | | | |
| 5.3 | There is team spirit within the firm. | | | | |
| 5.4 | Thefocusofcompensation and rewardis to attract, and retainemployeesinorganizations. | | | | |
| 5.5 | Project managers make compensation decisions. | | | | |
| 5.6 | The reward and compensation schemes provided by firm are sufficient. | | | | |

| Secti | on VI: Project Performance Practic | es | | |
|-------|--|----|--|--|
| 6.1 | The objectives of the appraisal system are clear to all employees. | | | |
| 6.2 | Performance of employees is measured on the basis of objective quantifiable results. | | | |
| 6.3 | Employees are provided performance based feedback and counseling. | | | |
| 6.4 | Employees have faith in the performance appraisal system. | | | |
| 6.5 | Appraisal system has a strong influence on individual and team behavior. | | | |
| 6.6 | The appraisal results are used for making decisions such as job rotation, training, compensation, promotion, and the so on. | | | |

| Section | on VII: Project Performance Relate | ed Is | ssues | | |
|---------|---|-------|-------|--|--|
| 7.1 | Meeting project time goals. | | | | |
| | | | | | |
| 7.2 | Meeting project budget goals. | | | | |
| 7.3 | Meeting scope and requirements goals. | | | | |
| 7.4 | Team's satisfaction with the project. | | | | |
| 7.5 | Client's satisfaction with the project results. | | | | |
| 7.6 | Overall success of the project. | | | | |
| 7.7 | Health and safety goals as set by the owner. | | | | |
| 7.8 | Opening new business opportunities for the company. | | | | |
| 7.9 | The amount of time taken by the employee to finish a task is optimum. | | | | |
| 7.10 | Periodic capacity development sessions are designed. | | | | |

Appendix B

Interview Guide Questions for key informants

Dear Participants

I would like to express my heartfelt appreciation, in advance, for taking time to answer the interview items. The questionnaire is designed for the preparation of a research for the fulfilment of MA degree in Project Management. The purpose of this questionnaire is just to get information regarding "Investigating the Effect of Human Resources Management Practices on Construction Project Performance: In selected Sub-cities of Addis Ababa City Administration". Be confident that the information you provide will be kept and used only for academic research purpose. So you are kindly requested to give your genuine answer and respond to each of the information honestly.

- 1 Who prepares human resources plan and evaluation status in the construction project?
- 2 How do the HRM practices affect construction performance in your company?
 - a. How do the recruitment and selection practices affect construction performances?
 - **b.** How the training and development practices do affects construction project performances?
 - c. How do the work design affects construction project ?
 - **d.** How do the performance management practices affect construction project performance?
 - e. How the compensation system and reward affect construction project performance?
- **3** How often do you evaluate the effectiveness of HR plan in the construction project?
- 4 What are the key HRM challenges currently facing the construction companies?
- 5 If you fill something is missing, please have a say!!

Thank You in Advance for your Cooperation!!

Appendix C

| | | | Sta | tistics | | | |
|---|---------|------|------|---------|------|------|------|
| | | Q1.1 | Q1.2 | Q1.3 | Q1.4 | Q1.5 | Q1.6 |
| N | Valid | 117 | 117 | 117 | 117 | 117 | 117 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | Q1.1 | | |
|-------|-------|-----------|---------|---------------|------------|
| | | | | | Cumulative |
| | | Frequency | Percent | Valid Percent | Percent |
| Valid | 1 | 44 | 37.6 | 37.6 | 37.6 |
| | 2 | 73 | 62.4 | 62.4 | 100.0 |
| | Total | 117 | 100.0 | 100.0 | |

| | | | Q1.2 | | |
|-------|-------|-----------|---------|---------------|------------|
| | | | | | Cumulative |
| | | Frequency | Percent | Valid Percent | Percent |
| Valid | 1 | 21 | 17.9 | 17.9 | 17.9 |
| | 2 | 36 | 30.8 | 30.8 | 48.7 |
| | 3 | 36 | 30.8 | 30.8 | 79.5 |
| | 4 | 22 | 18.8 | 18.8 | 98.3 |
| | 5 | 2 | 1.7 | 1.7 | 100.0 |
| | Total | 117 | 100.0 | 100.0 | |

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| | | | Q1.3 | | |
|-------|-------|-----------|---------|---------------|------------|
| | | | | | Cumulative |
| | | Frequency | Percent | Valid Percent | Percent |
| Valid | 2 | 1 | .9 | .9 | .9 |
| | 5 | 30 | 25.6 | 25.6 | 26.5 |
| | 6 | 56 | 47.9 | 47.9 | 74.4 |
| | 7 | 30 | 25.6 | 25.6 | 100.0 |
| | Total | 117 | 100.0 | 100.0 | |

| | | | Q1.4 | | |
|-------|-------|-----------|---------|---------------|------------|
| | | | | | Cumulative |
| | | Frequency | Percent | Valid Percent | Percent |
| Valid | 1 | 23 | 19.7 | 19.7 | 19.7 |
| | 2 | 49 | 41.9 | 41.9 | 61.5 |
| | 3 | 45 | 38.5 | 38.5 | 100.0 |
| | Total | 117 | 100.0 | 100.0 | |

Q1.5

| | | | | | Cumulative |
|-------|-------|-----------|---------|---------------|------------|
| | | Frequency | Percent | Valid Percent | Percent |
| Valid | 1 | 41 | 35.0 | 35.0 | 35.0 |
| | 2 | 67 | 57.3 | 57.3 | 92.3 |
| | 3 | 5 | 4.3 | 4.3 | 96.6 |
| - | 4 | 1 | .9 | .9 | 97.4 |
| | 5 | 3 | 2.6 | 2.6 | 100.0 |
| | Total | 117 | 100.0 | 100.0 | |

| Q | 1 | • | 6 |
|---|---|---|---|
| _ | | - | - |

| | | | Q1.6 | | |
|-------|-------|-----------|---------|---------------|------------|
| | | | | | Cumulative |
| | | Frequency | Percent | Valid Percent | Percent |
| Valid | 1 | 11 | 9.4 | 9.4 | 9.4 |
| | 2 | 4 | 3.4 | 3.4 | 12.8 |
| | 3 | 15 | 12.8 | 12.8 | 25.6 |
| | 4 | 39 | 33.3 | 33.3 | 59.0 |
| | 5 | 10 | 8.5 | 8.5 | 67.5 |
| | 6 | 15 | 12.8 | 12.8 | 80.3 |
| | 7 | 13 | 11.1 | 11.1 | 91.5 |
| | 8 | 10 | 8.5 | 8.5 | 100.0 |
| | Total | 117 | 100.0 | 100.0 | |

One-Sample Statistics

| | Ν | Mean | Std. Deviation | Std. Error Mean |
|--------------|-----|------|----------------|-----------------|
| T2.1(II) 2.1 | 117 | 3.84 | .776 | .072 |
| T2.1(II) 2.2 | 117 | 3.85 | .773 | .071 |
| T2.1(II) 2.3 | 117 | 3.87 | .760 | .070 |
| T2.1(II) 2.4 | 117 | 3.90 | .759 | .070 |
| T2.1(II) 2.5 | 117 | 3.93 | .763 | .070 |

One-Sample Test

| | Test Value = 0 | | | | | | | |
|--------------|----------------|-----|-----------------|-----------------|---------------|-------------------|--|--|
| | | | | | 95% Confidenc | e Interval of the | | |
| | | | | | Differ | rence | | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper | | |
| T2.1(II) 2.1 | 53.469 | 116 | .000 | 3.838 | 3.70 | 3.98 | | |
| T2.1(II) 2.2 | 53.852 | 116 | .000 | 3.846 | 3.70 | 3.99 | | |
| T2.1(II) 2.3 | 55.074 | 116 | .000 | 3.872 | 3.73 | 4.01 | | |
| T2.1(II) 2.4 | 55.566 | 116 | .000 | 3.897 | 3.76 | 4.04 | | |
| T2.1(II) 2.5 | 55.769 | 116 | .000 | 3.932 | 3.79 | 4.07 | | |

One-Sample Statistics

| | Ν | Mean | Std. Deviation | Std. Error Mean |
|---------------|-----|------|----------------|-----------------|
| T2.1(III) 3.1 | 117 | 3.98 | .731 | .068 |
| T2.1(III) 3.2 | 117 | 3.99 | .725 | .067 |
| T2.1(III) 3.3 | 115 | 3.95 | .699 | .065 |
| T2.1(III) 3.4 | 117 | 3.91 | .702 | .065 |
| T2.1(III) 3.5 | 117 | 3.94 | .711 | .066 |
| T2.1(III) 3.6 | 117 | 3.95 | .693 | .064 |

One-Sample Test

| | Test Value = 0 | | | | | | | |
|---------------|----------------|-----|-----------------|-----------------|----------------|-------------------|--|--|
| | | | | | 95% Confidence | e Interval of the | | |
| | | | | | Differ | ence | | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper | | |
| T2.1(III) 3.1 | 58.945 | 116 | .000 | 3.983 | 3.85 | 4.12 | | |
| T2.1(III) 3.2 | 59.541 | 116 | .000 | 3.991 | 3.86 | 4.12 | | |
| T2.1(III) 3.3 | 60.573 | 114 | .000 | 3.948 | 3.82 | 4.08 | | |
| T2.1(III) 3.4 | 60.327 | 116 | .000 | 3.915 | 3.79 | 4.04 | | |
| T2.1(III) 3.5 | 59.973 | 116 | .000 | 3.940 | 3.81 | 4.07 | | |
| T2.1(III) 3.6 | 61.643 | 116 | .000 | 3.949 | 3.82 | 4.08 | | |

One-Sample Statistics

| | Ν | Mean | Std. Deviation | Std. Error Mean |
|-----------|-----|------|----------------|-----------------|
| T(IV) 4.1 | 117 | 3.91 | .643 | .059 |
| T(IV) 4.2 | 117 | 3.93 | .666 | .062 |
| T(IV) 4.3 | 117 | 3.82 | .596 | .055 |
| T(IV) 4.4 | 117 | 3.87 | .623 | .058 |
| T(IV) 4.5 | 117 | 3.85 | .606 | .056 |
| T(IV) 4.6 | 117 | 3.87 | .623 | .058 |

One-Sample Test

| | Test Value = 0 | | | | | | | |
|-----------|----------------|-----|-----------------|-----------------|---------------|-------------------|--|--|
| | | | | | 95% Confidenc | e Interval of the | | |
| | | | | | Diffe | rence | | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper | | |
| T(IV) 4.1 | 65.703 | 116 | .000 | 3.906 | 3.79 | 4.02 | | |
| T(IV) 4.2 | 63.854 | 116 | .000 | 3.932 | 3.81 | 4.05 | | |
| T(IV) 4.3 | 69.316 | 116 | .000 | 3.821 | 3.71 | 3.93 | | |
| T(IV) 4.4 | 67.183 | 116 | .000 | 3.872 | 3.76 | 3.99 | | |
| T(IV) 4.5 | 68.860 | 116 | .000 | 3.855 | 3.74 | 3.97 | | |
| T(IV) 4.6 | 67.183 | 116 | .000 | 3.872 | 3.76 | 3.99 | | |

One-Sample Statistics

| | Ν | Mean | Std. Deviation | Std. Error Mean |
|----------|-----|------|----------------|-----------------|
| T(V) 5.1 | 117 | 3.98 | .820 | .076 |
| T(V) 5.2 | 117 | 4.00 | .830 | .077 |
| T(V) 5.3 | 117 | 4.06 | .833 | .077 |
| T(V) 5.4 | 117 | 4.03 | .830 | .077 |
| T(V) 5.5 | 117 | 3.91 | .761 | .070 |
| T(V) 5.6 | 117 | 3.93 | .774 | .072 |

One-Sample Test

Test Value = 0

| | | | | | 95% Confidenc | e Interval of the |
|----------|--------|-----|-----------------|-----------------|---------------|-------------------|
| | | | | | Differ | ence |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| T(V) 5.1 | 52.550 | 116 | .000 | 3.983 | 3.83 | 4.13 |
| T(V) 5.2 | 52.100 | 116 | .000 | 4.000 | 3.85 | 4.15 |
| T(V) 5.3 | 52.688 | 116 | .000 | 4.060 | 3.91 | 4.21 |
| T(V) 5.4 | 52.590 | 116 | .000 | 4.034 | 3.88 | 4.19 |
| T(V) 5.5 | 55.654 | 116 | .000 | 3.915 | 3.78 | 4.05 |
| T(V) 5.6 | 54.960 | 116 | .000 | 3.932 | 3.79 | 4.07 |

One-Sample Statistics

| | Ν | Mean | Std. Deviation | Std. Error Mean |
|-----------|-----|------|----------------|-----------------|
| T(VI) 6.1 | 117 | 3.97 | .782 | .072 |
| T(VI) 6.2 | 117 | 3.93 | .774 | .072 |
| T(VI) 6.3 | 117 | 3.88 | .779 | .072 |
| T(VI) 6.4 | 117 | 3.88 | .756 | .070 |
| T(VI) 6.4 | 117 | 3.89 | .818 | .076 |
| T(VI) 6.6 | 117 | 3.91 | .794 | .073 |

One-Sample Test

| | Test Value = 0 | | | | | | | |
|-----------|----------------|-----|-----------------|-----------------|--------------------------------|-------|--|--|
| | | | | | 95% Confidence Interval of the | | | |
| | | | | | Difference | | | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper | | |
| T(VI) 6.1 | 54.979 | 116 | .000 | 3.974 | 3.83 | 4.12 | | |
| T(VI) 6.2 | 54.960 | 116 | .000 | 3.932 | 3.79 | 4.07 | | |
| T(VI) 6.3 | 53.906 | 116 | .000 | 3.880 | 3.74 | 4.02 | | |
| T(VI) 6.4 | 55.508 | 116 | .000 | 3.880 | 3.74 | 4.02 | | |
| T(VI) 6.4 | 51.445 | 116 | .000 | 3.889 | 3.74 | 4.04 | | |
| T(VI) 6.6 | 53.322 | 116 | .000 | 3.915 | 3.77 | 4.06 | | |

One-Sample Statistics

| | Ν | Mean | Std. Deviation | Std. Error Mean |
|----------------|-----|------|----------------|-----------------|
| T2.1(VII) 7.1 | 117 | 4.03 | .860 | .080 |
| T2.1(VII) 7.2 | 117 | 3.89 | .704 | .065 |
| T2.1(VII) 7.3 | 117 | 3.91 | .707 | .065 |
| T2.1(VII) 7.4 | 117 | 3.91 | .719 | .066 |
| T2.1(VII) 7.5 | 117 | 4.02 | .788 | .073 |
| T2.1(VII) 7.6 | 117 | 4.09 | .805 | .074 |
| T2.1(VII) 7.7 | 117 | 4.08 | .800 | .074 |
| T2.1(VII) 7.8 | 117 | 4.07 | .774 | .072 |
| T2.1(VII) 7.9 | 117 | 3.98 | .731 | .068 |
| T2.1(VII) 7.10 | 117 | 3.97 | .737 | .068 |

One-Sample Test

| | Test Value = 0 | | | | | | |
|----------------|----------------|-----|-----------------|-----------------|--------------------------------|-------|--|
| | | | | | 95% Confidence Interval of the | | |
| | | | | | Differ | rence | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper | |
| T2.1(VII) 7.1 | 50.719 | 116 | .000 | 4.034 | 3.88 | 4.19 | |
| T2.1(VII) 7.2 | 59.718 | 116 | .000 | 3.889 | 3.76 | 4.02 | |
| T2.1(VII) 7.3 | 59.768 | 116 | .000 | 3.906 | 3.78 | 4.04 | |
| T2.1(VII) 7.4 | 58.763 | 116 | .000 | 3.906 | 3.77 | 4.04 | |
| T2.1(VII) 7.5 | 55.166 | 116 | .000 | 4.017 | 3.87 | 4.16 | |
| T2.1(VII) 7.6 | 54.905 | 116 | .000 | 4.085 | 3.94 | 4.23 | |
| T2.1(VII) 7.7 | 55.098 | 116 | .000 | 4.077 | 3.93 | 4.22 | |
| T2.1(VII) 7.8 | 56.872 | 116 | .000 | 4.068 | 3.93 | 4.21 | |
| T2.1(VII) 7.9 | 58.945 | 116 | .000 | 3.983 | 3.85 | 4.12 | |
| T2.1(VII) 7.10 | 58.369 | 116 | .000 | 3.974 | 3.84 | 4.11 | |