HUMAN RESOURCE MANAGEMENT PRACTICE TOWARDS THE PROJECT SUCCESS: A CASE OF ADAMA TOWN PUBLIC BUILDING PROJECTS

BY: BEYENA GEDEFA BERI

A THESIS SUBMITTED TO

THE DEPARTMENT OF CIVIL ENGINEERING

SCHOOL OF CIVIL ENGINEERING AND ARCHITECTURE

THIS THESIS IS PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER'S SPECIALIZATION IN CONSTRUCTION ENGINEERING AND MANAGEMENT

OFFICE OF GRADUATE STUDIES

ADAMA SCIENCE AND TECHNOLOGY UNIVERSITY

ADAMA, ETHIOPIA

JUNE, 2021

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DECLARATION

I hereby declare that this MSc. thesis entitled "Huma resource management practice towards the project success: A case of Adama town public building projects" is my own original work. That is, it has not been submitted for the award of any academic degree, diploma or certificate in any other university. All sources of materials that are used for this thesis have been duly acknowledged through citation.

Beyena Gedefa Beri	----------	----------
Name	Signature	Date

RECOMMENDATION

I, the advisor of this thesis, hereby certify that I have read the revised version of the thesis entitled, “Huma resource management practice towards the project success” is prepared under my guidance by Beyena Gedefa Beri submitted in partial fulfillment of the requirements for the degree of Mater’s of Science in Civil Engineering (Construction Engineering and Management).

Therefore, I recommend the submission of revised version of the thesis to the department following the applicable procedures.

Bahiru Bewuket (PhD.) ---------- ----------

Advisor Signature Date

APPROVAL SHEET

I/we, the advisors of the thesis entitled "Human resource management practice towards the project success: A case of Adama town public building projects" and developed by Beyena Gedefa Beri, hereby certify that the recommendation and suggestions made by the board of examiners are appropriately incorporated into the final version of the thesis.

Bahiru Bewuket (PhD.)	_____	_____
Advisor	Signature	Date

We, the undersigned, members of the Board of Examiners of the thesis by Beyena Gedefa Beri have read and evaluated the thesis entitled "Human resource management practice towards the project success: A case of Adama town public building projects" and examined the candidate during open defense. This is, therefore, to certify that the thesis is accepted for partial fulfillment of the requirement of the degree of Master of Science in Civil Engineering (Construction Engineering and Management).

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Finally, approval and acceptance of the thesis is contingent upon submission of its final copy to the Office of Postgraduate Studies (OPGS) through the Department Graduate Council (DGC) and School Graduate Committee (SGC).

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Office of Postgraduate Studies, Dean	Signature	Date

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LIST OF ABBREVATIONS AND ACRONOMS

BIM	Building Information Modeling
CPHRMMS	Construction Project Human Resource Management Manual Series
DBB	Design Bid Built
DGC	Department Graduate Council
ECoTEMPA	Ethiopian Construction Technology and Management Professional Association
ECPMI	Ethiopian Construction Project Human Resource Management Manual
EEA	Ethiopian Economic Association
EHRMP	Effective Human Resource Management Practice
EHRPM	Effectiveness of Human Resource Planning and Management
GDP	Gross Domestic Product
HR	Human Resource
HRM	Human Resource Management
HRMP	Human Resource Management practice
HRP	Human Resource Planning
IMF	International Monetary Fund
MoUDC	Ministry of Urban Development and Construction
MS	Micro Soft
NBE	National Bank of Ethiopia
OPGS	Office of postgraduate studies
NQ	Number of Questions
PM	Project Management
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
RII	Relative Importance Index
SPSS	Statistical Package for Social Science
SGC	School Graduate Committee

ABSTRACT

Construction industry is one of the major role players in economy and it's the most employees intensive in which human resource management issues are given inadequate attention. Most problems and operational issues concerning human resource management practices have arisen in public building projects. Consequently, public building projects exposed extreme high cost and time overrun, low quality and poor safety which the project success is relay on. The research intended to assess human resource management practice towards the project success in Adama public building projects. The study used both descriptive and exploratory method. Based on literature reviews and informal discussion with colleagues and experts in the sector, sixty six the most important factors were collected under ten groups and 12 most important impacts of poor practicing Human Resource Management (HRM) were identified. The questionnaires were distributed to ten randomly selected public building projects in Adama town and distributed to the respondents in a side of contractors, consultants and employers. Returned questionnaires were evaluated by Relative Importance Index (RII) and the results were ranked based on the importance value. SPSS v22 utilized to measure the statistical patterns. Based on the result of the study, most critical factors negatively affecting HRM practices were; "lack of providing compensation and reward packages, financial rewards and certificate of appreciations", "influence of change in economy, technology and globalization" with RII value of 0.970, "poor health and safety practice," with RII value of 0.932, "lack of insurance provision to the employees in the project" with RII value of 0.931, and "absence of continuity of work to ensure employees long term job security" with RII value of 0.928 were some of them. Also the impacts causing failure to project success were identified as "low productivity with RII value of 0.990, material wastage with RII value of 0.970, time and cost overruns with RII value of 0.960, client's dissatisfaction with RII value of 0.950, disputes and employee conflicts with RII value of 0.860 were identified. The researcher has strived to developed human resource management practice conceptual framework in a front view point of project success to assist the project managers, professionals and the stakeholders. Finally, it's an essential in Adama town public building projects to practice human resource management effectively, human resource utilized efficiently to ensure the project's success.

Keywords: Construction projects, Human resource management practice, public building projects, Project success.

1. INTRODUCTION

1.1 Background of the study

The construction industry has been described as an indicator by which the economic development of a nation is measured. This is because construction projects provide infrastructures required to drive socio-economic development and contributes to the Gross Domestic Products (GDP) as well as the living standard of its population. Construction process itself involves various activities with humans as a fundamental factor to the success of these activities (Ameh and Daniel, 2017). While it is true that machines have been developed to replace human in carrying out construction tasks (Rotman, 2013), it is also true that the machines cannot operate themselves. They have to be operated by human in order to achieve desired results. However, the low level of mechanization in the construction sector of developing countries leaves it with no option than to heavily rely on Human Resource (HR) for its operations. In the construction industry of developing countries, HR makes up significant part of the project cost. Cost of HR includes personnel administration, employee training, communication cost, welfare and compensation for health and safety. It, therefore, means that an effective human resources management (HRM) will result in highly motivated workforce leading to high productivity, quality improvement and minimize cost and time overruns.

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). As to Chan, Clarke and Dainty (2010), Erlick and Grabelsky, (2005) and McGrath et al (2011), employment in the construction project is characterized by relatively high rates of labour turnover, which manifests in periodic labour shortage. A further point is that, the growth of Small and Medium Enterprises

(SMEs) within the construction sector and the use of labour only sub-contractors, according to Dainty, Ison and Root (2004), Shafeek (2016), have reduced commitment and investment in human resource training within the industry. Further, labor turnover within the industry is also attributed to migration of skilled intellectuals and technical personnel both from and within developing countries in search of better work condition. In this regard, Ameh and Daniel (2017) state that Nigeria, Kenya and Ethiopia are the most affected countries by emigration in Africa. Labour turnover in the industry under discussion is believed to be caused by ineffective human resource management, which is characterized by poor training or lack of opportunity for training, poor wages and compensation issues, irregularity of the workload, safety issues among others. What's more, in Nigeria, Oladipo and Abdulkadir (2011) examine the extent to which strategic human resource management is practiced in the manufacturing sector and the relationship between strategic human resource management and organizational performance. The results show that strategic human resource management was moderately practiced in the Nigerian manufacturing companies. Results also indicate that line management devolvement, innovative recruitment and development of personnel, equity based compensation system, performance appraisal system, effective career planning system and a vigorous employee participation in the organizations‟ decisions and actions are the key strategic human resource practices which influence organizational performance in the sector. It, therefore, implies that companies operating in the manufacturing sector should pay more attention to these practices with a view to improving their implementation across the industry. Construction industry accounts for a significant portion of world economic activities, especially in emerging economies like Ethiopia where infrastructure developments are much needed. Moreover, the construction industry is typically characterized as a labor-intensive and low-tech sector. Meanwhile, it is also the sector consistently found the least productive. Commonly cited reasons for such poor performance in this sector are fragmentation, project-based culture, and temporary teams. These factors have something in common; they pointed to the difficulty in managing human resources. Therefore, one way to increase the performance of this sector is to influence more on human capital through the use of human resource management (HRM). In this study, therefore, the researcher attempted to assess human resource management practices in Adama town public building project.

1.2 Statement of the problem

Ethiopia is recognized as one of the most penurious nations on the world where robust economic change is needed (Economics, 2018). According to the International Monetary Fund (IMF, 2018), the Ethiopian economy had shown a continuous growth driven by major public construction and infrastructural investment with increasing demand for development.

According to NBE, (2018) construction industry's contribution covers 71.4% of the economic growth in the industrial output. Unlike other economic sectors, the construction industry's influences on socioeconomic transformation is recognized through its direct, indirect, and spillover effects. The federal government of Ethiopia is prioritizing the allocation of public funds to the infrastructure investment to achieve the national economic development goal of middle-income status by 2025, (Sinesilassie, 2017). MOUDC, (2015) indicated that the commitment of the government is being demonstrated by mobilization of actual funds to the construction industry, as compared to other economic sectors and the 10-year forecast of the Ethiopian construction industry of 10.5% is the fastest growth rate in sub-Saharan Africa and the second-fastest industry growth globally (Fitch Solutions, 3 2019).

But, Shiferaw et al., (2012) argued the public project success and its service delivery faced many critical challenges; roads constructed in remote parts of the country were below the expected schedule and quality, the government was unable to create revenue, and failed to cover maintenance and operation costs. Similarly, public-funded housing development projects, universities, and hydropower generation projects were among the projects that cost the government an enormous amount. Shiferaw et al. and other many researchers affirmed the government of Ethiopia was overambitious in planning mega projects and did not allocate sufficient time for the front-end project development phases critically crucial to the success of projects.

Sinesilassie, (2017) indicated that Ethiopian public construction project management issues of people's competency founded on knowledge of project managements are given less attention. GTP, (2015) explained that the poor project management of the country's construction industry was identified as a challenge of project success.

Also, according to Hailemarkos, (2020) Ethiopian public construction projects were critically aroused owner's competence, conflict among project participants, poor human

resource management, and project managers' ignorance and the lack of knowledge. People's competency and knowledge handlings were given less attention to the Ethiopian construction project management environment (Tabish, & Jha, 2017).

The previous researches shown that, in our country human resource management practices in public building projects can affect the performance, and completion of the projects. 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.

Apart from this, some local studies have been conducted in varies sectors. For instance, Wasbeek (2004) examines how human resources are managed at selected Ethiopian private companies, how Ethiopian human resource management practice is evolving, and how it can be improved. And the outcome of the study shows that an understanding of Ethiopian human resource management practice makes it possible to improve Ethiopian human resource management practice, and thus to increase employee productivity. As to Wasbeek (2004), Ethiopian human resource management practices differ from human resource management practices in the West due to differences in cultural factors, economic systems, political systems, and legal and industrial relations. More important, the researcher states that the importance of human resource management is not uniformly understood at all the case-study companies. Although the multinational companies based in Ethiopia see their human resources as the companies‟ most important asset, as human capital, the local companies generally do not. Other studies on human resource management in Ethiopia focus on other industries. For example, Shiferaw (2013) assesses HRM practice in Ethiopian Public Health Association (EPHA), and the finding shows that there are gaps in HRM practices regardless of HR manager's high level of education in their respective job

fields. In another study, Hagere (2017) examines the effect of compensation practices (focusing on salary, benefit, career growth opportunity, supervisor support and non-financial recognition practice) on professional employees‟ turnover intention in an organization called GOAL Ethiopia. The result shows that salary is the main factor in influencing employees‟ turnover intention followed by supervisory support, career growth opportunity and non-financial recognition in a respective manner.

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.

Adama town is one of the fastest growing town in south east Ethiopia where the large business activities going on and the city currently found in delegating public infrastructural development projects in the area. The town contained with diverse nation and nationalities with different cultures, , and the area is slightly different in climate and weather conditions from other cities in the country. This study, therefore, focused on the assessment the human resource management practice towards project success in Adama public building project

1.3 General objective

The general objective of the study was to assess the human resource management practice towards project success in Adama public building project.

1.3.1 Specific objectives

- To identify the factors affecting human resource management practice in Adama public building projects.

- To analyze the impacts of poor human resource management Practice on projects in Adama public buildings.
- To develop and provide human resource management Conceptual framework for public building projects in Adama Town.

1.4 Research Question

The following questions would be addressed and answered at the end of the study.

- What are the factors affecting the human resource management practice in Adama public building projects?
- What are the impacts of poor practicing human resource management on projects in Adama public buildings?

1.5 Significance of the Study

Human resource of an organization represents the largest investment of an organization. The inadequate utilization of human resource in the construction industry does not only constitute waste to construction organizations, but also to individual clients, governmental organizations, construction workforce and ultimately affects the construction industry's project delivery record. In addition, the effective utilization of construction resources is to achieve the set of organizational objectives. The basic objectives of construction organizations are: on time project delivery, project delivery within the cost budgeted and quality expected. The project success significantly depends on the adequate human resource management practice. Since adequate utilization of construction resources and project human resources are the pillar for project success, it's a very vital to study on human resource management practices.

There are only few researches done on this body of knowledge (human resource management) in project management even though it is one of the major body of knowledge described by project management institute and this research provide essential knowledge bases and points for other further studies, especially in Adama town public projects.

The significance of this study is generally, to provide essential suggestion on factors affecting HRM practice to the project stakeholders, especially for contractors, employers

and consultants who widely involved in HRM Practice in all their activities to enable the projects successfully completed, and this thesis would expedite for further studies.

1.6 Scope and limitation of the study

The research study was limited only to public building construction projects in Adama town. The information was gathered from the following stakeholders in all Employer, constructors and consulting firms; contractors, site managers, supervisors, project managers and engineers. This study has limited to some extents of situational happening such as Covid-19 pandemic, political, peace and security crises in the city and entirely in Ethiopia when the data was collected.

The scope of the study was assessment of the availability and implementation of the human resource management with respect to management practice and project knowledge areas, policies, standards, measurement, control and continuous improvement documents equivalent to identify the Company's human resource management practice in Adama public building project and recommendation of beneficiaries stated in above. The research approach in the study, the respondents are free to respond truthfully and dependable to the research instrument and the Management.

2. LITERATURE REVIEW

2.1 Introduction

In this chapter, literatures that acknowledge the chosen topics of the research were presented to give this study a theoretical perspective to go along with the case study. Now in practice, however, most construction projects encounter problems and challenges on human resource management and overall construction (time cost and quality) of the construction project. Most construction projects face the Human resource management problems during their execution phase and most project tasks were rarely finished according to the planned (time, cost, quality) and effective management and most of the construction companies have not Human resource management experience and procedure. This is common in the construction industry in our country. The paper therefore addresses the human resource management tools and technique problems in practices in Adama town public building construction projects with the principles and functions of construction management theories.

2.2 Construction Industry

The Construction industry is a big business. The industry's significant impact on the world economy can be demonstrated by reviewing construction's proportion of the total value of goods and services, as well as the number of people employed in construction as a proportion of the total workforce and the number of construction firms compared with the total businesses in all industries. According to MoUDC, (2012), construction industry is a sector of the economy that transforms various resources into constructed physical economic and social infrastructure necessary for socio-economic development. It embraces the process by which the said physical infrastructure were planned, designed, procured, constructed or produced, altered, repaired, and demolished. And, it classify construction industry as, Building such as residential building in urban and rural areas, non-residential building, i.e. factory buildings, ware houses, office buildings, garages, hotels, schools, hospitals, clinics, etc. Transportation systems and facilities which are airports, harbors, highways, subways, bridges, railroads, transit systems, pipelines, and transmission and power lines. Structures for fluid containment, control and distribution such as water treatment and distribution, sewage collection and treatment distribution systems, sedimentation lagoons, dams, and irrigation and canal systems, underground structures (such as tunnels and mines).

In Ethiopia, construction industry comprises of organizations and persons who include companies, firms and individuals working as client, consultant, main Contractors and Sub-Contractors, materials and component producers, plant and equipment suppliers. The government was involved in the industry as client, financier, regulator and operator. According to MoUDC, (2012), construction industry in recent year has undergone dynamic changes due to improved technologies, increased competition, customer expectations and demands and scarcer economic resources. Therefore, to overcome problems coming from these dynamic changes the industry needs improved, competent and effective managerial skills.

2.2.1 Construction Project management

According to Jainendrakumar, (2015) project Management is as knowledge field of both an art and a science. According to Price, (2007) project management involves applying knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations. It is the art of directing and coordinating human and material resources throughout the life of a project to achieve project objectives within specified constraints. Begum & Mohamed, (2016) explains that a large industrial project involves numerous differentiated activities that must focus on one final target. From the commencement of the works to the completion and delivery of the plant, the organizational structure must run smoothly on the basis of cooperation and interaction to meet the obligations undertaken towards the client. With this aim in view, it is essential for a company to possess great capabilities and experience. In planning and optimizing the various project activities, as well as highly advanced management tools and methodologies to control time and cost constraints and to meet the challenging requirements of growing efficiency. According to Endeshaw, (2017) coated ECoTEMPA, (2007) report defining construction project management is management includes control of construction planning, design services and works phases, time and progresses including productivities, cost and cash flow, quality an b d specifications, and stakeholders and organizational behaviors with organization resources by planning, organizing and coordinating implementing, monitoring, controlling and evaluating: (processes, resources, stakeholders with in quality, time, cost and environmental constraints).

According to Norizam & Malek, (2013) the project management was successful when the primary objectives have been met. These three primary objectives according to him were:

delivery or completion on or before the date agreed with the customer, completion within the budgeted cost and a project that meets the set standards of quality. Project managers face the difficult task of both fostering flexibility, adaptability and the acceptance of change as a permanent state, and providing support for team members to enable them to live with a process they may experience as stressful and disorientating. Norizam & Malek, (2013) defines project management as the planning, organizing, directing, and controlling of company resources for a relatively short term objective that has been established to complete specific goals and objectives.

Thus, clients, project managers, design professionals, contractors and construction managers are required to demonstrate sound managerial skills on construction projects (Umulisa et al., 2015). The outcome of construction projects is a product of processes and stages from conception to final delivery of projects. The effectiveness of strategies and approaches human resource planning in the construction developmental process will positively affect construction workers' efficiency. Hence, the construction project developmental process from inception stage and highlights the basic tasks of project managers, from commencement of a construction project to the satisfaction of clients' requirements (Umulisa et al., 2015).

2.3 Effective construction project management Practices

According to Ansari et al., (2018) Project management is like so many other business applications, lends itself well to automation. Despite recent advances in technology and production management techniques, construction remains one of the most people-reliant industrial sectors. Human resources represent the large majority of costs on most projects, and the industry employs an extremely diverse range of people from a wide range of occupational cultures and backgrounds, including people in unskilled, craft, managerial, professional and administrative positions. These diverse groups of employees operate as an itinerant labour force, working in teams to complete short-term project objectives in a variety of workplace settings. Hence the industry's project-based structure is made up of many disparate organisations which come together in pursuit of both shared project objectives and individual organisational objectives. These objectives are not necessarily compatible and they might not align which people's personal objectives, which can lead to competing demands on those working within project-based environments. These features

make construction one of the most challenging environments in which to manage people effectively, to ensure that they contribute to organisational success.

2.3.1 Projects effectiveness criteria

As Loosemore et al., (2003) supposed, one of the topics in the project management is the project success criteria. These are the most important attributes and objectives which must be met to enable the project to be termed a success. It is always possible that during the life of the project, problems arise which demand that certain changes have to be made which may involve compromises and trade-offs to keep the project either on programmed or within the cost boundaries (Bhoola & Giangreco, 2018). The extent to which these compromises are acceptable or permissible depends on their scope and nature and require the approval of the project manager and possibly also the sponsor and client (Aoin, 2017) and (Umulisa et al., 2015). However, where such an envisaged change will affect one of the project success criteria, a compromise of the affected success criterion may not be acceptable under any circumstance (Sena, 2008).

For example if one of the project success criteria is that the project finishes by or before a certain date, then there can be no compromise of the date, but the cost may increase or quality may be sacrificed (Sirshar & Liaqat, 2019). Success criteria can of course be subjective and depend often on the point of view of the observer. It is judged by the conventional criteria of a well-managed were project cost, time and performance. The failed in all three, as it was vastly over budget, very late in completion and is considered to be too small for grand opera. Despite this, most people consider it to be a great piece of architecture and a wonderful milestone (Norizam & Malek, 2013).

2.3.2 Project Success

In accordance with the definition of the project success, it has been access through a specific frame of time and duration (Panagiotopoulos et al., 2018). Project performance also has been explained as the produced quantity in which returns of the labours being utilized in specific amount (Belout & Gauvreau, 2004). Project performance itself keeps its distinctive dimension such as quality, comprehensiveness with required quantity. Performance of any individual person refers to the ability of his knowledge and learning in professional context to present the output against the work objectives (Begum & Mohamed, 2016). All organizations of services and production related are always remained

interested in employee performances because it measures the effectiveness of employees and the level of efficiencies of organizations and groups. Many researchers of HR management have offered their results by suggesting the measurement of employee performance in effective way as the output received from the workers has been analyzed as percentage of work that has been redone or rejected due to the quality (Ansari et al., 2018). Project manager is the key player in making any project successful and he has to show his positive impacts to transform leadership quality in making bonds among the team members (Bhoola & Giangreco, 2018).

2.4 Human Resource (HR)

According to Mahajan, (2016), Human Resource is the most important asset of the organization. Adebowale, (2014) defined Human Resource (HR) as the knowledge, skill, experiences, energies and attitude employed by organizations which were potentially useful for the production of goods and services.

HR was recognized not just in terms of hours work but also skill, knowledge, attitude, experience and similar attributes that affect particular human capabilities to do productive work and would be most suitable for the realization of their purposes, aspirations or objectives (Adebowale, 2014). Therefore HR were largely a the factor of efficiency/productivity of any organization success (Sinesilassie et al., 2017), whether it be construction or manufacturing but in them having the requisite skill, training, education, experience and attitudes that would be most suitable for their purposes, aspirations or achieving objective (Al-Mustapha, 2017).

2.5 Human Resource Management Practice in Construction Industry

The current practices in the construction environment were dynamic, complex and under-developed in respect to human resource management (A. Dainty & Loosemore, 2013; Raidén & Dainty, 2006). Consequently, most academics opinions concerning the approach of the construction industry with regard to human resource management are fragmented from the realities of construction activities (Sutar, A. & Mehendale, 2017). A major challenge of human resource management in construction was identified as the difficulty in balancing the needs of the construction project, the organizational requirements and the needs of the construction workforce (Al-Mustapha, 2017). Especially, a typical distinguishing factor of the construction industry was the

uniqueness involved in every construction project, which highlights the necessity of exhibiting a clear understanding of the construction industry in order to understand the human capital involved.

As per as Ayalew et al., (2016), performance evaluation in construction project generally focuses on a limited number of performance elements which was the act of achieving the project goals related to the product, which were completing the project on time, within budget and with the required quality and to client satisfaction.

Nowadays, private sector place more emphasis on the profit rather than the quality and time which was the major concern in the past (Teshome, 2019). Therefore, in order for construction firms to realize forgoing performance elements of construction project optimally, the concept of HRM efficiency must be stressed in the firms to improve the quality of product and services (Fionov, 2017). The willingness to change the quality of HRM will determine the success of total quality and time management in the firms (Eshetu, 2016). According to Hailemarkos, (2020) quality and efficiency of HRM have been identified as the major imperatives lacking in Ethiopian construction firms.

2.6 Factors Affecting Human Resource Management Practice

2.6.1 Human resource planning

According to El-Dash, (2007) most construction projects face the Human resource management problems during their execution phase and most project tasks were rarely finished according to the planned (time, cost, quality) and effective management and most of the construction companies have not human resource management experience and procedure. This is common in the construction industry in our depending on (Ayalew et al., 2016 and Sinesilassie et al., 2017). Human resources planning are the strategy that the HR department uses when hiring. It shows HR how many employees need to be hired, what areas they must specialize in, and what kind of training they will receive (Ulferts et al., 2009). Without HR planning, larger companies would struggle to meet the demands of their position with an adequate workforce, and knowledge would not spread across the company in an efficient manner. Human resource planning is a process an organizations determination of the quality and quantity of human resource requirements to delivering its long and short term goals and matching the required demand with an effective and constant supply (Dainty et al., 2000). As per El-Dash (2007), the Key Points HR planning tools and

techniques are concerns include the size of the workforce and the skills of the workforce with delivering the work on time and schedules. Some types of HR planning are most concerned with whether the business has enough employees; this is common in rapidly expanding companies. Other plans as per as Mavuso & Agumba, (2016) focus on the skills that employees bring to the table and how employees can be best used in specific projects. Employee skills become increasingly important as the business becomes more interested in growing its market and increasing product or service value (Omar et al., 2020). The effective human resource management requires the sound of Human Resource Management practice. Dainty et al. (2000) defines HRM as a distinctive approach to employment management which seeks to obtain competitive advantage through the deployment of a highly committed and skilled workforce, using an array of techniques. HRM can help firms improve organizational behavior in such areas as staff commitment, competency and flexibility, which in turn leads to improved staff practice (Kokkaew & Koompai, 2012).

2.6.1.1 Short-term Human resource Planning

Short-term human resource planning refers to staffing needs in the near future. It mainly involves a keen awareness of demand and supply, that is, an awareness of what positions need to be filled and who in the workforce is available to fill those positions. Usually, it is much easier to establish objective at this point in human resource planning. These objectives usually involve how to attract desirable employees and how to get rid of undesirable ones (Raidén & Dainty, 2006). According to Yasen (2018), short-term human resource planning programs include recruiting programs, selection programs and practice appraisal systems . Assessing the level of success at this point is usually very easy.

2.6.1.2 Intermediate-Term Human resource Planning

Intermediate-term human resource planning involves a lot more uncertainty at every phase of human resource planning (Centre for Business Practices, 2005). The main question that must be asked is, "What will we need?" The task becomes less about evaluating what is available now and more about forecasting. Often, a lot of these questions are answered based upon the judgment and discretion of midlevel management. Establishing objectives in this type of human resource planning usually involves trying to adjust employees' skills to match those that will be needed in the immediate future (Afzal et al., 2013).

2.6.1.3 Long-term Human resource Planning

According to Samwel, (2018) long-term human resource planning is becoming one of the most important tasks faced by companies that want to survive. Succession planning is a large part of this type of human resource planning. It involves judging what kinds of skills managers will need in the future and figuring out how to provide people the chance to build these skills. Also, competitive strategy plays a big role in long-term human resource planning; will the company want to focus on maintaining innovation or on cutting costs? Career development programs are often a part of the third phase of this type of planning. The success of long-term planning programs is still difficult to assess, but as time passes, more and more information becomes available.

2.6.2 Employee Training and Development

Nowadays, organizations know proper training needs to establish a proper system. Training and development referred to as a systematic approach to learning and development to improve individual, team, and organizational effectiveness (Alami et al., 2015). According to Becker and Gerhart, (1996) and Desta, (2008) training is the systematic development of the attitude and skill behavior pattern required by an individual in order to perform adequately a given task. Training is required to change the behavior of the employee in the workplace to increase employee's skills according to the standard which exists in the company (Kokkaew and Koompai, 2012). The organizations usually implement training when they want to change the process of manufacturing or service, training for new skills gives opportunity for better career paths (within the company or in the labor market), higher income and employability. The companies should improve continually employee's skills and attitude by training and manpower development to ensure enforcing optimal performance (Adebowale, 2014). As shown in figure 2.1 manpower training and development can change and improve the level of ability and attitude of the employees in the workplace.

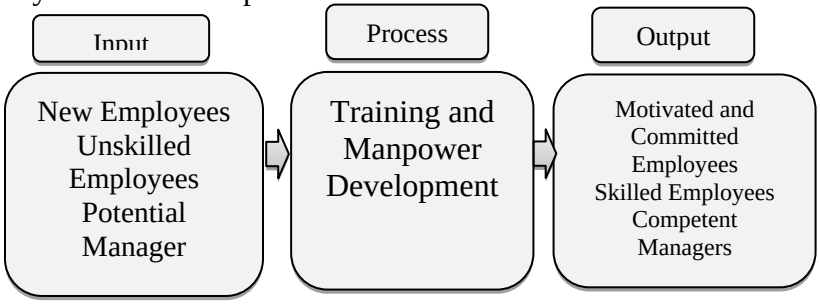

Figure 2.1: Manpower training's mode. Source: Adebowale, (2014)

2.6.3 Employee Motivation

Gile et al., (2018) and Igwe, (2014) defined motivation as the characteristics of an individual's willingness to expend their effort towards a particular set of behavior Construction worker motivation was a significant factor in the growth of construction productivity (Tregaskis et al., 2006; Yuan et al., 2011). The authors define the content theory of motivation as being based upon individual needs resting on psychological needs that demand satisfaction. On the other hand, a process theory focuses on the thought that runs through the mind of individual workers and affects their performance. Adebowale, (2014) and Eshetu, (2016) claim that productivity was related to workers motivations, and worker motivation was directly linked to construction productivity. Parry & Battista, (2019) argued that HRP construction industry can be made more efficiency/ productive by adopting the right system of motivation.

Kokkaew & Koompai, (2012) states construction managers' knowledge of workers' motivating factors can help construction management to develop approaches for improving construction workers motivation. The quality of human performance is significantly dependent on motivation, where an increased motivation brings increased productivity and vice-versa. Therefore, managers should understand individual needs to create a better work environment for construction employees. Efficiency of HRP in construction industry requires employers to recognize the driving forces of their employees financial and non-financial (Abuazoom et al., 2017). Ansari et al., (2018) identified employee motivational drives and demotivating factors that enhance job satisfaction and dissatisfaction as consisting of the following: Motivation drives: Achievement, Employer recognition, The work itself, Taking responsibility and the chance to advance Demotivating factors: Working conditions of employees, Poor Salary, Poor relations with superiors and policy of organizations

2.6.4 Recruitment and Selection

According to Desta (2008), recruitment is a practice of attracting potential applicants having the required qualities fill available job openings within the firm. Recruitment is the method of producing a "pool of" competent individuals "to apply for" work to a company (Alshaikhly, 2017). This means that it was an obligation for an organization to activate peoples' interests to apply for jobs. Recruitment was a vital constituent of a company's blanket staffing policy and it was the practice of attracting

qualified and competent individuals to a specific work from internal or external sources (El-Dash, 2007).

Madanat and Khasawneh, (2018) and Kidanemariam, (2019) reviewed HRM practices and policies of high performance companies, found that proper application of recruiting and selecting procedures boost employee productivity, increase organizational performance, and contribute in diminishing turnover. However, poor application of the recruitment and selection practices poses detrimental effects; blocking the company from achieving its objectives thereby dwindling its competitive edge and market share. High disputes and disciplinary problems; absenteeism; low productivity; and high turnover are common factors that accompany poor application of recruitment and selection practices (Kokkaew and Koompai, 2012).

2.6.5 Communication management

Asiedu-Appiah et al., (2013) and Bhoola and Giangreco, (2018) state the information considerably contribute to the achievement of construction project objectives. They define communication "as the transmission of information resources and others including ideas, knowledge, specific skills and technology from one person to another through the use of shared symbol and media". The subject of communication in the construction sector was a challenge, as workers in a team planning to achieve the same goal were brought together from different firms and backgrounds (Mihaleva, 2021). Nevertheless, the effectiveness of HRP in construction industry was significantly depends on the clarity of information on the job requiring execution (Adebowale, 2014). Identify effective communication as a fundamental factor for human resource planning and management systems to consider in order achieving project success.

Due to the fragmented nature of the construction sector, poor interpersonal communication leads to conflicts and disputes (Adebowale, 2014). However, as a result of multilingual practice on a construction site, report a conflict between two trades on a construction site that led to wastage of 30% of formwork in a multi-story building (Adebowale, 2014). The claim that on most construction sites, employees are not informed about the plan of work early enough, but were mostly informed close to the commencement of daily activities (Lifshits, 2017). This may be detrimental to construction workers' efficiency.

2.6.6 Team Performance Appraisal

This parameter encounters serious attention in the construction industry. Most of the participants appreciated the documentation process for staff assignment, including the project WBS, procurement process, policies and regulations, recruitment rates, qualifications, required training, and resource allocation with respect to the project schedule (Othman et al., 2012).

According to Azmy (2012), the success of a company or business was directly linked to the performance of the people that work for that production. Since every organization is made up of people, acquiring their services, developing their skills, motivating them to high level performance and ensuring that they continue to maintain their commitment to the organization were essential prerequisite to achieving organizational objectives.

2.6.7 Team building and development

Azmy, (2012) states the effectiveness of HRM practices were ensuring organizational success and achieve organizational objectives and concerned constitutes factors such as planning, training, recruitment and selection, team development, and team management system. Team development was the process of improving the competencies and interaction of team members to enhance project performance. In this process, individual and group skills need to be enhanced to improve the overall productivity of the project. Assessment of the performance was a milestone in the modern management processes. Team performance assessment provides a clear picture of an integrated working team (El-Dash, 2007). Unfortunately, despite the fact that most teams in the construction industry work together on several projects, the participants indicated that the assessment process is seldom conducted (Ijigu, 2015).

2.6.8 Reward and Compensation

According to A. Kidanemariam, (2019) coating Graham, (2003) defined total reward as an element which includes all types of rewards, indirect as well as direct and intrinsic as well as extrinsic. An employee reward system consists of an organization's integrated policies, processes and practices for rewarding its employees in accordance with their contribution, skill, competence and their market worth. Compensation is one of the human resource management functions that deals with every type of reward individuals receive in exchange for performing organizational tasks, such as wages, salaries and bonuses (Feyissa, 2013).

2.6.9 Health and Safety practice

According to Asiedu-Appiah et al., (2013) responsibilities for planning and coordination of health and safety are often unclear, and compliance with health and safety law is generally poor in construction projects. Regarding occupational health and safety practices in the construction projects major challenges as (A. Kidanemariam, 2019) revealed, low priority has given to health and safety; poor attitude of construction professionals, lack of competent party to enforce policies, procedures and regulations, and poor health and safety management systems.

The key to success is to ensure that health and safety aspects are carefully considered and the risk of danger and hazard to persons, as a result of site activities, is systematically safeguarded. According to Begum & Mohamed, (2016) the major causes of accidents on site should be identified and can be directly attributed to unsafe design and site. Specifically, safe working environment, safety gadgets, health insurance and provision of sick leave a payment of tools allowances and early payment of wages and salaries are the major factors of safety and security of employee in construction projects (Asiedu-Appiah et al., 2013).

2.6.10 Employee Job security

Enshassi et al. (2009), described job security creates a climate of confidence among employees, which cultivates their commitment on the company's workforce. He revealed Job security requires as a certain degree of interchange, a company must indicate a clear message that jobs are secured then, employees believing that this is true, feel confident and commit themselves to expend extra effort for the company's benefit.

As per as Asiedu-Appiah et al. (2013), the antecedents of job security includes worker characteristics, job characteristics, organizational change and job technology change and the consequences include psychological health, physical health, organizational withdrawal, unionization activity, organizational commitment and job stress. Job involvement, cultural values, and procedural justices moderate job security perceptions and attitudes.

2.6.11 Internal and External Factors to HRM practice

Researchers explored many critical internal and external factors which influence of HRM Practice in construction project. Tregaskis et al., (2006) believe on time payment should be

done right at the time when the work was accomplished. Discontinuity of work schedule will affect labors financial status and sufficient amount of pay should be given to labor. According to Wasbeek, (2004) psychological factors deals will many parameters, in civil Engineering point of view, in recent years the cultural difference was making the worker to work uncomfortably and work satisfaction with respect to job is very much necessary in Ethiopia. It was very clear to mention that climatic condition will affect the working performance (Sutar, A. A. & Mehendale, 2017). The project manager and the site supervisor should always maintain the site condition in a good manner. Wambua, (2013) described 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. 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 was necessary to have proper maintenance of equipment and proper training for the operating equipment's to the labors (Enshassi et al., 2009).

As pertained by Enshassi et al., (2009) political or governmental problems often aroused in some firms, and due to this work schedule is disturbed .In small scale firms, resources are managed in an improper manner, whereas in partnership based firms contractual conflicts are found. The above factors are studied and analyzed for their impact on human resources. weather changes, project location, working with confined place, and large project size (Ijigu, 2015). Also technology and systems have a positive influence on project success in HRM.

2.7 Impacts of Poor HRM Practice in effective Project Success

The concepts of efficiency and effectiveness were commonly defined to competencies for project execution. Centre for business practices report, (2005) states the effectiveness was the degree of achievement of objectives. Projects are formed to accomplish objectives and success is measured in terms of how well these objectives have been met. Criteria such as meeting project time, budget, technical specification and mission to be performed are the top priorities of project objectives.

According to Ansari et al., (2018) and Kidanemariam, (2019), the project success was measured against the overall objectives of the project (i.e. time, cost, quality, and project

mission). More specifically, the concept of success in a construction project, according to some researchers was corresponding to the efficiency and effectiveness measures. Project success was in terms of efficiency and effectiveness measures (Sinesilassie et al., 2017). Efficiency measures refer to strong management and internal organizational structures (adherence to schedule and budget, and basic performance expectations). In other words, efficiency measures deal with 'time, budget and specifications'. Effectiveness measures refer to the achievement of project objectives, user satisfaction and the use of the project. A project delivered on time, within budget, and meets performance specifications may not be well-received by the client/users for whom it is intended (Azmy, 2012). The project efficiency was concerned with the utilization of equipment and workforce, whereas effectiveness is concerned with the achievement of outcomes (Moyo, 2015). They also the efficiency of construction projects involves the utilization of resources, which may be represented by the ratio of the resources expected to be consumed divided by the resources actually consumed (Fionov, 2017) and (Makwana, 2016).

Jose, (2018) describe the evaluation of project success was from the efficiency and effectiveness dimensions. Project efficiency ("doing the thing right") was concerned with cost and process management (i.e. the efficient conversion of inputs to outputs within budget and on schedule) and a wise use of human, financial and natural capital. While, project effectiveness ("doing the right thing") was concerned with the development of worthiness or appropriateness of the chosen project goal (Ansari et al., 2018).

According to Jose, (2018) Human resource management practice has general direct impact towards project Success. Jose, (2018) found that construction firms with higher levels of strategy, including human resource, planning have achieved higher organizational performance, including higher productivity, greater cost effectiveness, and greater overall efficiency. Effectiveness of HRP management was the extent at which a project achieves objectives and production objectives. Project success can also be measured by the main factors of Effective human resource management. According to (Azmy, 2012) the identification of HRMP effectiveness measures was associated with the project 'results' in terms of accomplishing core business and project objectives, users' satisfaction and the use of the project.

2.8 HRM Practice Conceptual Frame Work to construction project organization.

According to Huemann et al. (2007), construction projects have the following characteristics that make HRM policies and practices different from those of the other industries employing routine organization: managing by projects as the strategy of the company, temporary nature of projects, dynamisms, project portfolio resource and multi-role demands, and specific management paradigm. In addition, it was also found that construction industry is a male-dominate culture (Loosemore *et al*., 2004). These are the main factors affecting the use of HRM in construction industry. The first two factors, managing by projects and temporary nature of projects, resulted in fundamentally different HRM models in classical managed companies and project-oriented companies like construction companies as presented in Figure 2.2.

However, effective human resource management has a significant impact on the working environment, the interest of the worker, the role of internal and external behavior. As the link of human assets and the overall performance results together, the enterprise shall take the initiative to implement and improve human resources management system, improve human resources advantages, affect the positive behavior inside and outside the employee's professional role for the enterprises through the implementation of human resource management.

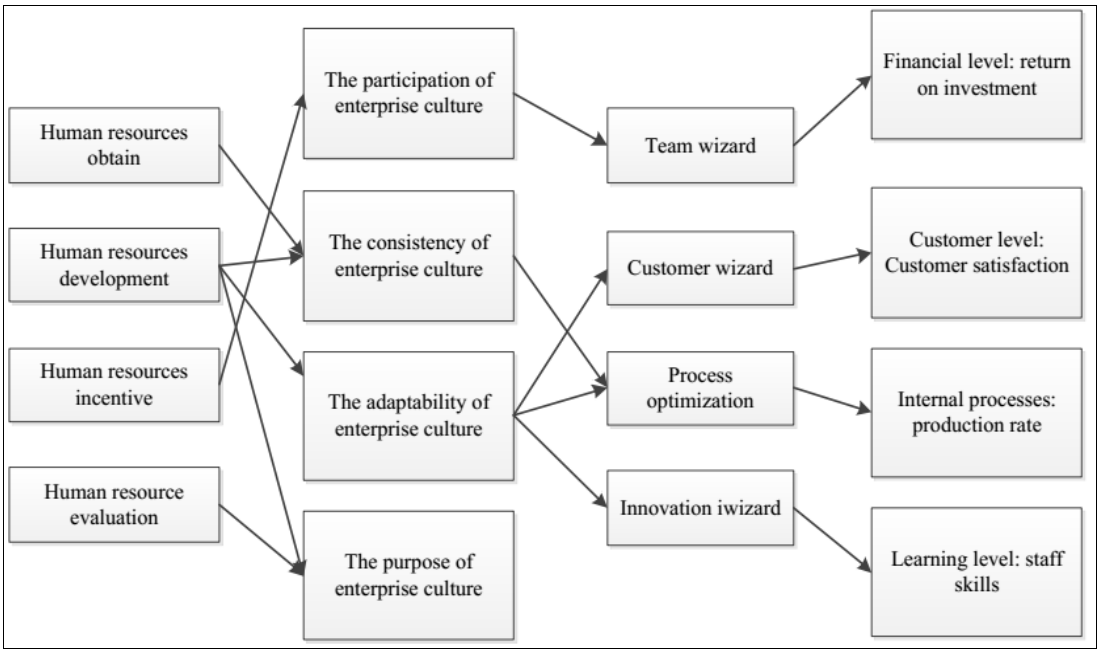

Figure 2.2: Effectiveness model of human resource management in construction companies

Source: Zhang, (2016)

Zhang, (2016) proposed the model of the conceptual framework of the early human resource value chain, that the four aspects of the organizational performance output actually represents a causal ordering relations.

2.9 Summary of Literatures and Research Gaps

There have been so many studies conducted previously to determine the factors affecting HRM practice in construction projects in the developed and developing countries. Past studies and research shows, there are still anonymous factors need to be further studied even in developed countries. Information and consideration of the various factors affecting HRM practice was needed to determine the focus of the necessary steps in an effort to reduce project cost overrun and project completion delay, thereby increasing efficiency and overall project performance.

The conclusion of Morlai, (2017) was based on the group ranking his analysis suggests six main groups have significant impact on the human resource planning and management systems in the construction projects. These are manpower group, managerial group, motivation group, material/equipment group, safety group, and quality group in descending order.

According to Zeleke, (2012) the most critical factors affecting building projects HR planning efficiency were levels of skills and experience of workforce, levels staff turnover, rework problems, levels of management commitment for change, project budget shortage or delay, poor incentive mechanism, poor condition and poor weather condition.

Backlund, (2014), states on his study of impact of poor management in construction in building project identified factors such as: planning, team acquirement, team management, and team development, management skills, safety, quality control, manpower scheduling, employee training and development, temperature, employee motivation and degree of bilateral communication.

Zwikael, (2009) findings were poor HR planning and scheduling, material shortage at project site, lack of skilled labor, rework due to construction errors, old and inefficient equipment, lack of, payment delay to suppliers were the most critical factors affecting HRMP. Some HRM practices research Gaps reviewed in our country were summarized and discussed as below:-

Table 2.1Summary of research Gaps on HRM practice

Author	**Study**	**Key Findings focuses**	**Research Gaps**	**Current/ this Study (2021)**
Alemu. (2017)	Assessment Of HRM Practices in Ethiopian Construction Works Corporation	Selection and recruitment and training only, focused more organizational management goals	Only five related factors were assessed, the population is very small only one single office.	Tried to address the most factors Affecting the project HRM Practice and the result focused on the current project situations.
Abebe, (2019)	Assessment of HRM Practices and Challenges in Selected Construction Projects: A Study in Jimma Town.	Only the assessment of HRM practices has not focused factors affecting HRM practice facing the selected construction projects in line with human resource management practices	Adopted only on selected projects and it limits study's generalization. Haven't investigated on the impacts of poor practicing HRM to project success, only assessed some related Major factors.	Adopted simple random sampling technique, investigated the impacts of the identified HRM practices on productivity, cost effectiveness and other related issues towards project success, Tried to address the most factors
Kidane mariam, (2019).	Effect of Human Resource Management Practice on Project Success. A case study on Telecom Expansion Project, Ethio telecom	The established objectives targeted on some HRM practice variables, and focused on the organizational functions	The study focused on the organizational functions responsibilities, unidentified HRM practice and HRM functionality.	Clearly identified the study objectives, and focused on the identification of major factors and its impacts on the project success. Not focused on the organizational functionality.

3. RESEARCH METHODOLOGY

3.1 Description of the Study Area

This study was conducted on Building construction projects in Adama town. Adama is one of the ancient and the largest towns in the country located on the eastern shore in the Oromia Regional State. Geographically, the town is located at $8°33'35" - 8°3'46"$N latitude and $39°11'57"E - 39°21'15"E$ longitudes. It is about 100 kilometers away from Addis Ababa in southeast direction. Adama has a total area of about 13,000 hectares, which has been subdivided into 14 urban Kebele (least administrative structure) administrations. The altitude of Adama varies from about 1500m to 1670m above mean sea level.

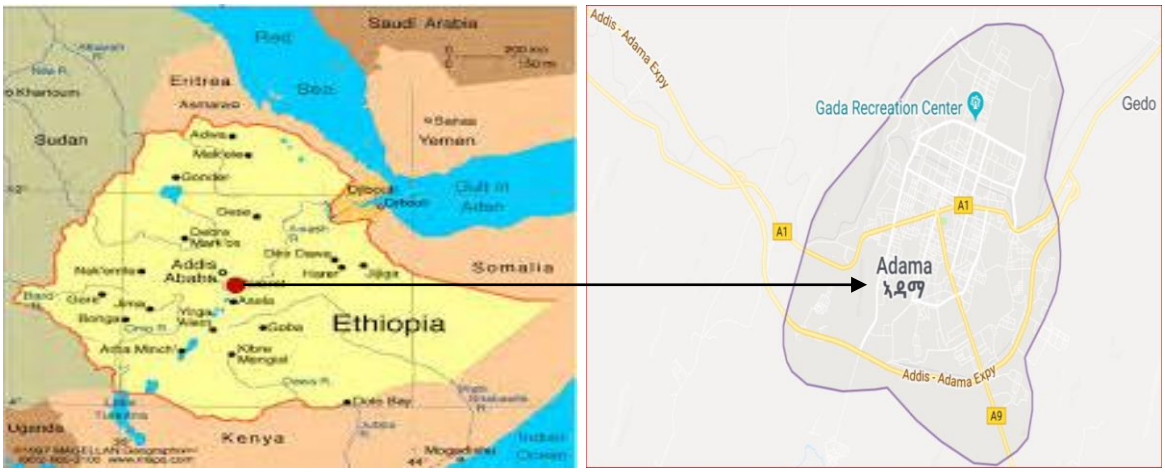

Figure 3.1: Location of the Research area (Adama town) on the map of Ethiopia

Scale: 1:2km (Source: http://www.operationworld.org/ethi/Adama)

Adama town is one of the fastest growing town in south east Ethiopia and the city currently found in delegating public infrastructural development projects in the area. Public building projects are one of the daily increasing demands in the town

3.2 Study Design and approach

The study used both descriptive and exploratory method. The study used descriptive because it tried to assess the human resource management practices on the project and used exploratory to check the associations between the human resource management practices and the project success. The study used quantitative and qualitative research designs. The following research frame was used to arrive at the final finding of the research.

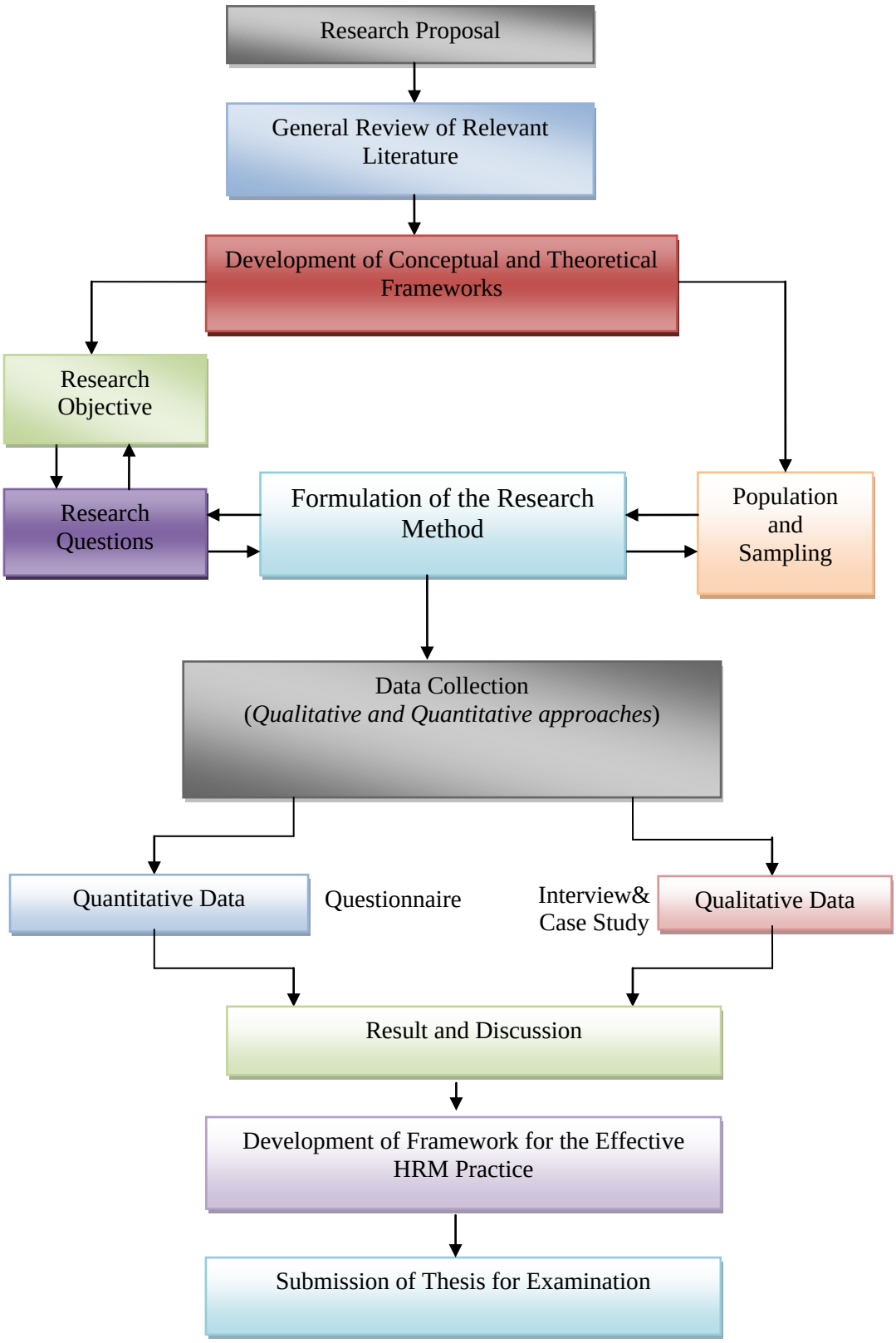

Figure 3.2: Research process

3.3 Target Population & Sampling Methods

3.3.1 Population of the study

The target population of the study was public buildings projects in Adama Town. During the data were collected, there were around 12 ongoing Public building projects in Adama town.

3.3.2 Sample size

Random sampling technique was used in order to define the sample size to distribute the questionnaires. The random sample size can be calculated as the following equation, in order to achieve a 95% confidence level (Assafa et al., 2001) accordingly:

$n = n'/ [1+ (n'/N)]$……. (Equation. 1)

Where: -

N = Total number of populations

n= Sample size of finite population

n' = Sample size of infinite population = S^2/V^2; where S is the variance of the population elements and V is a standard error of sampling population. (Usually S= 0.5 and V = 0.06).

So, sample size (n) = $(0.5^2/0.06^2)/ [1+ ((0.5^2/0.06^2) /12))] = 69.444/ (6.787) =$ **10**

Therefore, 10 (Ten) public building projects are randomly selected to achieve the 95 % confidence level from the total 12 (twelve) ongoing public building projects in Adama town.

Purposive sampling was applied to select professionals (project managers, site engineers/office engineers, Surveyor, Resident engineers) and others with different experiences, from contractors, consultants and employer expertise found in each randomly selected ongoing public building project and 33 respondents was selected as representative of the total population in the public building projects in Adama town from 10 randomly selected ongoing public building projects.

3.3.3 Sampling procedures

The returned questionnaire statements to be obtained from the respondents' opinions will have the following significant factor of practice on a Five-point Likert scale with. The

sample selected for each of the three groups is described below as: Consultants, Contractors and Employees who are involved in the public building construction project.

The answers of respondents' opinions for the factor affecting HRM Practice statements have point (5 = Strongly Agree, 4 = Agree, 3= Neutral, 2 = Disagree 1= strongly Disagree) and for Impacts of poor HRM practice towards project success statements have a point with (5 = very high impacts, 4 = high impacts, 3 = medium impacts, 2 = low impacts and 1 = very low impacts).

Table 3.1: Values assigned for the Likert scale in the questionnaire

Likert Scale	***Factors***	***Impacts***
5	Strongly Agree	Very High Impact
4	Agree	High Impact
3	Neutral	Medium Impact
2	Disagree	Low Impact
1	Strongly Agree	Very Low Impact

3.4 Study variables

Sixty six (66) dependent variables supposed to affect HRM Practice were listed under 10 groups, and twelve (12) impacting dependent variables of poor HRM practices towards the project success were identified in this study based on the reviewed literature.

Dependent variable: Human resource management practice toward project success in public building construction project.

Independent variables**:** Employee recruitment and selection factor, Training and development factors, reward and compensation and motivation factors, employee job security, health and safety factors, team performance appraisal factors, communication factors, internal and external factors.

3.5 Data collection process and source of Data

The data was collected from primary and secondary sources. A primary data source includes a questionnaire, interview and Observation while secondary data sources include journals and internet sources.

a) Primary Data: Primary data will be collected through different data collection methods.

Questionnaires: Standardized questionnaires (close-ended and open-ended questionnaires) will be distributed to all respondents using Likert's five rating scale to respond accordingly.

Interview: The research done with qualitative research tools that allow exact exploring the excellences and attitudes of the people. The interview is used in order to achieve the employee's own viewpoint in HRM activity and how it is practiced, and perceived in their daily life in the projects.

Observation or case study: Observation was used for the research assessing the routine and interactional design HRM in Adama public building project organizational context. This is a way of witnessing what and how, for example, managers and supervisors deal with the employees or how the communication channels are open in practice.

b) Secondary Data Collection: Secondary data sources were used to analyze the situation to put the study in the context of the Adama public building project. Sources include books, journals, the Company's HRM manual and annual reports, and other related publications.

3.6 Data processing and analysis

The effectiveness of manpower planning in public building construction projects will be determined according to the questionnaire survey data and the collected data will be analyzed by using SPSS V22 and RII. The score, assigning to each factor by the respondents represents the degree to which the factor contributes to overall practice factors. The set of information from survey data will be examined and confirmed for validity by the primary investigator. The data will be subjected to statistical analysis for further insights using the Statically Package for Social Science (SPSS) v22 for such as Pearson's correlation, regression and ANOVA at the final analysis and process.

3.6.1 Relative importance index

The relative importance index method (RII) is a statistical method of the determining owners, consultants, and contractors perceptions of the relative importance of the identified effective factors, which is used for ranking the different important factors. As this survey, there will be designation to identify the relative importance of the factor to

effective human resource practices in public building projects. The RII is to determine the relative ranking of the factors, mean values are transformed to importance indices based on the formula:

RII = ΣW / (A) (N)……..... (Equation 2)

Where:

W = Weighting given to each causes (ranging from 1 to 5) multiplied by the respondent's frequency, A = Highest weight (i.e. 5 in this case) and N = Total number of respondents.

To analyses the data from the gathered information, RII have value ranging $0<RII \leq 1$. The RII value close to 1 has highest important effect factor, and RII value close to 0 has the least important effect factors. After analyzing the data, variables prioritized the most affecting factors and presenting the results by using different methods; like graphs, charts and tables. In order to answer research objectives, study the analysis results, discussion of the results is compared by using the RII values.

Finally, conclusions will be drawn regarding to the effectiveness of manpower management practice on delivering public building project and their remedial measures forwarded based on the findings of the study and reviewed literature.

3.6.2 Frequency Percentile (Fp)

Similarly, the frequency percentile (Fp) computed from the frequency response scale with the formula (Hailemeskel, 2020)

FP = ΣW (n/N)*****100…….. (Equation 2)

Where W, stands for the weight given to each respondent's response, n is the frequency of response, and N is the total number of responses.

3.6.3 HRM Practice Conceptual Framework Modeling system

As it have seen from the literature reviews, For example; (Zhang, 2016), "HR affects the output of staff, then the output of staff impacts organizational output, while the organizational output will affect financial output, which eventually leads to the changes in the output of the enterprise in the market. It have been seen that successful human resource management encourages employees to have a good working attitude and behavior, and thus integrates into the impact of the implementation of human resource management on organizational citizenship behavior. A review of observed findings, investigated on both

the research objectives i.e. "Factors negatively affecting human resource management practices" and the negative impacts it would have on the project success in Adama public building projects. Human resource planning, employee selection and recruitment, employee training and development, employee motivation, teamwork appraisal and reward and compensation have direct relationships with productivity and then to project success.

Depending on Zhang, (2016) and Hassan S., (2005), the approach model used in this study was composed of system and attempt to assess the human resource practice to the project success through the performance of the job in terms of its input, transformation, and output. So, all systems and their models can be considered as in a hierarchical sense. It is composed of the assed factors affecting human resource management practices and the analyzed impacts of poor practicing human resource management would have on the project success. Those factors and impacts were used as system variables. There were hierarchies of the components of the systems which each and every single variable infer to HRM factors or impacts of poor practicing HRM. The study first identified nine factors affecting HRM Practice subsystems denoting the first intervening under the first dependent variable (Human resource management practice) from different sub groups as important determinates of the optimum level of system performance in the construction project, the nature of these subsystems and their variables fills the hierarchical sense of ordering, as suggested in Figure 4.2.

Then on the second intervening variables; Selection, recruiting and development are the base for fair and formal sense of any organization and those variables used as the first tools to transfer the first negative intervening variables found in the study to the third positive intervening variables through the acquired ground intervening variables as such knowledge, skill, ability and attitudes. After the third positive intervening variables in the public building adopted, there should be the Project Performance control Variables (time, cost, quality and safety) through fourth intervening variables stablished in effective, competent workers and efficient project production. Lastly, the end project success would be achieved for a case of the public building project objective. To refer the model in Figure 4.2, one should understand that the third intervening variables were integrated from the converted negative factors affecting HRM practices and the negative impacts of poor practicing HRM have had on the project success positive inference.

3.7 Ethical considerations

The research is free from any political consideration; it is based on the academic perception. The researcher also assuring that the names of respondents will not be revealed in the study and this research is informed to the consent participants.

Finally, the researcher took appropriate measures to ensure the research would cause no physical or psychological harm to research participants. As a general rule, therefore, the study did not raise any ethical concerns.

3.8 Validity and Reliability Test

3.8.1 Reliability Test

The reliability of the questionnaires statistics was calculated Cronbach's Alpha. Cronbach's alpha was used to assess the reliability, or internal consistency, of a set of scale or test items. In most social science research situations the general rule of thumb is that a Cronbach's alpha. As shown in Table 3.2 below, reliability of items was tested by SPSS 22 and Cronbach's Alpha resulted 0.818. So, the coefficient alpha 0.70 or higher is considered to be acceptable.

Table 3.2: Cronbach's alpha for questionnaires reliability checking factors

		No of response	%	Cronbach's	N
Cases	Valid	30	100.0	.818	75
	Excluded	0	0		

3.8.2 Validity Test

Content validity was used in this paper because it ensured that the sample of the items represented what it was intended to measure as designed. Reviewers' validity views and suggestions of the Advisors' was incorporated in the questionnaire and then Pre-testing was done on selected five respondents with the help of the assistants; however these respondents were not included in the study sample. As a result of the pilot test, changes in words selection and instructions were done in the questionnaire. Regular cross checking

and follow ups were done to ensure accuracy, relevance, completeness, consistency and uniformity of the data collected.

3.9 Data quality assurance

The data was checked to be more accurate. However, pilot studies were performed for both qualitative and quantitative studies. The importance of the pilot study was to save time, resources and ignore frustrations. Additionally, adequate training for data collectors, sufficient payment for data collectors has been done and Proceedings with appropriate checks after data collection have been undertaken.

A pilot study was conducted to refine the methodology and test instrument such as questionnaires before administrating final phase. A questionnaire was tested on potential respondents, academic lecturers, and second year MSc. COEM students or my friends to make the data collecting instrument objective, relevant, suitable to the problem and reliability. Issues raised by these pilot respondents were corrected and questionnaires were refined. Besides, proper detection by my advisor was also taken to ensure validity of the instruments. Finally, the improved version of the questionnaires were printed, duplicated and dispatched.

4. RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter discusses the data and analysis the research findings and the interpretation made to the analyzed data. It also includes the general characteristics of background profile in descriptive statistics, ten major factors affecting Human resource management practices, the impacts of poor practicing human resource management, case studies and HRM practices conceptual frameworks development are discussed in a descriptive way. Correlation analysis was also made and used to indicate the relationship between contractor, consultants and employers, between dependent and independent variables and finally regression is used to determine the effect of independent variable on dependent variable.

4.2 Response Rate

A total of thirty three questionnaires were purposively distributed to professional employees who are participating in Adama town public building projects and 30 questionnaires were filled completely and returned. The remaining 3 questionnaires were not returned in which the 2 of the respondents were assigned on duty for field work without filling the questionnaire on the next day and the remaining one were due to the reluctance of the respondents. Frequency's percentile (Fp) was calculated by (Equation 2).

Table 4.1: Questionnaire distribution and response rate

respondents From	Questionnaire distributed	Questionnaire responded	Response rate (Fp)
Contractors	17	16	94.11%
Consultants	7	6	85.71%
Employer	9	8	88.88%
Total	33	30	90.90%

4.3 Respondent's Background

The study tried to determine the demographic data in the following variables as indicated below. It frequency percentile was calculated by (Equation 2).

4.3.1 Respondent's Education Level and Experience in Construction projects.

In Table 4.3 below, from the total of 30 respondents of all organizations, 30% (9) held MSc. Degree, 24.4 % (14) held BSc. Degree and 13.30 % (4) were held Diploma. Also, out of 30 professionals 6.7% (2) respondents have experienced less than five years in building construction, 16.7% (5) of the respondents have experienced between 6-10 years, 36.7% (11) of the respondents have experienced between 11-15 years, 16.7% (6) of the respondents have experienced above 16-20 years, the other 23.3% (7) remaining respondents have experienced above 20 years.

Table 4.2: Educational Level and Experience of Respondents

Level of Education & Experience of Employees		Contractor		Consultant		Employer		Average
		Freq.	**%**	**Freq.**	**%**	**Freq.**	**%**	**%**
Edu. Level	MSc. Degree	4	25.0%	3	50.0%	2	25.0%	30.%
	BSc. Degree	9	54.3%	3	50.0%	5	62.5%	56.7%
	Diploma	3	18.8%	-	0.0%	1	12.5%	13.3%
Experience	1-5 years	1	6.3%	-	0.0%	1	12.5%	6.7%
	6-10 years	3	18.8%	1	16.7%	1	12.5%	16.7%
	11-15 years	4	25.0%	3	50.0%	4	50.0%	36.7%
	16-20 years	4	25.0%	1	16.7%	-	0.0%	16.7%
	21-30 years	4	25.0%	1	16.7%	2	66.7%	23.3%

This implies that there were educated and more experienced professionals which more enhances the value of expected responses that ultimately increase the quality of the study.

4.3.2 Functional Position of Respondents

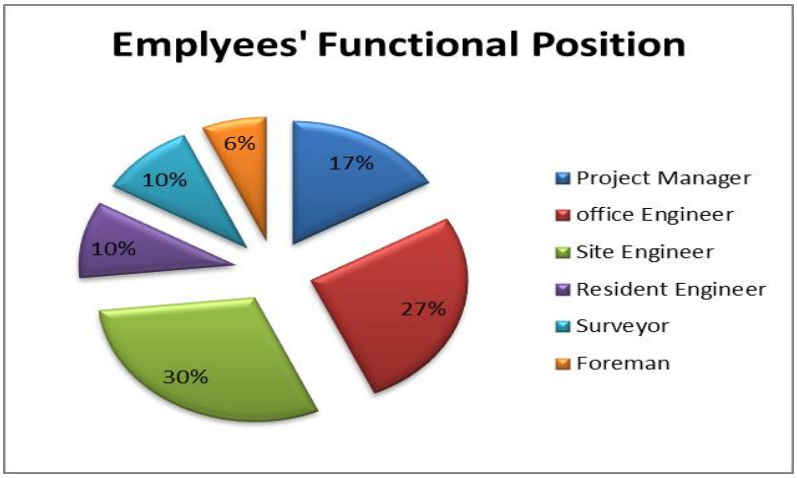

Figure 4.1: Functional Positions of Employees

From chart 4.1 above, out of 30 respondents of all participated organizations, 17% (5) were project managers, 27% (6) were office engineers, 30% (8) were Site Engineers, 10% (3) were Resident engineers, 10% (3) were Surveyors and the remaining 6% (2) were Foremen. This also denotes the researcher has got a skilled and professionals which further enhances the quality of expected responses that ultimately increase the quality of the study.

4.4 Factors affecting Human resource management practice

Table 4.3 to 4.11 below illustrates the result of the employees' responses who undertaken in building construction projects in Adama town form, contractors, consultants and Employers Perspective. Ten (10) group of on factors affecting Human Resource management Practice with Sixty three (63) items in public building projects were identified. These factors were Computed by RII in (equation 1) and ranked as perceived by the 3 responding groups.

4.4.1 Human resource management related factors

Table 4.3 below illustrates the relative importance index and the rank of average summaries of Human resource management related factors according to contractors, consultants and Employers.

From this table, among six the highest average important index of HR management related factors affecting HRM Practice were: "Poor coordination in formulating technical, operational and Strategic Human resource management with project objectives" was the first highest important factor with RII of 0.90. Here, the study implies that the in public building projects, it was a drastic problem in Coordinating and formulating technical, operational and Strategic Human resource management with project objectives in public building project in Adama Town.

"Poor standard human resource management assessment specifications, requirements and document amendments/design" was the second highest important factor with RII of 0.87. When we look this factor it might looks simple, but this is the pillar for the construction project HRM and also for the project success. Thus it's difficult to conceive the firms and the project goal without strong and specific standard HRM documents and amendments. "Lack of effective human resource management policy" was also third ranked the most important factors with RII value of 0.86. Also, the fourth significant HR management

related factor was “Inadequate Assignment of professionals and skilled project managers” with RII value of 0.81 affects HRM practice. “Lack of clear roles and responsibilities among project team members” and “inadequate fitting the project organizational structure with effective responsible employee” with RII of 0.79 and 0.78 were the fifth and the six factors affection HRM respectively. When to perceive those factors affecting HR management the identified and ranked from 3rd to the 6th, it could be implicit that the project stakeholders stacked of a free ride, without insuring the project HRM requirements, even they might did not realized the project HRM policy and tough employee responsibility to the ride of the organizational functionality.

Table 4.3: Summary of HR management related factors

No	***Human resource management related factors***	**Contractor**		**Consultant**		**Employer**		**Average**	
		RII	**Rank**	**RII**	**Rank**	**RII**	**Rank**	**RII**	**Rank**
1	Poor or lack of coordination in formulating technical, operational and strategic human resource management with project objectives	0.91	1	0.90	1	0.88	3	0.90	1
2	Poor standard human resource management assessment specifications, requirements and document amendments/design	0.89	2	0.83	2	0.90	2	0.87	2
3	Lack of effective human resource management policy or system	0.84	4	0.83	2	0.90	1	0.86	3
4	Inadequate assignment of professionals and skilled project managers	0.79	5	0.77	4	0.88	3	0.81	4
5	Lack of clear roles and responsibilities among project team members.	0.78	6	0.80	3	0.80	4	0.79	5
6	Inadequate fitting project organizational structure with effective responsible employee	0.88	3	0.83	2	0.65	6	0.78	6

Also the group discussions and interviews taken from top functional positions, met to strengthen those top four factors affects the human resource management practice which leads to affect the project completion or success. As Raidén & Dainty, (2006) stated, he company’s strategic choice in terms of operational HRM was to devolved many of the responsibilities to line management. The company had to a main board level HR director, who oversaw HRM implementation at project level and held the responsibility for all lining trends.

4.4.2 Human resource planning related factors

Table 4.4 below presents human resource planning related factors affecting HRM practice with respondent's relative importance index and rank average summaries collected from Contractors, Consultants and Employers.

In early discussions of human resource planning defined is as "the process through which management determines how the organization should move from a current manpower arrangement to a more desired arrangement.

Table 4.4: Summary of HR Management related factors

NO	Human resource planning related factors	Contractor		Consultant		Employer		Average	
		RII	Rank	RII	Rank	RII	Rank	RII	Rank
1	Lack of project human resource department integration with the company's project strategic planning process.	0.88	3	0.90	1	0.93	1	0.90	1
2	Lack of ensuring the effective utilization of existing project human resource.	0.89	2	0.87	2	0.88	2	0.88	2
3	Lack of skilled personnel with adequate capacity and knowledge in the project	0.91	1	0.77	5	0.83	4	0.84	3
4	Lack of short term and long term project human resource planning needs.	0.79	7	0.87	2	0.85	3	0.83	4
5	Lack of regular project human resource planning, scheduling and assessment	0.81	5	0.80	4	0.83	4	0.81	5
6	Lack of determining and matching project human resource demand and supply estimation.	0.80	6	0.77	5	0.83	4	0.80	6
7	Lack of adequate HR planning techniques in the project.	0.83	4	0.73	7	0.78	7	0.78	7
8	Lack of establishing and recognizing the future projects job requirements	0.76	8	0.73	7	0.78	7	0.76	8

Table 4.4 below illustrates that the most important indexed HRM planning factor affecting HRM practice were: "Lack of project Human resource department integration with the

company's project strategic planning process" was the first higher average ranked with RII value of 0.90, "lack of ensuring the effective utilization of existing project human resource" was the second ranked with RII value of 0.88,

"Lack of skilled personnel with adequate capacity and knowledge in the project" was the third ranked with RII value of 0.84, "lack of short term and long term project human resource planning needs" was the fourth ranked with RII value of 0.83, "lack of regular project human resource planning, scheduling and assessment" was the fifth ranked with RII value of 0.81, "lack of determining and matching project Human resource demand and supply estimation" was the sixth ranked with RII value of 0.80, "lack of adequate HR planning techniques in the project" was the seventh ranked with RII value of 0.78, "lack of establishing and recognizing the future projects job requirements" was the eighth ranked with RII value of 0.76.

It can be concluded from Table 4.4 that human resource planning Adama public building project is being undergone in inadequate practice since modern human resource planning concerns the forecasting of the organization's human resource needs for the future and the planning is required to meet predefined needs. It requires not only the establishment of objectives, but also the development and implementation of certain programs. Human resource planning also involves the collection of data, which can be used to evaluate program effectiveness and give notice when revision is needed. One of the objectives of planning is to facilitate organizational effectiveness, so it must be integrated with the organization's business objectives as conceived and stated by (Ulferts et al., 2009) earlier.

Also, interviews undertaken mostly of approved the above listed important factors which may affect HR planning in public building projects were "lack of determining and matching project Human resource demand and supply estimation, lack of adequate HR Planning techniques in the project and lack of establishing and recognizing the future projects job requirements" ranked and listed as the sixth to eighth in Table 4.5 above.

4.4.3 Human resource selection and recruitment factors

Table 4.5 below demonstrates the respondents agreement Relative importance index values for eight human resource selection and recruitment factors affecting HRM practice towards project success in Adama town public building projects in aspect of contractors, consultant and employers point of view.

As shown in Table 4.5, it could be determined that "inadequate assignment of the right persons at the right time at the right place at the right job in the project" highly affects, HR selection and recruitment factors with average importance of RII=0.97 which affect HRM practice in public building projects in Adama town. Also, that there is unclear or biased external/internal recruitment and inadequate job advertisement and recruitment of employees found in the building project, which were ranked as the second and the third important factors with RII=0.91 and 0.83.

Table 4.5: Summary of Human resource selection and recruitment factors

NO	***Human resource selection and recruitment related factors***	**Contractor**		**Consultant**		**Employer**		**Average**	
		RII	**Rank**	**RII**	**Rank**	**RII**	**Rank**	**RII**	**Rank**
1	Inadequate assignment of the right persons at the right time at the right place at the right job in the project.	0.99	1	1.00	1	0.93	1	0.97	1
2	Inadequate job advertisement used to recruit employees	0.94	2	0.90	2	0.90	2	0.91	2
3	Unclear or biased external/internal recruitment found in the construction project.	0.88	3	0.87	3	0.75	6	0.83	3
4	Lack of or poor formal induction, orientation and familiarization process designed to help new recruiter to provide basic organizational principle	0.83	4	0.80	5	0.83	3	0.82	4
5	Unfair and non-transparent in recruitment and selection process, not based on desired knowledge, skills, attitude and experience.	0.81	5	0.87	3	0.75	6	0.81	5
6	Lack of effective selecting applicants who meet project job requirements and Specifications.	0.81	5	0.80	5	0.80	5	0.80	6
7	Lack of or poor implementation of recruitment and selection policy.	0.78	7	0.73	7	0.83	3	0.78	7

From this table, "Poor formal induction, orientation and familiarization process to new employees to provide basic organizational principle with average RII of 0.81and unfair and non-transparent in recruitment and selection, not based on desired knowledge, skills, attitude and experience with RII of 0.80 affects HRM Practice. Also, in group discussion held respondents ensured that selecting, recruiting and assigning the right people are in the

right place at the right time is a critical factor in gaining and maintaining project success. Also some of interviewed respondents, recruitment and selection have always been crucial processes in all construction projects to maintain effective human resource Management practice.

4.4.4 Human resource training and development related factors

Table 4.6 below illustrates the finding revealed the factors affecting HR training and a development practice with the first (1st) highest indexed important factor was "Absence of Starting team building before the project starts" with Average RI of 0.97 as shown from the Table 4.6.

Table 4.6: Summary of Human Resource Selection and Recruitment Factors

NO	*Human resource training and development related factors*	Contractor		Consultant		Employer		Average	
		RII	Rank	RII	Rank	RII	Rank	RII	Rank
1	Absence of starting team building before the project starts.	0.99	1	1.00	1	0.93	1	0.97	1
2	Lack of employees training and development modules, schedule, strategy and programs in the project.	0.94	3	0.90	2	0.90	2	0.91	2
3	Poor in ensuring in team building and development in the projects	0.94	2	0.9	2	0.9	2	0.90	3
4	Lack of effective training and development based on relevant practical works in the project.	0.88	4	0.87	4	0.75	7	0.83	4
5	Lack of evaluating ongoing training and following up the training process and the outputs regularly in the project.	0.83	5	0.80	6	0.83	4	0.82	5
6	Absence of providing learning and trainings employees to develop their skill to improve the quality of services in the project.	0.81	6	0.87	4	0.75	7	0.81	6
7	Absence of scheduled follow up the training and development program in the project.	0.81	5	0.80	5	0.80	5	0.80	7
8	Lack of real improvement in the level of employees performance through training in the project	0.78	8	0.73	8	0.83	4	0.78	8

Also, the second (2^{nd}) and the third(3^{rd}) highest factor affecting HRM training and development practice in Adama town building projects were that, "lack of employees training and development modules, schedule, strategy and programs in the project with RII of 0.91 and "poor in ensuring in team building and development in the projects" with RII of 0.90.

The finding revealed that, the important factors affecting HRM training and development practice was "lack of effective training and development based on relevant practical works in the project with RII of 0.83 as the fourth (4^{th}) and "lack of evaluating ongoing training and following up the training process outputs regularly in the project" with RII of 0.82 as the fifth (5^{th}) important factor.

Absence of providing learning and trainings employees to develop their skill to improve quality of services in the project and Absence of scheduled follow up training and development program in the project were also the sixth important factors which affect HR training and development practice. The result indicates that HR training and development practice highly affects the success of public building Project in Adama town.

I can suggest that contractors, consultants and employers should consider training and professional development practice to their employees to improve and project performance for successful completion. Training and development of human resources improve efficiency, effectiveness, and competence (Hassan, 2005).

4.4.5 Human resource performance appraisal related factors

Table 4.7 below shows the relative importance index and average rank of contractors, consultant and employers summary of human resource performance appraisal related factors which affects Human resource management practice in public buildings projects in Adama town.

The relative important factors rated ranked in Table 4.7 below shows that there is high "lack of well-designed performance appraisal programs in all contractor, consultant and employer organization" was ranked first with RII of 0.92 in performance appraisal related factors. From interview responses, this is may be due to lack of employees' participation, inconsistent implementation and lack of resource, and programs**.** Absence of receiving perception and feedbacks on time from immediate supervisor in the project was also averagely ranked as the second important factors with RII of 0.88 which affect employees'

performance appraisal practice. Also, respondents from contractor, consultants and employers argued that "lack of employee awareness in the implementation of actual performance appraisal" with RII of 0.86 and "lack of immediate evaluation of employees' performance" with RII of 0.0.85 was ranked as the third and fourth factors affecting performance appraisal, which affects HRM practice in Adama town public building projects. Lack of employee awareness in opinions, creativity, innovation and problem solving factor with RII of 0.78 and poor performance regular assessing and evaluating employee's absenteeism and turnover with RII of 0.76 were also ranked as the fifth and sixth important factors.

Table 4.7: Summary of human resource performance appraisal related factors

No	***E. Human resource performance appraisal related factors***	**Contractor**		**Consultant**		**Employer**		**Average**	
		RII	**Rank**	**RII**	**Rank**	**RII**	**Rank**	**RII**	**Rank**
1	Lack of well-designed performance appraisal programs	0.93	1	0.90	2	0.93	2	0.92	1
2	Absence of receiving perception and feedbacks on time from immediate supervisor in the project.	0.91	2	0.83	4	0.90	3	0.88	2
3	Lack of employee awareness in the implementation of the actual performance appraisal	0.81	5	0.87	3	0.90	3	0.86	3
4	Lack of immediate evaluation of employees' performance	0.83	4	0.80	6	0.95	1	0.85	4
5	Lack of employee awareness in opinions, creativity, innovation and problem solving	0.74	7	0.83	4	0.78	6	0.78	5
6	Poor in performing, assessing and evaluating employee's absenteeism and turnover regularly.	0.78	6	0.77	7	0.75	7	0.76	6

Generally, the above computed relative importance index shows that employees and teams performance appraisal significantly affects HRM practice, and if it not treated performed and evaluated regularly, it's simple to perceive it will affect effectiveness of project success.

4.4.6 Human Resource Reward and Compensation related factors

Table 4.8: Summary of human resource reward and compensation related factors

No	*F. Human Resource Reward and Compensation related factors*	Contractor		Consultant		Employer		Average	
		RII	Rank	RII	Rank	RII	Rank	RII	Rank
1	Poor focusing of compensation and reward in attracting and retaining employees	0.88	3	0.92	2	0.87	3	0.98	1
2	Lack of providing benefits that compare favorable employee	0.93	1	0.90	3	0.90	1	0.91	2
3	Lack of providing compensation and reward packages with promotion, financial rewards, Certificate of appreciation and other than their salary	0.89	2	0.93	1	0.88	2	0.90	3
4	Absence of concern about employees' reward to improve human resource performance	0.84	4	0.89	4	0.80	4	0.85	4

Table 4.8 above lays the ranks and relative importance indexes mean of the key HR reward and compensation related factors. As shown above, while respondents from contractor and Employer side agreed on the highest important factor affecting reward and compensation of employees was "lack of providing benefits that compare favorable employee", respondents from Employer suggested "lack of providing compensation and reward packages with promotion, financial rewards, certificate of appreciation and promotion other than salary" highly affects affecting reward and compensation of employees. respondents from Contractor and Employers side also agreed "lack of providing compensation and reward packages with promotion, financial rewards, certificate of appreciation and other than their salary" as the second important factor, and respondents from employer agreed "poor focusing of compensation and reward in attracting and retaining employees" as the second important factor that affects reward and compensation of employees. While contractors and employers side respondents agreed "poor focusing in compensation and reward in attracting and retaining employees", as the third important factor, employers' respondents side agreed "lack of providing benefits that compare favorable employee" as the third important factor. When I would like to see the average important rank of the respondents from the highest to the least, factors affecting reward and compensation of employees were: "Poor focusing of compensation and reward in

attracting and retaining employees" with RII of 0.98 as the 1st, "lack of providing benefits that compare favorable employee with RII=0.91 as the 2nd, "lack of providing compensation and reward packages with promotion, financial rewards, certificate of appreciation and other than their salary with RII of 0.90 as the 3rd, and "absence of concern about employees' reward to improve human resource performance" with RII of 0.85 as the fourth respectively.

As observed from the above statements, reward and compensation of employees group factors i.e.; lack of providing benefits, poor in attracting compensation, lack of concern employee's reward and poor focusing on reward employees to improve performance practices highly affects HRM practice in public building projects to ensure project success.

Also, scholars i.e., (Hamid et al., 2017) recognized that poor reward and compensation of employees may discourage who are performing poorly or strongly make them even to leave a firm.

4.4.7 Human resource motivation related factors

As discussed in the literature, motivation is the most important factor for productivity and quality improvement (Rasool et al., 2019). The study performed in Table 4.9 below on human Resource motivation related factors in a response of experienced and educated construction professionals summarizes the most nine ranked relative important factor affecting HRM practice.

As a result of Table 4.9 below, the overall respondents average important index factors results shown have no big difference, but to some extent among themselves and all the factors affecting directly HR motivation in public building construction in Adama town.

The researcher slightly observed that the respondents were considered the mostly factors as they faced on their life experience in the project. Out of nine averagely indexes importance factors of the respondents, The highest important factors affecting employees' motivation were: "Absence of motivating workers during the execution of work in providing transportation, clear water, shelters and care services" was ranked as the first with RII of 0.91, "lack of motivating in making employee proud to work in the organizational responsibilities" was ranked as the second with RII of 0.90 and "Lack of

motivating in providing opportunities for professional career growth" was ranked as the third with RII of 0.87.

Table 4.9: Summary of HR motivation related factors

No	*G. Human resource motivation related factors*	Contractor		Consultant		Employer		Average	
		RII	Rank	RII	Rank	RII	Rank	RII	Rank
1	Absence of motivating workers during the execution of work with providing transportation, clear water, shelters and care services.	0.88	1	0.93	2	0.90	1	0.91	1
2	Lack of motivating in making Employee proud to work in the organizational responsibilities	0.88	1	0.97	1	0.85	3	0.90	2
3	Lack of motivating in providing opportunities for professional career growth	0.84	3	0.90	5	0.88	2	0.88	3
4	Lack of motivating in appreciating the employees for the work they have done.	0.81	5	0.93	2	0.85	3	0.87	4
5	Lack of motivating in offering a happy and friendly working environment	0.75	7	0.93	2	0.83	5	0.84	5
6	Lack of maintaining good salary band among categories of employee in a competitive employee market	0.84	3	0.77	8	0.83	5	0.81	6
7	Lack of motivating in offering progressively interesting and challenging work to the employees	0.70	8	0.83	6	0.80	7	0.78	7
8	Lack of motivating in offering flexible work schedules for the employees in time in the project.	0.68	9	0.80	7	0.78	8	0.75	8
9	Poor in ensuring the company to do not commit any unfair labours practices	0.78	6	0.70	9	0.70	9	0.74	9

The result generally shown that, the contractors, consultants and employers are very poor in practicing human resource motivation in public building projects. Because, in my opinions from the above questionnaire result and held round table interviews, nowadays there are very large experienced competitive number of employees, who perform their responsible duties to overcome their life challenges without another a treatments. It's up to her/him to do as per their skill and knowledge, otherwise there are enough competitors replace them. When we see the fourth and fifth ranked important HR motivation factors

from the table, i.e. "Lack of motivating in appreciating the employees for the work they have done" with RII of 0.87 and "lack of motivating in offering a happy and friendly working environment" with RII of 0.84 respectively, we can criticize the firms, especially contractors and Employers engaged in public building project in poor practicing ridiculous care and inadequate action in making motive employees to improve productivity. Also the other important HR motivation factors listed in the table strengthens poor action in HR management practices which needs special attention from all corresponding parties in improving project success. This shows, employers (contractors, Consultants and owners), in situations should have to motivate their employees so that they can put their best foot forward. Hence, they should be proficient in motivating employees to perform better at site work.

4.4.8 Job Security, health and safety welfare related factors

From Table 4.10 below; job security, health and safety welfare related factors summary, the respondents stacked their agreement much premium to health and safety issues and they confirmed the findings of (Asiedu-Appiah et al., 2013), stated that "Absence of providing health, safety and welfare, absence of employee appointment on safety issues and lack of ensuring it's developed and implementation" as the first intended importance factor with RII of 0.94 overall from contractor, consultants and employers. It could be seen from the group-discussion that employees regarded most health and safety factors as important but the practice was very minimal. Therefore it suggests that employees might be dissatisfied about this and might possible to intend quit their current places of work.

From Table 4.10 below, since job security creates a climate of confidence among employees which cultivates their commitment on the company's workforce, most of employees from contractors side displayed their fear on "absence of continuity of work to ensure employees long term job security or career opportunity" as three highest important factors affecting HRM practice with RII of 0.93 while Employees from consultants and employers sides has shown slight agreement.

Most of the time, employees engaged in contractors' and consultants'' firm would always want to feel secured about the jobs they do. Nowadays not only in Adama town, in our country Ethiopia, this is a practice that can coerce employees to have an intention to leave the job they were doing in the firm.

Table 4.10: Summary of Job Security, Health and Safety welfare related factors

No	*H. Job security, health and safety welfare related factors*	Contractor		Consultant		Employer		Average	
		RII	Rank	RII	Rank	RII	Rank	RII	Rank
1	Absence of providing health and safety plan appointment and ensure it is developed and implemented.	0.94	2	1.00	1	0.85	3	0.94	1
2	Absence of continuity of work to ensure employees long term job security or career opportunity	0.95	1	0.97	3	0.85	3	0.93	2
3	Absence/poor in providing personal protective equipment (PPE) in at work place in the project	0.91	4	0.97	3	0.90	1	0.92	3
4	Lack of insurance provision to the Employees in the project.	0.94	2	0.98	1	0.85	3	0.91	4
5	Lack of health and safety prevention , taking the right precautions; providing a satisfactory working environment practices	0.86	5	0.83	7	0.90	1	0.87	5
6	Lack of careful assessment in examination of the potential causes of harmful workplace, so as to inform the implementation to reduce health risks.	0.86	5	0.90	5	0.80	6	0.85	6
7	Lack of formal health and safety induction, monitoring and controlling health and safety performance practice	0.83	7	0.87	6	0.73	7	0.81	7

As expressed in literatures, it was specified by (Sena, 2008) that a company that has understood that job security contributes to its performance, advances again in job security and that the company must indicate a clear confidence and courage employees are job-secured. Then, employees feel confident and commit themselves to expend extra effort for the company's benefits, unless this is very serious and has a very high potential to cause employee turnover.

It's clear that, in developing countries construction industries health and safety issue is being practiced poorly mainly on site. Accordingly, in Adama town public building project it's being practiced simply just as a will of God, not as wellbeing of man. As a clue, from view point of the respondents intended in Table 4.9, they witnessed "Absence/poor in providing personal protective equipment (PPE) in at work place in the project" as important factor with RII of 0.92 and even if, if any major accidents to pathway (loss of life) happened, employees have no evident life security. Thus, the fourth ranked important

factor respondent's agreement "lack of insurance provision to the employees in the project" from Table 4.9 with RII of 0.91 reflects the above statements. It's simple to guess the catastrophes our nations especially; unskilled laborers, carpenter, masons, helpers and the other not listed labors faced day to day in the entire construction industries in our country. They fed their life day to day, because of a carelessness of the firms or the employers' practices. "poor or inadequate of health and safety prevention, taking the right precautions; providing a satisfactory working environment practices" with RII of 0.87 and "Lack of careful assessment in examination of the potential causes of harmful workplace to reduce health risks" with RII of 0.85 were also the respondents important factors practiced in public building projects in Adama town. Thus, careful attention should be taken by constructors, consultants and Employers to do not commit any life loss, and it's important to perform pre-assessment in examination of the potential causes of harmful workplace to reduce health risks.

4.4.9 Project HR communication related factors

The table 4.11 below illustrates the values of agreement relative importance index and average rank of contractors, consultant and employers summary of "project HR communication related factors" affecting of human resource management practices which may affect the project success. From the statistical value of RII "lack of information planning in employees meeting, decisions making and feedbacks distributed to employees" was the first important factor which highly affects the employee's communication with average RII value of 0.86. This reveals that the reason for lack of communication was there is no or inadequate plan in meeting, decisions making and feedback share to the employees, meaning the employees doesn't that much involved to participate in problem solving, in decision making and gaining feedbacks. "Absence in ensuring frequent and clear communication to the project team members and to stakeholders" with RII value of 0.85 was the second highest important factor affecting HR communication in public building projects. The researcher alleged that, such influences would derived from reluctance, unconsciousness and carelessness of the team workers, and stakeholders, which may aroused of many day to day redundant events and happenings in the projects which would yield careful attention. Also, "Lack of good communication skills among team members to develop trust and respect within their working relationships" with RII value of 0.82 was the third highest important factor affecting HR communication in the projects. Sometimes

such unforeseen problems, i.e. absence in dialogue exchange between team members make unpleasant working environment, which may regret the relationship of team members and then later, it would became difficult to develop trust and respect within each other.

Table 4.11: Summary of project HR communication related factors

No	I. Project HR Communication related factors	Contractor		Consultant		Employer		Average	
		RII	Rank	RII	Rank	RII	Rank	RII	Rank
1	Lack of information planning in employee meeting, decisions making and feedbacks distributed to employees.	0.86	2	0.90	1	0.83	3	0.86	1
2	Absence in ensuring frequent and clear communication to the project team members and to stakeholders	0.83	3	0.83	2	0.90	1	0.85	2
3	Lack of good communication skills among team members to develop trust and respect within their working relationships.	0.79	7	0.78	5	0.90	1	0.82	3
4	Lack of simplest and direct communication frame line references structure between supervisors and employees, and between employees and top management	0.90	1	0.77	6	0.78	6	0.81	4
5	Lack of setting the policy for collective bargaining, employee contract negotiation, and grievance handling	0.81	5	0.83	2	0.78	6	0.80	5
6	Lack of effective communication practice, to ensure members know and understand their roles and responsibilities	0.80	6	0.76	7	0.80	4	0.79	6

"Lack of simplest and direct communication frame line references structure between supervisors and employees and between employees and top management" with RII value of 0.81, "lack of setting the policy for collective bargaining, employee contract negotiation, and grievance handling" with RII value of 0.80 and "lack of effective communication practice, to ensure members know and understand their roles and responsibilities with RII value of 0.79 were also the most imperative factors affecting the project HR communication ranked four to six respectively.

4.4.10 Internal and external related factors

Table 4.12 below shows the respondents' agreement relative importance index and average rank of contractors, consultant and employers summary of "internal and external factors" affecting of Human resource management practices which may affect the productivity, effectiveness of human assets in public building projects during construction operations in Adama Town.

Table 4.12: Summary of Internal and external related factors

No	*J. Internal and External related factors*	Contractor		Consultant		Employer		Average	
		RII	Rank	RII	Rank	RII	Rank	RII	Rank
1	Influence of change in economy, technology and globalization	0.99	1	1.00	2	0.98	1	0.99	1
2	Influence of power, politics and top management on employees in the firm	0.88	3	1.0	1	0.93	2	0.94	2
3	Influence in size, structure, history, traditions and past practices of a firm's strategy and on flexibility and integration of employees in the company.	0.95	2	0.90	3	0.85	3	0.90	3
4	Culture, environment, gov't regulations and action of unions	0.83	4	0.90	3	0.80	4	0.84	4

In respect of the respondents' agreement from summary of Table 4.12 presenting the four major internal and external factors category, all respondents from contractors, consultants and employers side have selected "the influence of change in economy, technology and globalization to the firm" as the first highest important factor affecting HRM practice toward project success with RII of 0.99, "influence of power, politics and top management on employees in the firm" as the second highest important internal and external factors with RII of 0.94, "influence in size, structure, history, traditions and past practices of a firm's strategy and on flexibility and integration of employees in the company" the third highest important internal and external factors with RII of 0.90 and "culture, environment, government regulations and action of unions to firm & employees" as the fourth with RII of 0.84.

From the above, the most notable external factor affecting effective HRM practices were the effect of change in economy, technology and globalization to the firms on construction

operations have been taken as a highest significant factor. This is true, Since most of public projects are funded by the involvement of international finance in Adama town it has its own impact on their budget as a factor of change in economy/budget/finance, purchase of materials, machineries, Gasoline, benzene since its imported, etc. And, it is true to the respondents' agreement to the technology and globalization influences, because many of the construction projects even in Ethiopian and developing countries require for their socio-economic development are beyond the capability to undertake because of uniqueness and complexity of those projects. This indicates there should be a demand to import the technologies, globalization and adopt the construction technologies and activities. The other internal and external factors raised here above was culture so as pointed in literature, example (Adebowale, 2014) and (Ofori, 2000) which the respondent approved. It has been found that every organization has a culture which is determined by its history, size, corporate goals and objectives, technology of production, market, and operating environment which the respondent approved.

As intended in the table 4.12 above, the other internal external factors affecting the efficient HRM practice in public building projects, were Influence of power, politics and top management on employees in the firm. These factors may be, from government body or individuals, subjected to control the projects or regulations.

4.5 Top ten the most significant factors affecting HRM practices towards project success in Adama town public building projects.

Considering the objectives of the research, the study identified the significant factors affecting HRM practice, which may impacts project success as perceived by public building construction professionals (contractor, consultants and employers side) presented in table 4.13 below. With reference to the tables presented in the findings (from Table 4.3 to Table 4.12), the top ten highest-rated factors in all table were selected, considered as the most significant factors and subsequently ranked accordingly in Table 4.13 below.

The highest most important factor that highly affects HRM practice in Adama town public building project was "lack of providing compensation and reward packages with promotion, financial rewards, Certificate of appreciation and other than their salary in the project", which has the ranked as first among all factors with RII of 0.98. This important was shown and has been discussed under "reward and compensation related factors

group". The respondent shown this the most basic factor they wish has had during the project life. Truly, this is also approved by scholars, (Asiedu-Appiah et al., 2013; Sena, 2008), employee reward and compensation has a direct and positive relationship to increase the employees performance and productivity , as it could be seen also from the discussion. This means, that, the compensation and reward factors are the least practiced in the Public building projects in Adama town. Also, what this means is that, the compensation and motivation factors are very strong in causing employee turnover which is ranked as the 6^{th} from table 4.12 because the level of dissatisfaction seems very high and employees would seek to compensate for their dissatisfaction by looking for a better and continuous job.

The second highest important factor selected was "the influence in change in economy, technology and globalization to the firms" with RII of 0.97 from the group of internal and external related factors. As explained in table 4.11 and 4.12 it's honest to speak that one of the critical issues our country Ethiopia incurred during the last three years or since 2019 up to date was change in economy which infers exchange rate of Dollar. Many supplies in construction industry which is the back bone of our development have imposed of either the high material cot or lack of material supply. From round table discussion, the respondents has criticized of there was high rise of cement and reinforcement bar cost up to 300% than before. Unfortunately, even it's difficult to acquire within a precious price. This argument shows projects are suffered total delay because of change in economy.

The other highest ranked important factors affecting HRM practice in accordance of respondent were health and safety related factors listed from three to five; i.e. poor or absence of providing health and safety plan and appointment with RII of 0.932, "Lack of insurance provision to the employees in the project with RII of 0.931 and "absence or poor in providing Personal protective equipment (PPE) in at work place in the project with RII of 0.930 respectively from Table 4.13 below.

The finding indicates that Health and safety factors were being practiced poorly, in public building projects in Adama town.

Table 4.13: Summary of top ten the most significant factors

No	*Top ten factors affecting HRM practices towards project success*	Average	
		RII	Rank
1	Lack of providing compensation and reward packages with promotion, financial rewards, certificate of appreciation and other than their salary in the project.	0.980	1
2	The influence in change in economy, technology and globalization to the firms	0.970	2
3	Poor or absence of providing health and safety plan appointment and ensure it is developed and implemented.	0.932	3
4	Lack of insurance provision to the Employees in the project.	0.931	4
5	Absence/poor in providing personal protective equipment (PPE) in at work place in the project	0.930	5
6	Absence of continuity of work to ensure employees long term job security or career opportunity	0.929	6
7	Inadequate or lack of provision of growth & opportunities for those who perform well on the project.	0.928	7
8	Absence of well-designed performance appraisal programs and system in the project.	0.927	8
9	Lack of employees training and development modules, schedule, strategy and programs in the project.	0.919	9
10	Poor in ensuring in team building and development in the construction team	0.918	10

From viewpoint of interview taken, the construction projects generally, did not have assigned inspectors visiting their sites; simply do that informally by somebody.

However, it's obvious that larger construction companies had to fulfill the health and safety and insurance standards provide personal protective equipment (PPE) in at work place especially, higher grade contractors and foreigners. Instead, local and low level contractor even did not have written health and safety plans. It should be more important for contractors and consultants to take attention, because the access to the site is more relevant to them and affects the degree of safety for their employees to practice health and safety plans, implementations, assessments on their site work

The six listed in top ten significant factors affecting human resource management practice was "absence of continuity of work to ensure employees long term job security or career opportunity" with RII of 0.929. This is interrelated with job security and employee turnover. Contemporarily, in our country Ethiopia, nowadays construction materials has unavailable, or very high cost as construction project organizations became more flexible

in insuring continuity of works to insure job security. Also, as my observation, held group discussion and interview, recently building projects and other most projects have stopped because of shortage of cement and other input materials ad high price escalation of materials. Therefore, it could be concluded as discussed above especially for employees under contractors and consultants expressed their fillings that there is no job security since there is no work continuity in Adama town recently.

The next most consequent important factor, "inadequate or lack of provision of growth & opportunities for those who perform well on the project" and "absence of well-designed performance appraisal programs and system in the project" were also ranked as the seventh and eighth important factors affecting HRM practices with RII of 0.928 and 0.927, from the group of employees' performance appraisal related factors respectively. Respondent agree that the organizations did not recognized career growth of employee. It was the way organizations need to make competitive and productive employees, in improving workers skill, knowledge, creativity and experience in the company. Not only that, it was also the source of inspiration and proud in which employers chose to work in the company. In Ethiopia, most of the times provision of growth & opportunities are given by government organizations. But, in private organizations it hasn't been practiced or may be rare. So, this kind of poor practices should be take care in practicing HR to make competitive environment. There should has been "performance appraisal programs and plans in the construction projects in the modern competitive civilization and globalization, mainly contractors and consultants to step forward their firms in today's construction market.

The ninth (9^{th}) and tenth listed most significant factor respondent perceived were "lack of employees training and development modules, schedule, strategy and programs in the project" with RII of 0.919 and "poor in ensuring in team building and development in the construction team" with RII of 0.918. Training and development should also have been exercised in order to increase the effectiveness of employees in projects. As it could be seen here in Adama public building projects, there is no any action plan to training even, there is no any training modules, schedule, systems and programs planned. This is a clue, as respondent told me on group discussion as "construction organizations' employee selection to make recruitment requirement is more underpinned on the pre-existed performance of individual employees, no bother of others since there enough jobless workforces." The have told me that, private companies suggest that training new

unexperienced and pre-existed employee is costly, or they may incurred expense or loss. Such ideologies should need deep reform. They should understand and slowly practice HR training and development for themselves. Training & development is not only significant but also inspiration in increases job satisfaction & commitment towards the firms.

4.6 Group factors affecting HRM practice

Table 4.14 below illustrates the most significant group of factors affecting HRM practice ranks summarized out of 66 individual variables categorized under the 10 group of factors. Based on the result, "HR reward and compensation related factors was the first the most significant group factor with RII value of 0.918, internal and external related factors was the second the most significant group factor with RII value of 0.890, job security and health and safety related factors was the third the most significant group factor with RII value of 0.887, HR performance appraisal related factors was the fourth the most significant group factor with RII value of 0.854, HR Management related factors was the fifth the most significant group factor with RII value of 0.836 and so on.

Table 4.14: Most significant group of factors affecting HRM practice ranks

Group factors affecting HRM practice	Average	
	RII	Rank
HR reward and compensation related factors	0.918	1
Internal and external related factors	0.890	2
Job security and health and safety related factors	0.887	3
HR performance appraisal related factors	0.854	4
HR management related factors	0.836	5
HR motivation related factors	0.826	6
HR training and development related factors	0.825	7
HR planning related factors	0.824	8
Project HR communication related factors	0.821	9
HR selection and recruitment related factors	0.802	10

So as to summarized in above table, it can be concluded that in Adama public building projects, there is no poor reward and compensation, performance appraisal, motivation, training and development, planning, communication, selection and recruitment and there was internal and external influence in change economy, technology and globalization,

4.7 Impacts of poor practicing HRM towards project success

This is the findings and assessment of the second specific object set which the researcher wants to carryout. Table 4.15 below demonstrates the respondent's agreement relative importance index values for identified twelve Impacts of poor practicing HRM towards project success in Adama town public building projects in aspect of contractors, consultant and employers point of view. These impacts measure how the adverse factors affecting human resource management practice influence the project success. The following listed important variables were assumed and believed to measure the impacts of poor practicing HRM (human resource management, planning, selection and recruitment, training and development, performance appraisal, reward and compensation, motivation, job security, health and safety welfare, internal and external related factors) have on project success. It was computed by RII in (equation 1).

From the Table 4.15, all respondents from all contractors, consultants and employers argued "low productivity by employee" with RII of 0.99 is the highest first ranked important impact which highly affects the project success. Employee productivity was an outcome of the employee's knowledge, capability, motivation, in the workplace environment.

Absence of or inadequate practicing such HRM incurs low productivity, low performance of employees and affects the entire project and organization goals. Employees participating public projects in Adama town trusts that, poor treatment and bad attitudes practices even highly affects the labours held production of project works. Is has seen that the performance of employee is significantly dependent on payment of construction, training and workers' motivation as a factor affecting construction productivity. Employee productivity was an outcome of the employee's knowledge, capability, motivation, workplace environment, etc.

From the findings, poor practicing HRM has the high impact on project success in decreasing the input employees should perform.

The second highest impact rank recorded here in table 4.15 based on the respondents agreement was "material waste" with RII of 0.97. The construction projects have become recognized the importance of the management of project materials and equipment, which can amount to half or more of the project costs.

Table 4.14: Summary of impacts of poor practicing HRM towards project success

No	Impacts of poor practicing HRM towards project success.	Contractor		Consultant		Employer		Average	
		RII	Rank	RII	Rank	RII	Rank	RII	Rank
1	Low employees productivity	0.99	1	1.00	1	0.98	1	0.99	1
2	Material waste	0.96	4	1.00	1	0.95	2	0.97	2
3	Overruns in time and cost	0.98	3	1.00	1	0.90	4	0.96	3
4	Client's dissatisfaction	0.99	1	1.00	1	0.93	3	0.95	4
5	Disputes and Employee conflicts	0.83	9	0.90	5	0.85	5	0.86	5
6	Project delay	0.84	6	0.90	5	0.83	6	0.85	6
7	Inadequate quality	0.85	5	0.83	7	0.83	6	0.84	7
8	Low quality of finished job	0.84	6	0.83	7	0.83	6	0.83	8
9	Rework due to inaccurate work experienced	0.84	6	0.77	10	0.75	10	0.78	9
10	Crime and embezzlement of funds and goods	0.80	10	0.77	10	0.78	9	0.78	10
11	Low of accountability	0.74	11	0.80	9	0.73	11	0.75	11
12	Variation order	0.70	12	0.67	12	0.65	12	0.67	12

The negative impact poor practices of HRM proceeds the high costly, because of employee low productivity which follows inadequate material wastage in project site. Therefore these firms had to lead the way in assimilating in good prating HRM and practicing good material management systems into their operations.

The third important impacts poor practicing HRM had on project success based on the respondents agreement was "project cost and time over run" with RII of 0.96. Based on result with this agreement, poor practicing HRM causes project delay, cost overrun and should have others risks. Good and efficient HRM Practice should have initiative and positive staffs a high performance team, can improve the efficiency of production without high cost and time delay over project the completion. The interview and case study conducted were supported the result above.

The fourth significant Impact respondent revealed was "client's dissatisfaction" with RII of 0.95. Therefore, inadequate implementation of the HRM practice presented in this study

enhances construction employee inefficiency and worsens construction productivity during building production process. Such type of impact also decreases the satisfaction of construction clients, stakeholders.

Disputes and employees conflicts also fifth ranked with RII of 0.86 as the most important impact of poor practicing HRM. Also, collective bargaining occurs when workers group together to negotiate employees' wages and benefits, to create or revise work rules, and to resolve disputes or violations of the employee contract with management representatives. The interview and case study conducted were supported the result above.

When inadequate quality of material or alteration incurred in the public project, the finished job would experience rework which insures additional cost and project time elongation. Such factor directly impact project success. Also, there should be loss of accountability, satisfaction and trust between project team, between project owners and contractors. There should be crime and embezzlement of funds and goods, when management get lost or poor.

4.8 Analysis of Interviews

The interview adopted in this research is dependent on the purpose of the objective to be achieved. Semi-structured qualitative interview was adopted, as earlier stated. Three high employee intensive construction sites were selected for the qualitative part of this study. The interview was conducted with three purposively selected professionals (site engineers, Project managers and office engineers) who have had also participated in questionnaire on each construction site and have understand the questions and HRM practice problems. These professionals were directly involved in the fieldwork with other construction employees and are adequately aware of human resource management practice and the challenges confronted on sites. The interview questions were arranged as shown in appendix-2 form question 1 to 9 denoted as (Q1, Q2…and Q9) based on the research objectives and the respondents' suggestion were arranged in table 4.16 below. The above interview questions were tried to address the interviewees. The respondents reply also had tried to be concluded and summarized in table below from view point of the contractors, consultants and employers.

Table 4.15: Summary of interview Analysis

NQ	Contractor's Response	Contractor's Response	Employer's Response
Q1	Lack of motivation, lack of training and development, lack of job Security, absence of team development, performance appraisal reward and compensation, poor health and Safety issue, absenteeism and employee turnover	Lack of team performance and appraisal, poor communication, health and safety issues, absenteeism and employee turnover	Poor communication, lack of reward and compensation, poor health and safety concern, poor documentation systems, employee turnover,
Q2	Meeting the schedule and actual plan, continuity of work, stability and peace, weather conditions, employee skill, complexity and sequence of works. Budgeting cash outflows, shortage and price escalation of materials, efficiency of labors, employees and equipment, change in economy, technology, ease of communication, demand for and supply	stability and peace, efficiency of contractors an professionals, change in economy and technology, communication channel development systems, estimation of schedule , knowledge, experience, skills, process improvements, good will data formulated at strategic, tactical and operational levels. demand for and supply	Right kinds and numbers of employee, stability and peace, knowledge and skill management, Significant occurrences of material shortage, efficiency of constrictors and consultants, formulated operational levels.
Q3	Yes, to fill job vacancies, but sometimes difficult to get right person at right place, Thus its necessary to find in informal means	Yes, to fill job vacancies. Thus its necessary to find in informal means	Yes, to fill job vacancies, difficult to get right person at right place, but sometimes no budget,
	Through assessment, information, past experience with organization	Sometimes, from family, past time recognition, and simply informal agreement	Sometimes, incorrect ,or unclear situations
Q4	No any training is give, the employee should know and should harvest	No any training is give, the employee should know and should harvest	Only for newer to short period may be given , unless there is no

	experience for themselves. Unless employees get experienced or skilled through process.	experience for themselves. Unless employees get experienced or skilled through process.	formal and regular training is give, unless sometimes meeting is present.
Q5	We can't say there is a formal motivation, but during handworks and overtime taken the company may pay some cash, buy water tell or coffee, and sometimes provision feast (dinner) for higher positions. Tell the employees inspire for another site at the end of project.	We can't say there is formal motivation, but during hard works and overtime taken the company may pay some cash, buy water or tell. The employees inspired for another site, sometimes provision feast (dinner) for higher positions at the end of project.	May be some times, by duties from overtime and nonworking days, filed trip payments, and some incentives welfare of sugar and edible oil and land or condominium house provision. Otherwise, development is depends on the city cabinets/committees' decision and the works experience in the organization
Q6	There is no any health and safety policy here, only the employees keep themselves, but sometimes barriers and safety marks kept at risk position. Many times, striking, falls, attack and sometime fatality may happen. It's simple to say it's slight or poor in safety and un risky site implementing, assessment. No any provision of or health care even during sick leaf. You may get rest time allowance; otherwise you should care of yourself.	Only the employees keep themselves, there is no any health and safety policy here, but sometimes barriers and safety marks kept at risk position. Many times, striking, falls, attack and sometime fatality may happen. It's simple to say it's slight or poor in safety and un risky site implementing, assessment. You may get rest time allowance. Otherwise you should care of yourself.	When we go to site visit, we always recommend and warn all about poor health and safety undertaken by the contractors and consultants. It's very big difference between health safety policies and procedures they coated on contract agreement document. Employees may get rest time allowance.
Q7	Employment job security in contractor's organization is very rare unless you are the owner or family or relatives when	When projects are get small or none. You should seek of another active site based on your skill and experience. This	If you may employed in government organization, you should respect regulations and, not to

	projects are get small or none. Other you should seek of another active site based on your skill and experience. This is a characteristic of the project in Adama or other places. So, employees should turnover/leaves whenever another favorable is condition is available	is a characteristic of the project in Adama or other places. You may request a call for next projects after the current has ended. So, employees should turnover/leaves whenever another favorable is condition is available	commit unwanted practice, minimize absenteeism, punctual and keep loyalty, Otherwise, you may get rushed up with suspension. No matter of how much you are productive.
Q8	Poor quality of production, Employee conflicts, Project elongation, low productivity, failures because of poor quality and rework due to wrong alteration, wastage of materials, equipments embezzlement of material, bribery and the after, suspension from any projects and bankruptcy of the company.	Claim and dispute, demolition of structure rework, poor accountability, Poor workmanship, briber, client dissatisfaction, employee's dissatisfaction, loss/ expense crisis to owners due to contractor's wrong alteration. Demolition and hazard or risky environment altered.	Material wastage, poor quality, cost overrun time delay, poor performance. Low quality products, delay of projects, and suspect to corruption and embezzlement, bankruptcy and finally, failure to the project and the organizational objective finally, no success.
Q9	The contractors, professionals or representatives should motivate, train, develop the employees and labours and should make performance appraisal. All should tackle corruption and unnecessary actions, must make accountable and loyal nations should make interaction or employee relation and interesting working environment. Health and safety of employees must be ensured.	Should make Awareness in motivation, training, development. Labours and employees performance and appraisal should assess and implanted. Policies and regulation must be implanted and executed. Projects should be delivered on expected time and cost. Employees should satisfy with the organization they working in	Train and educating employees, make them honesty, accountable, responsible, confident, projects should be delivered on expected time and cost. Employees should satisfy with the organization they working in. framework should to be developed to develop to enhance HRM practical functions and productivity

The interview apprehended has specified the factors affecting HRM practice in public building construction projects were identified in the question (Q1-Q7) from all side

respondents, and the impacts of poor practicing HRM in public building projects also raised as shown in Q-8 and the suggestion were given to improve the problems encountered due to poor practicing HRM in public building construction projects.

According to the result from the interview, lack of proper planning, lack of effective management, poor communication, lack of training and development, lack of knowledge and skill management, lack of motivation, lack of proper health and safety plan, regulations and strategies, lack of employee reward and appraisal, lack of compensation and incentives were identified and submitted as the most factors affecting HRM practice in public building construction projects. Increased safety problems on-site, variation under the standard of material and construction method, wastage of material, demolition of structure/rework, affect the quality of the project, cost overrun and delay of the project are the result of the impacts of poor practicing HRM it all affects the success of the project.

From the result of the interview; Respondents suggested to improve the problems encountered due to lack of effective HRM practice and some imperatives are given to do more conceptual models on policies and development in public building construction projects.

4.9 Case Study Analysis

4.9.1 Project Case study-1

The case study in table 4.17 was conducted, on the public building construction projects in Adama town, which two case studies have made from the consultant and the owners data, and site visits. As shown in table 4.17 in the case study made, the projects have encountered the time and cost overrun. Adama university graduation hall project have seen that, the project starting date was January 5, 2014, with 85% project status and now the project has stopped because of poor design and faulty structural propagation. In case of the Adama city, Bole sub-city administration projects, the project status is still 85% and it has delayed by 132 calendar days. This project is also not finished until today.

Cost overrun on the public building construction project has resulted due to an equipment shortage, Change of finishing materials cost, productivity and inefficiency employees and equipments, and additional works due to faulty alterations.

Table 4.16: Project case study-1

Projects	Project 1	Project 2
Project location	Adama town	Adama town
Contractor	-	-
Consultant	-	-
Project name	Adama university graduation hall	Adama city, Bole sub-city administration
Delivery system	DBB	Lump sum
Contract amount	ETB 500,056,410.45	ETB 10,573,560.75
Reread contract amount	ETB 523,194,007.2	ETB 10,612,525.57
Variations cost	ETB 23,137,596.75	ETB 389,649.82
Beginning date	January 05,2014	March 5,2010
End date	January 11,2018	March 15,2019
Contract period	803 calendar days	264 calendar days
Time Extended	Until now	120 calendar days
Project status Now	**85%, (stopped)**	**90%, on progress**

In case of Adama University graduation hall project, about 23,137,596.75 ETB variations cost has made to the contract amount and in the case of Adama city, Bole sub-city administration office project, 389,649.82 ETB variations cost amount has made to the contract amount, and those projects are not finished until today. Reworks due to inaccurate drawing and lack of experienced contractors and subcontractors were occurred to projects. In a relation to human resource management practice, it's observed that the employees and labours having been participated in these projects faced Joblessness, may relocated and rotated to other projects without their will. This could harm the employee's motivation and willingness and finally could harm the other projects employee productivity and other issues.

4.9.2 Project Case study-2

From case study two in Table 4.18 it has seen the danger the employee's life encountered because of poor health and safety management practice in the project. It's obvious that

how many employees passed away, injured and suffer disabled in day today's construction projects activities because of inadequate and poor practice of human resource management (health and safety). Here the employees suffered of hazardous, spread disease and has died even has no enough insurance provisions, or health care welfares. They left thrown and useless after the days gone far. Therefore, attentions precaution, prejudice, motivations inspirations and trainings should to given entire project organization.

Table 4.17: Project case study-2

Type of project:	**Adama city culture and tourism mixed- use building project**
Location	Adama city, around Derartu Square
Consultant:	MK consulting engineers Plc.
Contractor:	MCG-General construction Plc
Client:	Adama city Administration
Project cost:	696, 0000,000.00 (Six hundred and Ninety six Million birr)
Problem type:	1. Fall from the above floor: One of the project's labors has fallen from the above 3rd floor and the employee has passed away in July, 2020. 2. COVID-19**:** Two of the project employees have caught Covid-19 in March -2021
Project Status	Finally, the project has stopped or closed for unknown duration or months, as the end of May, 2021

4.10 Human resource management conceptual frame work development

The framework model is comprehensive enough to provide a theoretical framework and foundation for further conceptual framework research that could be carried out in the wide range area of practicing HRM studies. A construction project depend on the expert employee guide supported by a management framework, which has to harmonize many professional, contractors and employers whose irregular involvement will changed through the course of project-based industries in which to apply virtuous human resource management (HRM) practices.

As it have seen from the literature reviews coated (Zhang, 2016), "HR affects the output of staff, then the output of staff impacts organizational output, while the organizational output will affect financial output, which eventually leads to the changes in the output of the enterprise in the market. It have been seen that successful human resource management encourages employees to have a good working attitude and behavior, and thus integrates into the impact of the implementation of human resource management on organizational citizenship behavior. A review of observed findings, investigated on both the research objectives i.e. "Factors affecting human resource management practices" and the negative impacts on the project success in Adama public building projects has been made. Human resource planning, employee selection and recruitment, employee training and development, employee motivation, teamwork appraisal and reward and compensation have direct relationships with productivity and then to project success. In despite, employee job security, employee health and safety welfares and Insurance provisions are the key spirit of the project assets that the employees are highly select to work in. Depending on the research questionnaire responses analysis, interview analysis and case Studies carried out, the researcher has tried to model some important and critical human resource management factors conceptual frame work by differentiating independent, dependent and overriding or intervening variables as seen in Figure 4.2 below. The model or conceptual frame work developed has supposed to improve the impacts of poor practicing HRM, in Adama Public building projects.

To have a complete understanding of the framework structural presentation, firstly the key variables in the domain of performance must be identify and then the relationship of these variables to performance must be determined. Such method would provide a reliable method of predicating the level of effectiveness, efficiency, and competence. The types of variables or criteria that can be used vary by domain and level of investigation. Finally, the competing values were chosen as a valid configurational method on which to identify criteria of presentation for the developed method. For the purpose of the study, it concentrates the major subsystem which is the human resource management practice frame modeling subsystem. It has been considered as a priority and essential subsystem. Common primary casual variable, managerial activities, variable, system performance variable and a common end-result variable, as a format of modeling variables were grouped into the following:

Independent variables (inputs): This is the component or sub-system that does the causing and which/when varied, appears to induce change in another variable (or subsystem). In the model constructed in this study the independent variable represented by Managerial Activities variable primary independent variable, and secondary independent variable.

Intervening/moderating variables (process): This is the transformation or conversion process that explains the linkage between the dependent and independent variables, and causes the relationship between them to change. In the model constructed the study were represented by group of intervening, second group of intervening, third group of intervening, and fourth group of intervening groups were listed.

Dependent variable (output): This component or subsystem which is acted upon or caused by the independent variables. In the model constructed in this study the dependent variable represented by the System performance of variable. The boxes in the model represent the endogenous dependent variables, with lines and arrows indicating the casual patterns and the alleged casual direction with representing positive and negative relationships. The arrows indicate that changes in the variable from which they emerge will cause changes in the variables in which they enter after a passage of time. The straight line connecting all variables is an indication that the linear additive nature of the relationships between each pair of variables.

Depending on the research questionnaire analysis, interview and case study analysis carried out, the researcher has tried to model some important and critical human resource management factors conceptual frame work by differentiating independent, dependent and overriding or intervening variables as seen in Figure 4.2 above.

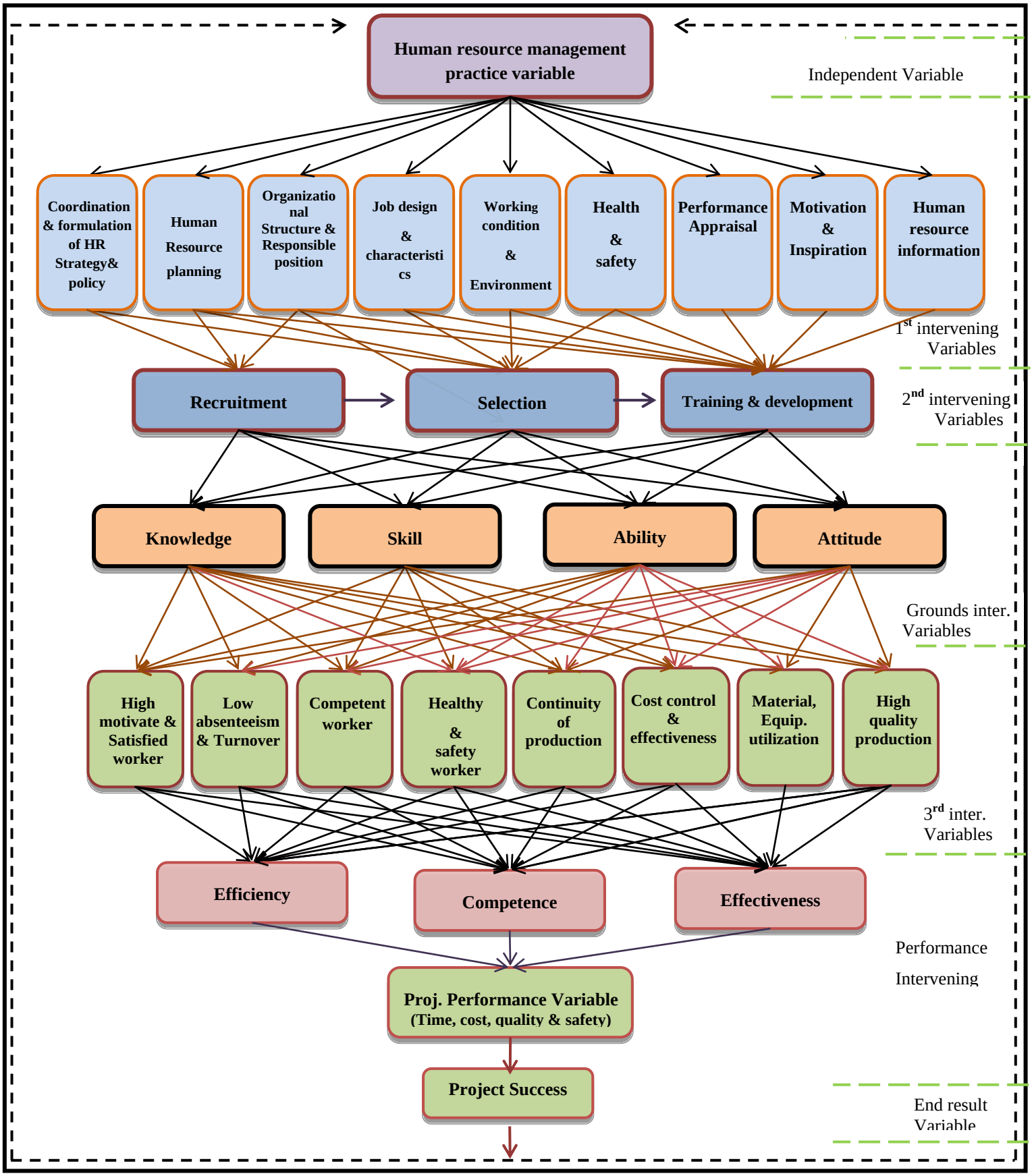

Figure 4.2: Human resource Management practice Conceptual Framework model.

4.10.1 Validation of HRM Conceptual Framework model

As illustrated in Table 4.19 above, the model or the HRM Practice development system framework has been approved and validated by five purposively selected construction professionals, engineers and managers. As a result, six variables asked and the respondents agreed as, "the model provide theoretical knowledge and make better understanding of project managerial role and stakeholders in building projects", "the developed model provide the path way to practice human resource management to the project completion", "the developed conceptual framework support the project managerial tasks and activities", "it helps to provide competitive and dynamic environment in building construction projects", "It's ease, simple and possible to learn and understand the causal inference and changes (inputs, process and outputs) to the end result of HRMP variables" and "the model has no more ambiguity and no any other suggestion, or modification needed."

Table 4.19: HRM practice develeopment system model validation

HRM conceptual framework mode validation	
HRM practice development system model validation	**RII**
The model provide theoretical knowledge and make better understanding of project managerial role and stakeholders in building projects	0.98
The developed model provide the path way to practice human resource management to the project completion	0.97
The developed conceptual framework support the project managerial tasks and activities	0.95
It helps to provide competitive and dynamic environment in building construction projects	0.98
Its ease, simple and possible to learn and understand the causal inference and changes (inputs, process and outputs) to the end result of HRMP variables.	0.96
The model has no more ambiguity and no any other suggestion, or modification needed	0.97

4.11 Correlation of HRM practices and Project success

Correlations are a measure of the linear relationship between two variables. A correlation coefficient has a value ranging from -1 to 1. From the table 4.18 below, Pearson's values closer to the absolute value of 1 indicating that there is a strong relationship between the variables being correlated whereas values closer to 0 indicate that there is little or no linear

relationship. A positive correlation coefficient indicates that there is a positive linear relationship between the variables.

Table 4.20 Pearson's correlation coefficient

Variables	Spearman's rho.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) HRM Planning Related Factors	Pearson's Cor.	1.0							
	Sigma (2-tailed)	.00							
(2) Selection and Recruitment Related factors	Pearson's Cor.	.261	1.0						
	Sigma (2-tailed)	.07	.00						
(3) Training & Development Related factors	Pearson's Cor.	1.0	.33*	1.0					
	Sigma (2-tailed)	1.0	.02	.00					
(4) Performance Appraisal Related factors	Pearson's Cor.	.064	.101	.29*	1.0				
	Sigma (2-tailed)	.661	.491	.038	.00				
(5) Reward & Compensation Related factors	Pearson's Cor.	.349*	.580**	.580**	.387**	1.0			
	Sigma (2-tailed)	.014	.00	.00	.006	0.0			
(6) Motivation Related Factors	Pearson's Cor.	.102	.292*	.499**	.060	.349*	1.0		
	Sigma (2-tailed)	.494	.042	.00	.680	.014	0.0		
(7) Communication Related Factor	Pearson's Cor.	.102	.206	1.0**	.277	.325*	.351*	1.0	
	Sigma (2-tailed)	.485	.156	.142	.054	.023	.013	0.0	
(8) Project Success	Pearson's Cor.	.654**	.198	.025	.318*	.342*	.221	.109	
	Sigma (2-tailed)	.001	.174	.862	.142	.016	.128	.456	.00

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

From the above correlation test, it can be summarized as HR planning practice had a statistically strong positive correlation with the project success at ($p < 0.01$) and also reward and compensation practice had a moderate correlation with project success at ($0.01 < p < 0.05$). Whereas the communication related factor training and development related factors selection and recruitment related factors doesn't have that much significant relation with the project success.

4.12 Correlation among contractors, consultants and employers

Kendall's correlation coefficient was conducted between Contractor's, Consultant's and Employer's response. It has proved that most of the variables have significant r/ships, and the respondents; Contractors, Consultants and Employers have strong r/ship.

Table 4.21 Kendall's tau-b correlation coefficient

Correlations of concordance				
Kendall's tau-b		Contractors	Consultant	Employers
Contractors	Correlation Coefficient	1.00	.860	.780
	Sig. (2-tailed)	.00	.867	.867
	N	78	78	78
Consultant	Correlation Coefficient	.860	1.00	1.00**
	Sig. (2-tailed)	.867	.00	.00
	N	78	78	78
Employers	Correlation Coefficient	.780	1.00**	1.00
	Sig. (2-tailed)	.867	.00	.00
	N	78	78	78
**. Correlation is significant at the 0.01 level (2-tailed).				

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The research aimed to assess human resource management practice towards project success in Adama town public building projects. The research specific objectives were to identify the factors affecting human resource management practices, to analyze the impacts of poor practicing human resource management in Adama town public building projects and finally to develop and provide human resource management Conceptual framework pertaining the influences and the impact variables favored in the findings in a feasible wise for public building projects in Adama town. Based on literature reviews, 66 (sixty six) the most important factors were collected under 10 (ten) groups and 12 (twelve) the most important impacts of poor practicing Human resource management towards the project success were identified and distributed to the respondents in a side of contractors, consultants and employers. Then, the returned questionnaires were evaluated by Relative importance index, RII and the results were ranked based on the importance. Also, qualitative interviews and case studies were carried out pertaining to the factors affecting HRM practice and the impacts it might have on Adama town public building projects success.

Based on the quantitative and qualitative analysis of the research findings, the study revealed that there are the most significant factors affecting human resource management practices that ought to cause the project completion. The result indicates that, in Adama public building projects, “Lack of providing compensation and reward packages, “the influence in change in economy, technology and globalization to the firms”, “poor or absence of providing health and safety plan appointment and ensuring its developed and implemented”, “lack of insurance provision to the employees in the project”, “absence/poor in providing personal protective equipment (PPE) at work place in the project“, “absence of continuity of work to ensure employees long term job security or career opportunity”, “inadequate or lack of provision of growth & opportunities for those who perform well on the project”, “absence of well-designed performance appraisal programs and system in the project”, “lack of employees training and development modules, schedule, strategy and programs in the project” and “poor in ensuring in team building and development before the project starts in the construction team” have found the most significant factors affecting the human resource management practices.

Beside the most important factors affecting the human resource management practices, the causes of fail to project success were "employees low productivity, Material wastage, time and cost overruns, client's dissatisfaction, disputes and employee conflicts, project elongation or delay, inadequate quality, low quality of finished job, Rework due to inaccurate work experienced, crime and embezzlement of funds and goods, low of accountability and loyalty and Variations orders" have been found as the critical impacts of poor practicing human resource management in Adama town public building projects.

The qualitative studies of interviews and case-studies occupied have been more emphasized and strengthened the research objectives in précising the significant evident factors affecting human resource management and its negative impacts on the project success

Based on the significance and the consumers or role-players in the construction project suggestion as shown in the details, the researcher tried to developed Human resource management practices conceptual framework in a front view point of project success.

The statistical measurement patterns have been made of SPSS v22 to predict variables correlation and regression and resulted as there is high significance and strong relationships between variables.

Kendall's coefficient was used to determine if there is a degree of agreement between factors affecting HRM practice and poor practicing HRM impacts for Employers, consultants, and contractors. From factors affecting HRM practice, HR Management, HR planning, training and development, reward and compensation, employee motivation, performance appraisal, internal and external factor groups altogether and from poor practicing HRM parameters time and cost overrun, poor quality, low employee productivity, client dissatisfaction, employee turnover, material waste have a significant degree of agreement among the owners, consultants, and contractors. This is because all contractors, consultants, and employers are agreed with these variable groups. On the other hand, for selection and recruitment, health and safety, and communication there is an insignificant degree of agreement among the owners, consultants, and contractors. This is because contractors and consultants are concerned with these factors more or less than employers.

5.2 Recommendations

The finding exposed that human resource management practice has been undermined and inadequately practiced in Adama town public building projects. This could harm the project's success and endanger the public building projects and even the construction companies. Concentrations should be given to the identified important human resource management factors and the impacts they could have on the success of the project and the continuity of construction firms.

Based on the findings and conclusions made from the study, the following recommendations can be forwarded to the project stakeholders i.e. contractors, consultants, employers and regulatory bodies in Adama town public building projects.

- Stakeholders especially contractors should practice in reviewing and the existing human resource management manual, regulations, procedures, update themselves and they should reflect the present project circumstances.
- Stakeholders should maintain effective recruitment and selection to attract the right quality and quantity of employees to develop the knowledge, skills, and abilities, and retain employees in the organization rather than applying improper and a biased employee's recruitment.
- Contractors should clearly state the purpose for the employee's appraisal to reduce the confusion and ambiguity of the process. Employee's performance should be assessed based on quantifiable standards and feedback to be given to employees on their performance.
- In the same tenure, competitive compensation facilities should be provided for employees, and higher employee performance should be linked with higher salary and compensational facilities. This scheme of incentives makes motivation and might increase the commitment level of the employees in the construction projects.
- Stakeholders, especially contractor and consultants should establish proper communication and coordination channels between employees and employers, employees to top managers and to various stakeholders to create alignment with the project objectives and avoid misunderstanding in the execution of the projects. It's advisable to develop and interact with the modern technologies concerning the

communication platforms; example BIM (Building Information Modeling) and related soft wares are admirable.

- Occupational health and safety practices and employees insurance provision in the construction project was the major challenging factor as revealed in the study. Low priority was given to health and safety, poor attitude of construction professionals towards occupational health and safety, lack of competent party to enforce policies, procedures and regulations, and poor health and safety management systems. Therefore, each construction projects should have its own safety and health policy include safety as a pay item in contract document, allocate budget and time frames for health and safety in the contract document. Above all, orientation and occupational health and Safety training should be provided to the employees and concerned parties, creating consciousness is also vital to reduce resistance by employer and employees, and empowering the limited capacity of those attempting to the implementation of occupational health and safety practices within both the construction sector and government authorities. There should be care services and insurance provisions for those who got injured, caused disabilities and fatalities.
- Contractors, employers and companies should ascertain job security in a degree of unemployment frustration, a company must indicate a clear spot that jobs are secured then, employees have faith on the company, feel confident and commit themselves to expend extra effort for the company's benefit. Key talented and potential employees leave the company when they do not see positive future prospects and flee out of companies, thus the company should advance and increase employee's retention policy.
- In addition, in circumstance of material price escalation, material shortage and economic changes (dollar exchange) in Adama town public projects and in case of the country's construction industry should get immediate deliberation; the government should consider and overcome the political crisis and business environment risks. Thus, even country's political crisis may accelerate the project success problems.
- Finally, the study has assisted the development of HRM Practice conceptual framework system presented in Figure 4.3 as much as possible to be functional in

Adama public building projects and the concerned party should refer it as a road map in implementation of HRM practice.

- Adequate application of recommendations presented in this study will significantly improve the efficiency, effectiveness and productivity of construction employees in advance of reducing the current construction time and cost overruns and ultimately increase stakeholder satisfaction in the construction firms and lately secures the project success.

5.3 Future works and Implications

- HRM practices and policies focused on improving functions like training, selection, health and safety, performance appraisals improving communicational skills, employee relations and motivations may possibly turn out to be conventional in future research works and it is essential to investigate the role of HRM towards the building and developing performance.
- The study was only held on public building construction projects in Adama town and further and similar study on developing models to improve HRM Practice in construction industry also necessary for construction industry in Ethiopian

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APPENDICES

Appendix 1. Questionnaire survey

Title of Research Study is "Human Resource Management Practices towards project success: A case of Adama Town public building projects", and I kindly request you to indicate your answer to each question by filling in the space provided or by ticking (√) in the correct answer as appropriate.

Part 1: General Information of company and personnel.

A). what is your firm scope in the industry?

Contractor ☐ consultant ☐ Employer ☐ other_____

B). your educational Background:

PhD ☐ MSc ☐ BSc ☐ Diploma ☐ Advanced diploma ☐ other _____

C). Your total work Experience in the company _____Years

1-5 years ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ Other_____

D). Current Position:

Project manager ☐ Office Engineer ☐ Site Engineer ☐

Resident Engineer ☐ Surveyor ☐ Forman ☐ Other_____

E). Company's experience: _____ year

1-5 years ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ Other_____

F). Your Age: _____ years

G). Gender: Male ☐ Female ☐

Part 2: Factors Affecting Human Resource Management Practices towards project success in Adama Town public building projects.

Please try to fill the questionnaires provided below based on the level of Agreement they have on the Factors affecting human resource management practices in your company by ticking write(√) in the space provided. (**5**= Strongly Agree; **4**= Agree; **3** = Neutral; **2** = Disagree; and **1**= Strongly Disagree)

Factors affecting Human Resource Management Practice toward project success		**level of Agreement**				
No	***A. Project Human Resource Management related factors***	**5**	**4**	**3**	**2**	**1**
1	Poor or lack of coordination in formulating technical, operational and Strategic Human resource management with project objectives					
2	Lack of effective human resource management policy or system					
3	Inadequate fitting project organizational structure with effective responsible employee					
4	Poor or lack of standard human resource management assessment specifications, requirements and document amendments/design					
5	Inadequate Assignment of professionals and skilled project managers					
6	Lack of clear roles and responsibilities among project team members.					
	B. Project Human Resource Planning related factors	**5**	**4**	**3**	**2**	**1**
1	Lack of project Human resource department integration with the company's project strategic HR planning process.					
2	Lack of establishing and recognizing the future projects job requirements					
3	Lack of determining and matching project Human resource demand and supply estimation.					
4	Lack of short term and long term project human resource planning needs.					
5	Lack of adequate HR Planning techniques in the project.					
6	Lack of regular project human resource planning, scheduling and assessment					

7	Lack of ensuring the effective utilization of existing project human resource.					
8	Lack of skilled personnel with adequate capacity and knowledge in the project					
	C. Project Human Resource Selection and Recruitment related factors	**5**	**4**	**3**	**2**	**1**
1	Inadequate Job advertisement used to recruit employees					
2	Unclear or biased External/internal recruitment found in the construction project.					
3	Unfair and non-transparent in recruitment and selection process, not based on desired knowledge, skills, attitude and experience.					
4	Lack of effective selecting applicants who meet project job requirements and Specifications.					
5	Lack of or poor implementation of recruitment and selection policy.					
6	Lack of or poor formal induction, orientation and familiarization process designed to help new recruiter to provide basic organizational principle					
7	Inadequate assignment of the right persons at the right time at the right place at the right job in the project.					
8	Poor in ensuring in team building and development in the construction team					
9	Absence of Starting team building before the project starts.					
	D. Project Human Resource Training and Development related Factors	**5**	**4**	**3**	**2**	**1**
1	Lack of employees training and development modules, schedule, strategy and programs in the project.					

2	Lack of effective training and development based on relevant practical works in the project.					
3	Absence of providing learning and trainings employee to develop their skill to improve the quality of services in the project.					
4	Absence of scheduled follow up the training and development program in the project.					
5	Lack of real improvement in the level of employees performance through training in the project					
6	Lack of evaluating ongoing training and following up the training process and the outputs regularly in the project.					
	E. Project Human Resource Team Performance Appraisal Related Factors	**5**	**4**	**3**	**2**	**1**
1	Lack of awareness of employees in the implementation of the actual performance appraisal in the project.					
2	Absence of well-designed performance appraisal programs and system in the project.					
3	Lack of Immediate evaluation of employees' performance in the project.					
4	Poor in performing, assessing and evaluating employee's absenteeism and turnover regularly in the project.					
5	Absence of receiving perception and feedbacks on time from immediate supervisor in the project.					
6	Inadequate provision of growth & opportunities availability for those who perform well on the project.					
7	Lack of aware of employees 'opinions, creativity and innovation in problem solving in the project					
	F. Project Human Resource Reward and Compensation related factors	**5**	**4**	**3**	**2**	**1**
1	Absence of concern about employees' reward to improve human resource performance in the project.					

2	Lack of providing benefits that compare favorable employee in the project.					
3	Poor focusing of compensation and reward in attracting and retaining employees in project.					
4	Lack of providing compensation and reward packages with promotion, financial rewards, Certificate of appreciation and other than their salary in the project.					
	G. Project Human Resource Motivation related factors	**5**	**4**	**3**	**2**	**1**
1	Poor in ensuring the company to do not commit any unfair labours practices					
2	Lack of maintaining good salary band among categories of employee in a competitive employee market					
3	Lack of motivating in providing opportunities for professional career growth					
4	Absence of motivate workers during the execution of work with Providing transportation, clear water, shelters and care services.					
5	Lack of motivating in making Employee proud to work in the organizational responsibilities					
6	Lack of motivating in offering a happy and friendly working environment					
7	Lack of motivating in appreciating the employees for the work they have done.					
8	Lack of motivating in offering progressively interesting and challenging work to the employees					
9	Lack of motivating in offering flexible work schedules for the employees in time in the project.					
	H. Security, Health and Safety related factors	**5**	**4**	**3**	**2**	**1**
1	Absence of Continuity of work to ensure employees long term job security or career opportunity					

2	Absence of providing health and safety plan appointment and ensure it is developed and implemented.					
3	Lack of formal health and safety induction, monitoring and controlling health and safety performance practice					
4	Lack of health and safety prevention , taking the right precautions; providing a satisfactory working environment practices					
5	Lack of careful assessment in examination of the potential causes of harmful workplace, so as to inform the implementation to reduce health risks.					
6	Absence/poor in providing Personal protective equipment (PPE) in at work place in the project					
7	Lack of insurance provision to the Employees in the project.					
	I. Project HR Communication related factors	**5**	**4**	**3**	**2**	**1**
1	Lack of simplest and direct Communication frame line references structure between supervisors and employee, and between employees and top management					
2	Absence in Ensuring frequent and clear communication to the project team members and to stakeholders					
3	Poor communications and inadequate participation from team members.					
4	Lack of effective communication practice, to ensure members know and understand their roles and responsibilities					
5	Lack of information planning in employee meeting, decisions making and feedbacks distributed to employees.					
6	Lack of good communication skills among team members to develop trust and respect within their working relationships.					
7	Lack of setting the policy for collective bargaining, employee contract negotiation, and grievance handling					
	I. Internal and External related factors	**5**	**4**	**3**	**2**	**1**

1	Influence in size, Structure, history, traditions and past practices of a firm's strategy and on flexibility and integration of employees in the company.					
2	The influence of power, politics and top management on employees in the firm					
4	The influence in change in economy, technology and globalization to the firm					
4	Culture, environment, gov't regulations and action of unions to firm & employees					

Part 3: Impact of Poor Human Resource Management Practices towards project success in Adama Town public building projects. Please indicate to what extent of the following impacts due to Poor Human resource Management practice towards project success in Adama Town public building project by ticking (√**)** in the column representing in your selection.

Rate of impacts: Respondents were asked to rank impacts of lack of effective HRPM systems according to the degree of importance (**5** = Very High Impacts; **2** = High Impacts; **3** = Medium Impacts; **2** = Low Impacts; and **1** = Very Low Impacts)

No	**Impacts of poor Human resource management practice towards project success.**	**level of impact**				
		5	**4**	**3**	**2**	**1**
1	Low productivity by employees					
2	Overruns in time and cost					
3	Disputes and Employee conflicts					
4	Experience low quality of finished job					
5	Project elongation/delay					
6	Material waste					
7	Inadequate quality					
8	Variations					

9	Client's dissatisfaction					
10	Lack of accountability					
11	Crime and embezzlement of funds and goods in an organization					
12	Rework due to inaccurate drawing and lack of experience of sub-contractors					

Please, if you have any different concerns depending on the Factors or impacts from your experience, share here**:**----------

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Appendix 2. Qualitative interview Questions

1. From your experience what are the factors affecting HRM practice in public building construction projects in Adama town?
2. What are the key HRM planning factors currently faces your organization?
3. Do you think the recruitment and selection process help the organization to find out the right person for right position? How does your organization get the Employees?
4. Does your organization make regular training and development programs?
5. How effectively you motivate your employees in your company.
6. To what extent does your construction project implement Employee Health and Safety policies and procedures?
7. Do your company Concern about the future employment security by solving business problems?
8. What impact does poor Human resource management have on construction project or organization?
9. What do you suggest to improve the problems encountered due to lack of effective HRM Practice in public building projects, in ensuring project success?

Appendix 3. Validation and Confirmation of HRM Practice development model

Title of Research Study is "Human Resource Management Practices towards project success: A case of Adama Town public building projects", one of the research's' objectives "Human resource Management practice conceptual Frame work development

system copy is provided for you to validate the model, and I kindly request you to indicate your answer and agreement to each question by filling in the space provided or by ticking (√) in the correct answer as appropriate. The level of agreement would, (**5**= Strongly Agree; **4**= Agree; **3** = Neutral; **2** = Disagree; and **1**= Strongly Disagree)

Current Position:

Project manager ☐ Office Engineer ☐ Site Engineer ☐

Resident Engineer ☐ Surveyor ☐ Forman ☐ Other_____

Your total work Experience in the company _____Years

1-5 years ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ Other_____

HRM Conceptual Framework mode Validation	**Level of Agreement**				
HRM practice system model Validation	**5**	**4**	**3**	**2**	**1**
The model provide theoretical knowledge and make better understanding of project managerial role and stakeholders in building projects					
The developed model provide the path way to practice human resource management to the project completion					
The developed conceptual framework support the project managerial tasks and activities					
It helps to provide competitive and dynamic environment in building construction projects					
Its ease, simple and possible to learn and understand the causal inference and changes (inputs, process and outputs) to the end result of HRMP variables.					
The model has no more ambiguity and no any other suggestion, or modification needed					