

**ADDIS ABABA UNIVERSITY**

**ADDIS ABABA INSTITUTE OF TECHNOLOGY**

**SCHOOL OF CIVIL AND ENVIRONMENTAL ENGINEERING**

(CONSTRUCTION TECHNOLOGY AND MANAGEMENT)



**COMPARATIVE ANALYSIS ON BUILDING CONSTRUCTION LABOUR MANAGEMENT  
PRACTICES OF LOCAL AND FOREIGN CONTRACTORS IN ADDIS ABABA**

**A THESIS IN CONSTRUCTION TECHNOLOGY AND MANAGEMENT**

**By**

**MESFIN BEKELE TESEMA**

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A Thesis

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the Requirements for the Degree of Master of Science in Civil Engineering



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**(CONSTRUCTION TECHNOLOGY AND MANAGEMENT)**

Title: - **Comparative Analysis on Building Construction Labour Management Practices of  
Local and Foreign Contractors in Addis Ababa**

By: - Mesfin Bekele Tesema

**Approved by Board of Examiners**

1. <u>Abebe Dinku Prof. (Dr.- Ing)</u>	_____	_____
Advisor	Signature	Date
2. <u>Dr. Girmay Kahssay</u>	_____	_____
Internal Examiner	Signature	Date
3. <u>Eng. Yibeltal Zewdu</u>	_____	_____
External Examiner	Signature	Date
4. _____	_____	_____
Chairman	Signature	Date

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DECLARATION

I, the undersigned, declare that this research report entitled as “Comparative Analysis on Building Construction Labour Management Practices of Local and Foreign Contractors in Addis Ababa” is my own original work which has not been submitted or presented elsewhere for similar or any other related awards, and contained no other previously published materials except those where due reference is made.

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Mesfin Bekele Tesema

AAU, AAiT

July, 2020

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Mesfin Bekele Tesema

(AAU, AAiT)

Addis Ababa, Ethiopia

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ABSTRACT

Labour management in building construction has an essential impact on controlling manpower related problems. Ineffective construction labour management is always a source of claims, conflicts, unproductivity, cost overrun, and delay affecting overall performance of the construction projects causing imperfect competition among local and foreign construction contractors. This study was aimed at conducting a comparative analysis of building construction labour management practices between local and foreign contractors in Addis Ababa. It is important to identify the trend gaps between these contractors, and work for improvement.

The principal tools used to conduct this research are literature review to select the most common building construction labour management practices identifying 39 factors leading to affect management practices, and experiences of other countries; two separate semi-structured survey questionnaires for contractors at head offices and at project site, and semi-structured interview with senior Foreman (Craftsmen). Using the Kish sampling technique a total of 112 respondents (i.e. 40 Contractors, 40 Engineers, 32 Foreman (Craftsmen)) has been involved in the study from both foreign and local construction contractors. The study has used the SPSS software of 20.0 version to analyze the responses from survey questionnaire and calculated RII to prioritize the leading factors.

The study has revealed major problems of building construction labour management practices from both local and foreign contractors affecting their performance. According to the results of the study; lack of HRM personnel, technical selection criteria, lack of scheduled training, minimum labour wage scale and labour-relation are found to be the major factors affecting contractors' performance. Comparative study of management-related and labour-related problems also has been done. Finally, relevant recommendations for the conclusions made, and future research areas are forwarded.

**Key Words:** Labour; Labour Management Practices; Labour-Relations; Manpower Planning; Retention; Selection and Recruitment; Training; Wage and Payment

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LIST OF ABBREVIATIONS

AAiT	Addis Ababa Institute of Technology
AAU	Addis Ababa University
BC	Building Contractor
CM	Construction Manager
COC	Centre of Competency
FIDIC	Federation Internationale Des Ingenieurs-Conseils
Freq.	Frequency
GC	General Contractor
GTP	Growth Transformation Plan
HRM	Human Resource Management
HVC	High Visibility Cloths
ILO	International Labour Organization
LP	Labour Proclamation
MoC	Ministry of Construction
MoFED	Ministry of Finance and Economic Development
OE	Office Engineer
PM	Project Manager
PMBOK	Project Management Book of Knowledge
RII	Relative Importance Index
SE	Site Engineer
SPSS	Statistical Package for Social Science
SWOT	Strength, Weakness, Opportunity, and Threat

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## CHAPTER ONE

### 1. INTRODUCTION

#### 1.1. Background

Labour management is a process of communicating (channeling) mankind's vitality and abilities (skills) to accomplishing a business targets having high concern on improving both labour efficiency and effectiveness (Annigeri et al., 2018). As most of the construction projects are usually labour intensive, the behaviour of labour (workforce) has enormous influence on affecting the performance of construction firms which requires an effective management that leads towards the project objectives. Therefore, project success heavily depends on its labour management strategies (Lill, 2008).

Labour management in construction especially in building projects is all about controlling workforce related problems to eliminate project time and cost overruns by improving labour productivity (Soe & Cho, 2014). For improvement in labour performance, there will be a need for good labour management practices. According to Soe & Cho (2014), construction labor management practices can be viewed as four categories; (1) labour management practices affecting project, (2) manpower problems due to shortcomings of labour management practices, (3) factors increasing labour productivity by good labour management practices and (4) factors reducing labour productivity by poor labour management practices.

Labour is an essential aspect and very important because it combines all other resources in order to produce the various construction products. Construction labour as an important resource of the contractors, it is very influential for any improvement (Wachira, 2001). Janagan & Thirumalairaja (2014), stated that even a micro level improvement on labour productivity can be achieved by an effective use and proper management of labour which ultimately can reduce unit cost; other ways, even activities may not be possible. Thus, it is important for any organization to study and identify the barrier factors and take an appropriate action for improvement. For example, even overtime as a percentage of the total labour working hours usually [5% and 7.9%] will shows its' major impacts on labour resources causing employees fatigue affecting their performance, disengagement, even more dissatisfaction on the job, and finally turnover (Suby, 2007).

A previous project work comparing the financial performance of local and international contractors in Ethiopia has revealed that foreign contractors perform financially better than local contractors and also local contractors are in 'financial distress'. To have such a superiority, companies have to be well organized, committed and effective in management as construction labour management can make or break the profit on the job. Good relationship between workers and supervisors can improve the productivity at higher margin (Biniyam, 2009).

A research conducted by Azeb (2016), comparing the general performance of local and international contractors on road projects has showed that; project execution performance difference between foreign and local contractors is becoming the challenges of Ethiopian construction industry as local contractors are losing confidence to compete. Accordingly, problems related to recruitment of employees and competence development is a major factor for project success. But still question remains how and why this affects; because some factors would be related to the job type, area and conditions as the research is only conducted on road projects. Another researcher Tewodros (2006), studying labour productivity has concluded that; there is lack of effective project management systems which was many years ago and things could be changed these days. All are aimed at identifying what factors affect labour productivity; not how and what affects the construction labour management also excluding other countries experience.

In this research, the building construction labour management practices including their manpower planning, recruitment criteria, payment, qualification standards, claims of labour management, maintaining the labour (retention), upgrading management, seasonal fluctuating labor management and etc. will be investigated comparing the two group of contractors. Knowing the detail practice of the two group parties will help to set directions in order to improve labour management which will add a major impact on project performance. And more, this research will compare and analyze the current practices of local and foreign contractors.

## **1.2. Statement of the Problem**

A successful project execution requires an effective construction labour management despite technology and equipment. Productivity of any building construction project relies mainly on its workforce as labour play an integral part in the successful completion of any building project. Ineffective construction labour management will cause claims, conflicts, absentees, unproductivity, employment discourages, poor performance and quality, cost overrun and delay

affecting the overall performance of the project and contractors' too. This in return will cause imperfect competition among local and foreign contractors operating in Addis Ababa creating superiority and dominance one on another on contract awards which is a major loss. The effect would extend to being totally out of competition, loose of senior employees and economic loss to contractors and the nation at large. Therefore, there is a need to undertake a comparative study aimed to determine whether there is a significance difference between local and foreign contractors in terms of labour management.

### **1.3. Research Questions**

The followings are the main questions that this research is expected to answer;

- Do foreign contractors operating in Ethiopia have a better building construction labour management practices than the local construction companies?
- What are the significant differences of domestic and foreign contractors in terms of building construction labour management?
- What are the current barriers of effective building construction labour management in Addis Ababa?
- How much detail project management should concern about the construction labour management?

### **1.4. Objectives of the Research**

#### 1.4.1. General Objective

The general objective of the research is to conduct a comparative assessment on building construction labour management practices between local and foreign contractors operating in Addis Ababa.

#### 1.4.2. Specific Objectives

- To investigate current practices of building construction labour management practices of both local and foreign contractors undertaking building projects in Addis Ababa.
- To explore and rank major factors (shortcomings) leading to affect building construction labour management practices in Addis Ababa.

- 
- To identify comparatively the key gaps in building construction labour management and labour-related problems of local and foreign contractors.
  - To forward the measures and formulate recommendations that should be taken to improve the building construction labour management.

### **1.5. Significance of the Research**

The outcome of this study has a multi-dimensional significance to different parties including the local and foreign contractors, potential investors, policy makers, future researchers and for any interested party. Therefore, significance of the research specifically have two dimensions.

First, the research is very important in showing the current status of both local and foreign contractors in terms of building construction labour management to review and compare. This will bring-in strength and identify weakness of local and foreign construction contractors to make changes and improvement on their labour management custom, rules and regulations. Specifically;

- Helps to identify the factors affecting both local and foreign contractors' building construction labour management and take a measure.
- Helps to identify which of the local and foreign contractors' labour management practices affects their project performance more.
- Helps to identify which of management-related and labour-related problems are more pernicious.
- Helps to compare and measure their stand against their contender.

Second, the research will be a source of information for upcoming potential investors to arrange their effective human resource (HR) department related to building construction labour management; policy makers related to labour management rules and regulations; and for future researchers as a source of secondary data by indicating the current trends of the two group of contractors for further study.

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## **1.6. Scope and Limitation of the Research**

The research concentrates on identifying management-related and labour-related factors that can affect the performance of the building labour, and how those labour related management practices impact on the contractor's performance affecting time, cost and quality. Therefore, the scope of the research is limited to:

- Building construction projects because of the nature of the industry; as building construction projects are less mechanized and more labour intensive than other projects.
- Only local construction contractors having a relative equivalence capacity with the foreign contractors undertaking building projects in Addis Ababa has been selected for analysis and survey questionnaire. Therefore, only grade one companies from local contractors who are undertaking building construction projects has been sampled.
- Foreign construction contractors who are currently (by the time of survey) operating building construction projects in Addis Ababa.
- Only labourer and their supervisors that have a direct involvement on the execution of the construction projects as the research is intended to study the practice of building construction labour management.
- Although there are many different construction labour management practices in different countries, it is impossible to address all of them. Therefore, this research limits itself primarily to management related functions of; (1) manpower planning, (2) recruitment and selection, (3) training and development (4) wage & payment, and (5) retention.
- Only main contractors' building labour management practices; as the role and impact of subcontractors on labour management is not considered in this research.

There were some difficulties when collecting data. (1) As the research included many open-ended questions it was time taking and faced difficulties with completeness of the questionnaires. (2) As the research included the opinions of Foreman (Craftsmen), it requires direct access to the site. But, in some construction sites getting direct access to project site and work area was not easy. (3) Different location of contractors head office and Engineers at project site make data collection somehow difficult. (4) The other difficulty of the research was misinterpretation of 'labour' by professionals as 'labour' are only those who work on unskilled, daily payment bases employees (daily labourers).

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## CHAPTER TWO

### 2. LITERATURE REVIEW

#### 2.1. Introduction to Construction Management

Construction management is a process of planning, scheduling activities and effective utilization of available resources i.e. material, energy, labour and equipment (Alem, 1999). Sharma & Pathak (2015), any construction project at any stage will employ different kinds of resources that can be categorized in to four; (1) Human resource, (2) Financial resource, (3) Physical resource and (4) Technology resource. Meanwhile, Kumar et al. (2018), also divided resources in to five as; (1) Human Resource, (2) Material, (3) Money, (4) Machine (equipment) and (5) Time. All authors commonly agreed that human resource play vital role and needs to be managed properly.

The human resource in a construction projects is a composition of different workers. Sharma & Pathak (2015), listed workers that a construction project site includes as “engineers, construction workers, supervisors, operators, drivers and also administrative personnel.” According to Kumar et al., selection of skilled and unskilled labour for construction jobs has enormous impact on escalating cost of a project and delay which forces the project to be completed behind schedule and over budgeted. Therefore, construction project management requires continues monitoring of human resource (labour) with the right allocation.

#### 2.2. Concepts and Definition of Terms

##### 2.2.1. Labour

The Oxford dictionary (2010), defines the word ‘Labour’ as “the people who work or available for work in a country or company”. The labour work in this definition is more specified as a manual especially physical work using hands. It also includes formal definition of a task or a period of work which specifies the effort of the labourer on a job.

The labour definition according to Wachira (2001), is stated as a task requiring the execution of mind and the physical body or both to combine other resources in order to produce a product. According to this definition particularly from the construction view, labour is one of the vital resource necessary to combine other construction resources (finance, material, plant and equipment) and produce various construction products.

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### 2.2.2. Labourer

Base on the above ‘labour’ definitions, those people who involve in the labour work are be called ‘Labourers’ and the Oxford dictionary (2010), discusses this as a person whose job involves hard physical activities which are usually not skilled, and mostly works that are performed outdoor. Therefore it is a labour force (Labourer) that all the people who work for a hiring company or a country (Oxford, 2010).

### 2.2.3. Labour Management

The term ‘labour management’ in English words have a representative meaning of company’s employer and workers or employees relationship (Razi et al., 2012). Labour management is a channeling (driving) process of the mankind’s energy, skills and abilities towards the organization’s business targets (Fryer, 1982; Wachira, 2001; Annigeri et al., 2018). Accordingly, the labour management is more concerned on the efficiency and effectiveness of the labour to measure how fast a job has been done and how the task is useful. Therefore, labour should be controlled and there are three possible methods to do so; (1) Control of wage rate, (2) Control of working rules, and (3) Practice of effective labour management techniques (Wachira, 2001).

#### 2.2.3.1. Control of Wage Rate

Wage rate of the construction labour could be controlled based on the economic system of the country and policies of government or individual firms set their policies on labour wage to take advantage over their market competition (Wachira, 2001).

#### 2.2.3.2. Control of Working Rules

Governmental authorities (Ministries) and labour management relations (trade unions) have parts to play on setting general work rules but mostly controlled by government bodies.

#### 2.2.3.3. Practices of Effective Labour Management Techniques

Wachira (2001), the most effective way of controlling the construction labour is to set sound labour management practices that can identify the labour related problems, work for appropriate solutions and assure effective and efficient utilization of the human resource. This mainly requires the individual construction firm practical participation as it is full of free options.

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#### 2.2.4. Labour - Management Relations

Labour - management relations have similar defining characteristics to industrial-relations referring any productive activity requiring individual's engagement in the relation of the employer with his workforce (Pandey, 2007). Statements from Pandey (2007), also clarifies the dynamic concept of labour - management relation as not limited to relationship of unions and management (between the state, employers and workers organization); but also goes to the general relation between employees themselves.

Another explanation of labour - management relation is that; it is the interacting relationship of the employer and employees (the labour and the management) (Razi et al., 2012). It is a stage where all the stakeholders including employers, employees and their respective associations directly participate on sectorial (industrial) activities.

#### 2.2.5. Classification of Labour

The skill requirements for a job are becoming frameworks to classify the workforce while measuring their performance (Janagan & Thirumalairaja, 2014). Accordingly, the construction workforce can very precisely be classified in to; (1) unskilled, (2) low skilled, (3) semi-skilled, (4) skilled and (5) highly skilled workforces. Some unskilled workers may become skilled after acquiring the necessary trainings. According to Kumar et al. (2018), good human resource management includes the allocation of skilled labour (contractors, supervisors etc.), unskilled labourer (masons, mistri etc. if they are required to report for the above) and technical labourer (qualified and specialized from institutes). This classification is more complicated from others labour classification. However, Fernando et al. (2016), believed in that, labour classification (grading labour) should be done on project site before recruiting the labourers.

Zannah et al. (2017), skilled labourers are those who perform construction trades adding a significant economic value. High level of experience, education, specified sets of skills, training and abstract thinking are the characteristics of skilled labourer. Schools, vocational training institutes and on-site workshops are the three possible places to develop a skilled labourers.

For the purpose of this study, the concept of 'Labourer' stands for those people who involve in hard, physical works for their company and the word 'skilled' refers to the those labourer who have experienced through practice.

#### 2.2.6. Local versus Foreign Contractors

‘Local Contractors’ are firms that are restricted their business operation to a particular area (technical boarder of a country). They only undertake local construction projects within the boarder. While the term ‘Foreign Contractors’ is akin to ‘International Contractors’ that can undertake construction business in different countries. The source of fund for these international projects are usually from foreign financers through donation, loan or any other business agreement which is usually requires the “International Competitive Bidding” to select the awarding contractor. Relationship between the parties is governed by the well-known document called FIDIC. FIDIC is widely accepted form of internationally binding contract document that governs the relationship of client and the international contractor. Many mega civil engineering projects were being underway in Ethiopia through international projects. Foreign construction contractors usually took the advantage on international competitive bidding over the local contractors due to their better relative capacity (Abebe & Girmay, 2003).

#### 2.2.7. Relative Equivalent Capacity

The word ‘relative’ have a grammatical attachment of rank in relation of things or grades. The term ‘equivalent capacity’ describes relation of having equal value, amount, function or meaning having the same or similar effect with ‘ability or power to do something on a legal competence’ as they have equivalent class within their relation. (Oxford, 2010).

According to the Ethiopian MoC, grade one (G-1) contractors are the highest level of categories in the country and further categorized by their work specialization (General Contractors GC-1, Building Contractors BC-1, Road Contractors RC-1, Special Contractor SC-1 etc.) (MoC, 2019). Besides fulfilling the legal requirements to afford grade one category, they have relatively better organizational structural, human and financial capability which makes them relatively better than lower categories and have equivalence capacity with foreign contractors to undertake larger local and international construction projects. Most of the large projects in the country are undertaken by grade one (G-1) contractors (Yimam, 2011). Foreign contractors are also grade one (G-1) categories. Hence, it is mainly because of their relative equivalent capacity with foreign contractors (experience, number of projects, capital) to compare with (Rounds & Huang, 2017). Therefore, higher grade local contractors (G-1) can be compared with that of foreign contractors (G-1) as they are in the same class (Azab, 2016; Biniyam, 2009; Tsegaye, 2016).

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### **2.3. Human Resource Management in Construction**

Human resource management is all about managing the workforce (people) and their performance within the relationship of employee-employer in order to achieve company's business objectives (Jianjian Du et al., 2007). The human resource (workforce) is the most valuable asset but also most complex resource to manage comparatively to any other resources that are required for the completion of a construction project (Malkani & Kambekar, 2013; Jose & Bhirud, 2018). It is mostly criticized for lack of appropriate approach towards human resource management policies and applicable structures in construction.

Activities of the construction industry are either to build or assemble different components of an infrastructure which require the direct and indirect involvement of different participants. As the scale of the construction projects gets larger, the number and skill of professionals on multi-tasked project work increases. Normally, a construction project requires the participation of Design Engineer, Project Architect, Construction Engineer and Project Manager; but all are under the supervision of the Construction Manager. Hence, all the participating parties from top level management to the lower technical personnel have a role to play for a sustainable and successful completion of the project (Jose & Bhirud, 2018).

Bigger companies are usually expected to have a HRM department to deal manpower planning, recruitment and selection separately. It is very necessary to assign a personnel to handle such a duty in construction projects sites for the smooth flow of works, availability of workforce on time, provision of necessary facilities, retention of workers and etc. (Jose & Bhirud, 2018; Sharma & Pathak, 2015).

As construction works are managed by people and play an important role, people management should be given priority in terms of human resource management (Kumar, 2018). The human resource management which includes the processes of organizing, managing, leading and controlling the project team is one concern of PMBOK. The 3<sup>rd</sup> edition of PMBOK also included the construction extension version to discuss about the project human resource development plan, team acquiring, team development and team management (Yimam, 2011).

Even though the construction industry as of Kokkaew & Koompai (2012), is characterized by its 'labour intensive' and 'low-tech' economic sector; it is also common to see fragmented project

based temporary team of labour, which is a major factor for consistent performance and productivity. This makes the management difficult and require effective policies. Kokkaew & Koompai (2012), has classified the effect of human resource policies and practices on three critical success factors of a construction project as (1) time, (2) cost and (3) quality.

The other characteristics of construction industry is the variable workload of construction firm's business operation and the resulting staff requirement variation in terms of workforce depth and professional skills (Jose & Bhirud, 2018). Some projects at some phases may require intense involvement of highly skilled professionals and others may do less or large physical workforce. However, their availability especially the technical workforce also be affected by seasonal fluctuation due to many reasons (Koshe & Jha, 2016). Hence, construction project managers should understand the significance of sustainable human resource development.

### 2.3.1. Challenges of HRM

The human resource management especially on projects encounter many challenges. The analysis by Malkani & Kambekar has stated some of the critical issues of HRM in construction which includes the following list. Malkani & Kambekar (2013, p.358);

1. Hiring the right people
2. Developing the right process
3. Helping employees to develop right skill
4. Motivating and retaining the workforce
5. Creating culture of innovation
6. Succession planning

A presentation held at Malaysia technology university in 2006 on major challenges for the HRM functions and listed the following (Mustapa & Rashid, 2006, p.7);

1. People related issues become a second priority to time, cost and quality targets
2. Competing organizational and individual employees expectations, priorities and needs
3. Balancing project and organizational requirements with human needs
4. Avoiding employee dissatisfaction, reduced commitment, industrial conflict, turnover, accident, recruitment problems and poor public image
5. Aligning HRM decision with overall strategic organizational philosophy

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### 2.3.2. Functions of HRM

Construction project managers need to put more attention to people management through human resource management even if technologies and general project management techniques have greatly advanced; because most of any construction project's budget still are being paid to human resource (Jianjian Du et al., 2007). According to the author's statement, recent realization from construction project management has suggested that development in performance of HRM are key factors for the improvement in productivity, efficiency and cost effectiveness.

The project management book of knowledge, PMBOK (2004), has discussed about the functions of the human resource management that are organizational planning, staff accusation, and team development. But other authors are considering the main part team development like human resource training and human resource motivation are to become critical functions of human resource management (Duncan, 1996; Tabassi & Bakar, 2009).

Tabassi & Bakar (2009), has also cited the perception of Slotte et al. (2004) that stated the function of human resource management is to achieve business goal by advancing the human capacity. According to their statement; (1) training, (2) career development, (3) organizational development, (4) and research development are among the primary duties of HRM. In addition to the above, the HRM organization is meant to promote the integral learning culture for fast capacity development at all levels to meet the strategic business plan and to achieve high quality performance (Slotte et al., 2004). Which seems difficult in construction projects and rear to be happened.

The development of human resource within any construction company can be a source of competitive advantages Brandenburg et al. (2006), and a sustainable competitive advantage is only achieved by effective system of human resource management practices. Therefore, it is clear that effective management is very crucial and according to the suggestion of Kokkaew & Koompai the following list of activities could increase the effectiveness of human resource management. These are Kokkaew & Koompai, (2012, p.3);

1. Strategic human resource management
2. Job analysis
3. Recruitment and selection
4. Training and development

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5. Career development
  6. Performance management
  7. Compensation and benefits discipline, and
  8. Safety and health

Detailed activities of the HRM that are crucial for attaining sustainable and maximized competitive advantage has been listed by Pfeffer (1998), and also more emphasis has been given both by Kokkaew & Koumpai (2012), and Soe & Cho (2014);

1. Employment security
2. Selective recruitment
3. Higher wages
4. Incentive payments
5. Employees ownership
6. Information sharing
7. Participation & empowerment
8. Trainings for skill development
9. Cross-utilization & cross-training
10. Team & job redesign
11. Wage compression
12. Promotion from within
13. Long-term perspectives
14. Measurement of practices
15. Symbolic egalitarianism (Labour equality)

While discussing about the function of HRM, Kumar et al. agreed on that good human resource manager have the following major role activities to play (Kumar et al., 2018, p.96);

1. Role analysis
2. Role specification
3. Recruitment of temporary & permanent staff
4. Evaluating performance
5. Communication with employees and etc.

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## **2.4. Labour Management in Construction**

### 2.4.1. Construction Labour Management Practices

As discussed above, construction sector specially building projects are among the worlds' major human resource demanding industry that the human asset (workforce) plays the vital role at every stage (Annigeri et al., 2018). Therefore, workforce is one of the important elements that affect the continuity and smooth implementation of projects. The authors also stated that, efficient and optimal use of resources especially the human resource will increase the productivity of the industry as the labour management includes improving labour productivity, reducing time and cost overrun of projects and solving problems.

Labour management is a better expression of good project management techniques. Hence, a good building project manager is characterized by his/her wise, forceful, energetic and efficient utilization of the available workforce (labour). Therefore, the labour management needs to make sure of the required type of skilled and sufficient number of workforce availability to perform all the planned works helping project team to minimize time waste & cost overrun (Essay, 2016).

For a sustainable sectorial development of the construction industry, effective labour management has a considerable contribution with respect to advancement in technology and material Lill (2008), recognizing that workforce is the most valuable resource in the industry. It is therefore clearly understandable that sound labour management for labour intensive industries like construction, is the best way to improvement and cannot be ignored (Wachira, 2001).

The performance of labourers can mainly be improved by the implementation of good labour management practices (Soe & Cho, 2014). Good construction labour management can increase the profit margin of any construction firm by increasing productivity with the help of good relationship of workers and their supervisors to identify problems they face and work for appropriate solution (Janagan & Thirumalairaja, 2014). In reference to the conclusion by Janagan & Thirumalairaja (2014), creating awareness about resource utilization, work quality, communicative ability, cost and profit sensitivity, job knowledge and safety consciousness etc. are expected works from the management as they use to compare local and migrant labourers.

Different countries and even individual construction firms (organizations) may adopt many different management practices depending on the situation, organizational culture and

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management approach as labour management practice problems that can affect the effectiveness of labour can be different from place to place, the project type and conditions; and their extent of needs to be covered also differs (PMBOK, 2004).

During exploring the general industrial labour management practices of Chinese and American companies Rounds & Huang (2017), has classified the levels of factors into “institutional” and “interpersonal” levels. Factors that are directly related to the institutional practice include a company’s policy and strategy of hiring and recruitment, HR structures, wage and related benefits, employee termination practices, and skill development training programs. While other factors like managerial perspective view of local workforce and corporate ‘localization’ are among interpersonal level.

The problem of labour management identified by Wachira (2001), experiencing the uncertainty of labour management of Kenya’s construction has included that unfair wages, recruitment of unskilled personnel, poor communication, negative influencing factors, lack of motivation, lack of training and lack of investment in research & development as he called them shortcomings.

Soe & Cho (2014), has a different perspective on identifying labour management problems that the labour management practices should have to be categorized under four activity areas which most of the problems by Wachira (2001) are included. Accordingly, construction labour management practices can be viewed as; (1) Labour management functions affecting on project time, cost and quality, (2) Manpower problems by shortcoming of labour management practices, (3) Factors increasing labour productivity through good labour management practices and (4) Factors reducing labour productivity due to poor labour management practices. But Soe & Cho, has given more emphasis to management practices like; (1) manpower planning, (2) selection & recruitment, (3) training & development, (4) motivation, and (5) safety & health at work places.

Jose & Bhirud (2018), conducted a research on factors affecting human resource management of construction firms considering about 75 factors that are collected through interview and questionnaires from Engineers, Project Managers, Human Resource Managers and Contractors. Then, the factors are divided into 14 main criteria as; (1) Job Analysis and HR Planning, (2) Recruitment & Selection, (3) Education & Training, (4) Motivation Performance Appraisal, and Labour Retention, (5) Compensation & Other Rewards, (6) Labour Health & Safety, (7) Employment Relations, and (8) Other External Factors.

Therefore, the following most commonly stated labour management practices especially more important and usually practiced by construction management and also relevant to the developing countries construction industry are discussed in detail here. Based on the statement of Wachira (2001); (1) Control of wage rate and (2) Practice of effective labour management techniques which are also more specified by Soe & Cho (2014); those labour management functions affecting on project time, cost and quality i.e. (1) Manpower planning, (2) Recruitment (3) Selection (4) Training and development and including (5) Retention in addition has been selected for discussion in this study. Other practices require direct involvement and impact of the labour.

#### **2.4.1.1. Manpower Planning**

According to the definition of Sharma & Pathak (2015), manpower is the number of people that is required to complete a task and is assigned to an activity. Accordingly, manpower management is among the primary factors that can affect the timely completion of a project. That is why human resource managers use it as an important management tool putting their greater concern on and call it as ‘Human Resource Planning’ (Soe & Cho, 2014).

Planning the manpower is more concerned about assigning the right number and the right kind of people at the right time; to do the right job at the right place (Soe & Cho, 2014). Similar but detailed explanation on the general management view has been listed by Itika (2011) that the main reason of human resource planning, HRP (Manpower Planning) is to (Itika, 2011, p. 64);

- Have the right skills & jobs at the right time
- Forecast the types of HR needed
- Ensure replacements will be available & be prepared to fill vacant posts
- Ensure the recruitment strategy meet the current & future number of jobs with qualities
- Ensure the effective utilization of available HR at hand
- Facilitate any required personnel procedures on the current & future jobs including recruitment, placement, career planning and training.

The statement by Sharma & Pathak (2015), discussed that an increased number of employees on construction projects will shorten the work duration and vise-versa. This could not always be simple and easy because it requires careful project manpower planning, work schedule and providing necessary facilities. However, improper manpower planning and scheduling cost many projects to suffer time and cost overruns.

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#### **2.4.1.2. Recruitment and Selection**

One of the core functions of the human resource management is recruitment and selection which have the most critical impact on the performance of a company (Soe & Cho, 2014). The definition of recruitment as given by Christopher (1985), stated as “The activity that generates a pool of applicants who have the desire to be employed by the organization, from which those the suitable can be selected”. The definition generally explained recruitment as a process of attracting skill-full applicants with ability and personality for a job. According to the description of Soe & Cho (2014), recruitment is “the set of procedural activities and process used to legally obtain a sufficient number of qualified people at the right place and time so that the people and the organization can select each other for their own best short term and long term interests”. Therefore this process have the potential of bringing-in the right people Siew (2014), who have the potential of making a positive contribution to choose from the pool of applicants.

Adebowale (2014), has drawn a conclusion that states one of the reason for the poor image of the construction industry is lack of formal system in adopting recruitment procedure. It is mainly due to the temporary nature of the construction work. The causal system of the construction workers employment greatly affect the performance of contractors.

##### **2.4.1.2.1. Effect of Improper Recruitment**

A company have two source options to recruit a worker for a job which can be done from internally or externally (Siew, 2014). Both have their advantages and drawbacks which are more concerned about motivation, cost of recruitment and bringing-in new experiences.

Wachira (2001), discussed the experience of neighborhood country, Kenya; that even though the contractors have a freedom in recruitment, most of them recruit unskilled and unqualified contractors’ team to key positions and even at lower technical levels. They do this because of trust they have on people they know rather than their skills and qualifications. They assign the unskilled personnel in-charge over professionally skilled tradesman. This inappropriate positioning according to the author; will create more resentment, material wastage and poor workmanship as the professionals try to bear applying their skills, which the in-charged unskilled does not understand.

Selection is choosing the perfect or nearly perfect pool of candidate(s) that are qualified to the company's requirement. It is a process by which knowledge, skills and abilities of candidates are measured to grade labour by pre-stated criteria. In other words, selection gives the opportunity for firms to pick a candidate that best match the skills and professional qualification recruitments of the organization. As a result, the incoming workforce would be with a better skills, abilities and more experience (Soe & Cho, 2014). Grading labour is done before recruiting labour at project site to classify and categorize the skill level aimed to evaluate the performance and also as screening and motivation later on skill development preference (Fernando et al., 2016).

Even if different companies having their own different measurement methods for hiring employees of different skills, Zannah et al. sets some criteria that should be considered while selecting skilled workers which are also factors of good labour section. Zannah et al. (2017, p.3);

1. Physical strength & stamina
2. Manual dexterity & condition
3. Knowledge & analytical skills
4. Knowledge on handling tools & equipment

#### **2.4.1.3. Training and Development**

Some authors consent on the agreement that construction as a labour intensive industry; its success heavily depends on the performance and skills of the workforce (Fernando et al., 2016). Any construction firm's liability, productivity and competitiveness heavily depends on their individual labourers' work related confidence, initiatives, problem solving, and solution finding skills. To have such advancement, every personnel need to be resourceful, self-sufficient, autonomous and creative through training and development (Ojambati et al., 2012).

In some areas, human resource training and development are becoming critically very important strategic (long term) plan of the human resource management (Tabassi & Bakar, 2009). Soe & Cho (2014), said that "Training and development is a process of developing work related knowledge and skills specially used for effective development of technical and problem-solving skills". Good human resource managers must repetitively provide trainings to every employees (workforce) as continuous trainings are relevant to everyone in order to update their skills, improve their communication skills, learn new methods and technology etc. Accordingly, contractors must be encouraged to train their workers as it repays them on a better performance

of project execution and increase competitiveness. Even though the causal system of labour employment does not oblige contractors to train; they need to be forced. Kenyan can be taken as an example for this as government used to require contractors to pay training levy for all contracts more than Kshs. 50,000.00 (Wachira, 2001).

A well-organized human resource management in the construction is important to implementing effective training Tabassi & Bakar (2009), so that managers could develop ways to measure the performance of their workers. Different methods are possible to train labour and the one that was suggested by Sivakumar (2018), is proportioning. Accordingly, the skill level of labour to work unsupervised determines the training needed. However, training have the capability to change the proportioning later on. Tabassi & Bakar (2009), are also agreed on two significant methods of training construction workers; (1) On-the-job- training, and (2) Off-the-job-training.

#### 2.4.1.3.1. On-the-job-training (OJT)

On-the-job-training is one of the traditional model where new regulations, procedures, or processes are delivered to the workforce in a place and they demonstrate it at exact workplace. Many ‘skilled’ labourers can be trained through the OJT of apprenticeship training under the well-known technical skill learning methods called ‘job rotation’ of different activities and ‘understudy assignments’ through giving a responsibility or duty on a job to be fulfilled.

#### 2.4.1.3.2. Off-the-job-training

Managers may provide classroom lectures, demonstrative films, and conditional exercises or any others to develop technical and problem-solving skills of their labourers. The choice depends on the information required to be delivered. The following table presents the comparison of the two methods (see Table 2.1 below).

Table 2.1. Off-The-Job Training Versus On-The-Job Training

	<b>On-the-job-training</b>	<b>Off-the-job-training</b>
Emphasis on	Getting the job done	Learning basic facts and skills
Ultimate goal	Developing “best practices”	“Knowledge”
Knowledge	Dynamic, situated, practice-oriented	Static, decontextualized, general
Topics/Problem	Arise from & embedded in work situation	Given by curriculum
Learning scope	Individual, group, organization	Primarily individual

Source: Tabassi & Bakar (2009), page 473

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#### 2.4.1.3.3. Labour Subcontracting Vs. Training

Lill (2008), sometimes covering all the required project work at the right time may not be possible to the main contractor only. So the work will be sub-contracted to individual Craftsmen or sub-contractors while the main contractor only plays the role of project management. This will help the main contractor to reduce non-productive expenditures while working under unstable workload with his own labourers chasing client's repetitive project time shortening questions due to extended project duration.

However, labour-only sub-contracting and self-employment block the opportunity of getting training and development. There will be no sufficient facilities, funds or organized target groups to train when individuals perform building construction works by their own as a subcontractors. Eventually employees face difficulties to improvement and the contractor lack competency in the construction industry (Janagan & Thirumalairaja, 2014; Lill, 2008; Ojambati et al., 2012).

If there is lack of training in the construction projects, especially the supervisory staff of the project will face challenges to cope with planned works, communicate with labourers and adequately perform their work activities (Wachira, 2001). Therefore, this inconvenience management will make the project cost-ineffective and affect the profit of the contractor. However, most contractors argue the necessity of training and give less effort as they face a challenge to train their employees; since their employees do not stay longer in the firm. The HR development program of any construction firm should be planned by integrating different skill trainings including financial management, inter-communication, and implementation of alternative approaches so that they can develop quicker decision making skills (Zinabu, 2016).

Fernando et al. (2016), concluded that less in technical skill occur due to the less commitment of contractors and the labourers themselves to skill development. Accordingly, most of the skilled labourers acquire their skills from informal training through observing what their seniors are doing and this does not allow them to learn the new methodologies and technology behind the work. Almost the same thoughts with Janagan & Thirumalairaja (2014), construction workers' skills transferred through hierarchical basis (like through family-line) over years (normally 5 - 10 years of learning curve). In fact, on their trial periods, they affect the productivity and quality of building works until they become of capable.

The technical areas and types where the training programs are needed should be identified to provide the labour with the right technical skill improvement. There is a stage how the training needs and areas to be determined. A simplified steps suggested by Tabassi & Bakar (2009), stated as; (1) assessing the performance and satisfaction level, (2) planning the training program, (3) determining the area (skill) of training needs and type, and (4) organizing the training media (methodologies) like demonstration, case study, OJT, or off-the-job (Tabassi & Bakar, 2009).

Fernando et al. (2016), also agreed that training programs need to be very short and economical for the benefits of both to the labour and the firm as well with the involvement of government to advance the industry. Therefore, authors have established strategic framework to process the skill development trainings. The stages were stated as; (1) Investigating the skill shortage, (2) Scrutinizing industrial needs. The above two stages can be sorted by implementing effective research and cleaning the house strategy. (3) Motivation by creating awareness about benefits of skill development, (4) Designing standards & training program, (5) Implementing training programs, (6) Developing skill measurement criteria, (7) Skill measurement, and (8) Grading labour. Last stage be conclusion with certification used to grading system even at national level.

#### **2.4.1.4. Wage and Payment**

The word ‘wage’ according to the explanation of Anniger et al. (2018), it is the fiscal ‘payment’ that an employee gets paid for the job he/she has done from the employer. The wage levels may be different based on the work and qualification of the labourer, but dependent on the pre-assigned payment scale. Both reviews by Annigeri et al. (2018), and Zannah et al. (2017), has stated that the following three factors related to payment can greatly affect the labour productivity; (1) Lower wages, (2) Difference in payment scale, and (3) Payment delay.

##### **2.4.1.4.1. Minimum (Lower) Wage**

Minimum (lower) wage in general context has been established in many countries to protect the workers. Member countries of the international labour organization (ILO) should fix the minimum amount of wages to every employees based on their national circumstances as stated by the 1970’s (No. 131) minimum wage fixing convention ([www.ilo.org/minimumwage](http://www.ilo.org/minimumwage));

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“Article 1

1. Each member of the international labour organization which ratifies this convention undertakes to establish a system of minimum wages which covers all groups of wage earners whose term of employment are such that coverage would be appropriate.”

“Article 2

1. Minimum wages shall have the force of law and shall not be subject to abatement, and failure to apply them shall make the person or persons concerned liable to appropriate penal or other sanctions.”

The convention also specified elements that member countries should take into consideration while deciding the minimum wage levels on article 3.

“Article 3

- (a) The need of workers and their families, taking into account the general level of wages in the country, the cost of living, social security benefits, and relative living standards of other social groups”

However, the application of the laws on the ground especially within construction contractors at the building project site are very unrealistic (Wachira, 2001). Having a call for recent study by the ILO (2017) in Ethiopia, on the necessity, importance and the likely consequences of introducing minimum wages, including the advantage and disadvantage of setting minimum wages scale; the construction sector does not even get in to consideration. Because the study called for exploring only the textile and garment sector. Hence, the construction industry especially in building projects are in needs of serious follow-up.

Employees of the construction industry in developing countries (countries like Kenya and Ethiopia) are usually complaining about the wages and different payments because contractors are totally in charge of deciding the labour wages (Wachira, 2001; Thewodros, 2016). But those who are unsatisfied are free to leave. The study by Thewodros (2016), have proved that most of the labourers (mostly males) working 8hrs at construction site (average age below 26) only get salary of below 1000 ETB per month which is only about \$1 - \$2 per day according to the current average exchange rate in 2019. But this figure is unrealistic with the current market price.

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#### 2.4.1.4.2. Payment Delay

Payments to the construction workforce in a fortnightly basis is a common and normal practices (Sivakumar, 2017). But in some cases, there is a situation that contractors does not pay or delay wages and payments even for several months.

Not only payment delay concerns the workforce; but contractors also deduct from payments for many reasons including for taxation, pension, for services they did not provide adequately etc. Employees should get clearly stated pay-slip for the deduction made by the contractor so that they can have an equivalent compensation. According to Sivakumar (2017), there are some other conditions of employment that adhere the performance and productivity of usually 'local' labourers in developing countries especially related to wages. These include; extend of normal working hours, overtime rates, allowable deductions from pay, and termination procedure.

#### 2.4.1.4.3. Scale of payment

Setting equal amount of wage scales to the same level of work by the same professional skill requirements is a good instrument to adopt fair wages and is indication of a wise labour management. Most construction contractors does not consider unfair wages as to be a shortcoming of labour management (Wachira, 2001). Soe & Cho (2014), also share the same on this one as low amount of payment is among the manpower problems by shortcoming of labour management practices. High amount of wage payment in contrast is one of good labour management practices increasing labour productivity.

The existence of larger pool of unemployment workforce in the market greatly reduce the amount of minimum wages to be paid because positions of those who asked the legal and/or higher amount simply taken and replaced by labour waiting outdoors (Wachira, 2001). In order not to lose their positions, employees take the job at lower wages. The amount of wage paid to labourer greatly affect their performance (Annigeri et al., 2018). Further explanation of authors states that; labour with a low amount of wage payment may lack interest to perform well and continue on the job. These labourers may require extra bonus and compensation to be motivated. Labour relations (trade unions) have obligations to track the claims up to the final decisions but labourers with low wages are unable to join trade unions and take a part to fight for their rights.

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#### **2.4.1.5. Labour Retention**

The last thing that managers need to consider after hiring and training a new workforce is planning about employee's retention. The construction industry by its nature and due to the lack of skilled craftsman in the industry, successfully trained and skilled workers cannot stay for longer period and firms regularly loses them to other professions (Bartlett, 2007). Carriers of construction labourer and professionals could be affected by different variables that are sourced from social, economic or cultural factors which have direct impact on the professionalism, personal interest, commitment, and development etc. of the employee while reducing the rate of retention in the firm (Dainty et al., 1998).

As discussed by Lill (2008), earlier and also cited by Bartlett (2007), skilled labourer lose their current jobs in order to get access to other better paid places (occupations) which pushes the construction industry to take a serious outlook on their wages, incentives like guaranteed overtime, technical trainings, outsourcing work, reduced labour force demand and mechanization (intensive use of automated technology).

According to the analysis made based on the exit interviews, some of the reasons for employee's to quit from construction firms are (Nkomo & Thwala, 2009, p.123);

- More pay
- Better prospects (career change)
- More security
- Opportunity to develop skills
- Better working conditions
- Poor relationships with managers (team leaders)
- Poor relationships with colleagues
- Bullying or harassment on job site
- Personal reasons including pregnancy, illness, change in living area etc.

Relatively the same ideas of Garrity (1999), has been cited as a solution by Staci Fawn Bartlett that to have a control over trained employees from leaving the firm, the management must understand the interest of workers and give practical responses as they want good wage and benefits, scheduled overtime, safe and better working conditions, transport pays and other perks.

The above reasons provide basic information to set retention plan. But Newman & Rose (2017), suggested two basic factors that needs to be consider while planning employee's retention; (1) Design based on firm's long-term strategic plan (growth or exit strategy) and (2) Consider key employees (relationship, knowledge, human capital and etc.)

#### 2.4.1.5.1. Lack of Labour Retention

Leaving from a job or 'job hopping' has negative effects to both the construction company by increasing expenditure and to the employees forcing them to relocate while changing job from company to company. The effect will extent to lose of productivity that can affect the carrier development of the labour and productivity of the project. Lack of good labour management in terms of appreciation (motivation) at work that recognizes the talent and contributions of every employee is among the main reasons for low retention (Nkomo & Thwala, 2009).

According to the statement of Lim & Ling (2012), these days; it is common to see the practice of construction contractors to dismiss (fire) the worker immediately after the project jobs have completed. It is therefore, a common indication Lill (2008), as contractor's gesture shows lack of concern on the development of the project workforce. As per the scholars thought Mondy (2010), termination of employee is an extreme penalty for workers and may affect other construction workforce's output and performance of the contractor, so management decision is vital.

## **2.5. Construction Labour Management Practices of Other Countries**

Labour management in construction is a worldwide issue that concerns every country. Countries have been experiencing variety of labour management practices as different researchers from different countries have conducted many researches to address the widespread and manifold labour related problems. Reviewing their experience will help to identify the causes of labour related issues, major drawbacks, the potential threats of the future and strengthen research by providing more information. Therefore, experience of some other countries in construction labour management have been reviewed and summarized as follows.

### 2.5.1. Kenya

African countries are becoming the major business destinations of direct investment for many foreign companies. Especially Chinese companies are the most active participants in Africa. Kenya is among the major countries hosting US American and Chinese business firms in

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different business sectors. Chinese companies mostly involve in construction projects that can create many employment opportunities. According to the statement by Rounds & Hongxiang; they mostly criticized for their extreme exploit of domestic workforce (labourers) and undermine the local labour standards. And that is why they repetitively enter in to labour strikes and protests. Authors has used semi-structured interviews, qualitative and comparative case study to conduct the research (Rounds & Hongxiang, 2017).

Chinese companies have strategic management of ‘low-cost employment’ approach which makes them profitable. They only allow long term employees and Chinese employees to sign formal contracts so that only fewer demand their rights. According to Rounds & Hongxiang (2017), the ever increasing number of Chinese companies’ registration is followed by the growth of labour conflicts. The authors recall the time when Kenyans (the young Maasai men) protest in August, 2016 in the southwestern Kenya against the Chinese company at a construction site of coal plant project. The main reason for the protest is against the announcement of the company to bringing-in 1400 Chinese workers to the project and loss of job opportunity in addition to their poor labour practices. Therefore strikers went to the construction site and many Chinese workers have been injured. The protest does not consider the nationality of the firm as there were other Americans and foreign investors; but not held personal strikes like what they did on the firm.

The above strike is not the only and the last protest of Kenyans against the Chinese construction companies, as there are many open cases on the labour dispute offices and yet more to come more. A very recent strike has been reported on the Thwake dam project on April, 2019 for complains of poor pay and radical discrimination of Kenyan labourers. Over 350 skilled and unskilled labourer have stopped working for protesting low wages, poor working conditions, lack of drinking water and molesting (Nzioka, 2019). All the above actions clearly carryings-on the labour management practices of foreign firms (especially the Chinese) in question.

#### 2.5.2. United Republic of Tanzania

The construction industry of united republic of Tanzania contribute about 5% to GDP and about 9% of employment. The base line information development study ILO in 2005 showed that about 70% of the construction workers are employed on a temporary (causal) bases and most of foreign workers get the permanent form of employment. However, the law in Tanzania requires every construction firm to provide welfare facilities for every labour including (ILO, 2005, p.82);

1. Fresh water to drink, wash and any other purposes
2. Suitable accommodations
3. Catering facilities
4. Sanitary facilities (including toilet, showers, and changing rooms)

To conduct the research, interview with contractors, supervisors and workers has been held in addition to survey questionnaire for supervisors and workers on ongoing civil engineering and building projects. Issues of the study has also been reviewed with the legal and regulatory framework. The study has proved that there is no exploitation of labour forces as no construction project site has found hiring children. Even if men workers constitute 85% of employment, women are also being involved both in office and manual works on site without any discrimination in wages. The law has specified the minimum amount of wage at a normal of 45hours/week and to be paid 1.5 times for the overtime works.

In the contrary, the Tanzanian construction industry requires notably a serious law enforcement and monitoring the contractors on providing health and safety facilities, encouraging employees to join trade union membership and registered for pension schemes (ILO, 2005).

### 2.5.3. Nigeria

A research aimed at identifying factors affecting the performance of labour in Nigerian construction projects has been conducted by Fagbenle et al. (2011). Contractors and workers including operatives from 40 construction projects were responded for the survey questionnaires administered. RII of the Likert's scaling method has used for analysis and to rank the factors which prioritized; (1) Unfair wage, (2) Negative influencing factor, and (3) Lack of motivation respectively as a major problems according to the labour response. From the contractors perspective (1) Lack of training, (2) Poor communication, and (3) Inclement weather are the higher factors affecting performance of labour (Fagbenle et al., 2011).

It has been noted that labour management will affect the productivity of labour and performance of a company by many researchers. Management by itself has many factors. Assessment and comparison of the relative effect of management-related factors on construction labour productivity has been studied by Odesola (2015), in Nigeria. A stratified random sample of 115 building craftsman and 60 Engineers has responded to the structured questionnaire to come up with the same agreement on management related factors. Therefore, they ranked the six factors

as; (1) Material management, (2) Quality of site management, (3) Lack of financial motivation system, (4) Supervision, (5) Crew size & efficiency, and (6) Firms reputation, respectively. According to the conclusion of the study, the undeveloped and developing countries construction industry still needs improvement in management practices recommending construction managers to formulate policies that significantly improve management-related factors (Odesola, 2015).

#### 2.5.4. Malaysia

Up to recent years, the Malaysian construction industry has been playing an important role in development of the country's economy. But these days, the volume of construction projects is becoming steady and unexpectedly rise and fall. The construction labour force demand from the domestic market has been affected significantly; facing the problem of labour shortage and uneven from place to place. This is because the local labourers refused to take parts in the construction activities especially under the hot weather, low wages and unattractiveness of the career path. These occasions forced Malaysia to look for foreign labourers from neighboring countries such as Indonesia, Myanmar, Cambodia, Nepal, and Bangladesh (Essay, 2016).

The large pool of foreign construction labour brings another barrier, language. Most of them does not speak or understand the local language and face a problem of communication. A research conducted by Valitherm (2014), to identify communication barriers of Malaysian construction sites used survey questionnaire of the five (5) points Likert scales (index) and field study (site observation). Accordingly, the language barrier of these labourers consequently leads to serious issues of; (1) Activity delay due to the time takings to understand, and (2) Health and safety matters which make the labour management practices more difficult (Valitherm, 2014).

#### 2.5.5. Indian

India is the second largest populated country in the world (i.e. 1.25 billion people in 2016) and among them about 4.4 crore (44 mill. people) are unskilled construction labourers. Most of the labour usually work under casual conditions and without any properly provided facilities. They face many problems. A specific area from India called west Bengal has been selected for survey identifying a total of 93 risk factors that can affect labour divided in to various sub groups. As a result of the study, construction workers face problems of working for more hours, staying away from home, social security, skin problems, physical health problems and etc. Finally the authors concluded that there is a question of construction management for balancing labour rights and demand of construction industry (Bhagat & Bhirud, 2017).

#### 2.5.6. Sri Lanka

Performance of construction labourers in Sri Lankan construction industry has been recognized by Fernando et al. (2016), as neither been specified qualitatively nor quantitatively due to no standards to recruit labour with their perfect level of performance. A project will face challenges to complete as per the required quality, time specified and cost if the right crew is not assigned.

A research aimed to develop a framework to enhance skill of labourers to enable successful delivery of projects has conducted. Interviews and questionnaire survey for labourers has been used to collect primary data and analyzed using binomial test and RII. According to the findings of the research the skill development of construction workers is majorly hindered by less guidance, less motivation on labourer and poor examination of their skills. The study also revealed that shortage of skilled labourers and the poor image on employment conditions are the root causes for unskilled labourers to work as skilled labourer. These has been negatively affecting the quality and production standards, costing high due to material wastages, and require more time to complete projects (Fernando et al., 2016).

#### **2.6. The Ethiopian Construction Industry Overview**

Ethiopia is among the one registering an accelerating non-oil dependent economy in Africa (Zinabu, 2016). Even being one of the African country with the fastest rate of urbanization, Ethiopia is still facing the challenges of unemployment. Despite the increasing number of labour force in the market; there is no equivalent demand to absorb the labour as employment creation remained inactive and specially urban unemployment are becoming greater concern. Ethiopian construction sector, the one with a burden of creating larger number of job opportunity through infrastructure development is expected to reduce the urban unemployment according to the growth and transformation plan (GTP) (Fitsum, 2014).

Developing countries like Ethiopia spend most of their annual budgets on infrastructures like road constructions, buildings, water work constructions, civil works of telecommunication facilities, etc. (Yimam, 2011). Numerical reports prove this as; by 2007/2008 budget year 50% of the budget was allocated to capital projects (33% to road projects) (MoFED, 2008).

However, these large amount of budget allocation does not foster the infrastructure of the country as it is needed to be; and still remained the poorest from sub-Saharan countries (Yimam, 2011). Ayalew et al. (2016), has cited the report of Centre for Economic Performance at the

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London School of Economics (LSE) which showed that Ethiopia is one of the poor performing country even from East Africa in terms of project management in features of lean operation, talent management and performance management.

#### 2.6.1. Challenges of the Ethiopian Construction Industry

The construction industry in developing countries like Ethiopia is mostly known by its consumption of extra cost and extension of time than planned (budget/schedule) in every phase of the project and dissatisfaction of the involving parties at the end (Koshe & Jha, 2016). The fact from recent researches showed that the industry is facing many challenges as the current performance of project management practice level even in terms of applying general project management functions, tools and techniques and control over risk, quality, resources utilization and safety (21- 40%) and in terms project completion, schedule slippage ranges from (according to Ayalew et al. (2016)) 61% - 80% to about (according to Koshe & Jha (2016)) 91.75% projects are not completed on time and the delay extends to 352% of their contractual time compare to their planned schedule.

As discussed earlier Koshe & Jha (2016), had published a research in 2016 investigating causes of construction delay in Ethiopian construction industry. Based on the data collected from Construction Managers, Resident Engineers, Contractors, Clients and Senior Professionals; 7 main critical factors have been evaluated as most common out of 88 factors that were identified (grouped in to 8 categories) as causes of delay in Ethiopian construction. Financial difficulty of contractors, price escalation of materials, ineffective planning and scheduling, delay in progress payments, lack of skilled professionals, fluctuating labour availability are among the major shortcomings. The last two main factors (lack of skilled professionals in the CM, and fluctuating seasonal labour availability) are directly related to the labour management. Accordingly, unqualified or inadequately experienced labour with the required professional skills is one of the major challenging problem of the construction industry in Ethiopia.

#### 2.6.2. Labour Management in the Ethiopian Construction Industry

One of the world's common construction industry problem is lack of skilled labour with different level of skills required (Fernando et al., 2016). And the same is true for the Ethiopian construction industry (Zinabu, 2016; Koshe & Jha, 2016). Skill development could not be achieved with in short time. It requires series of capacity development training by construction

project managers, engineers, contract administrators and technically skilled and/or semi-skilled labour experts. Azab (2016), has also stated that the availability of personnel with high experience & qualification, recruitment of employees and competence development is a major problem for the country's construction industry.

To have a control over the fluctuating labour availability, leave, and payment request as construction labourer have a choice to leaving to better paid job Lill (2008), the project manager as well as a top level management from the contractors side have role to play in arranging some incentives and give training to motivate labour and increase productivity of the labour. This will require a good experienced and specialization in labour management. Therefore, improvement in construction labour management practices, strategies, tools and techniques require a detailed knowledge and continuous studies by the sectorial professionals (construction managers & project managers) to decrease the mismatch between required and available skilled or unskilled labour and to discuss the consequences of ignoring the interests of the labourers.

## **2.7. Local and Foreign Construction Contractors in Ethiopia**

### **2.7.1. Local Contractors**

Construction projects in Ethiopia are parts of the country's economic development initiative as it shares Koshe & Jha (2016), considerable large amount of the country's limited financial resources. But it was a very recent history since 1968 that local construction contractors started to emerge and undertake construction works and knockdown by the polarization of Dergue reign Biniyam, (2009), until the recent government took initiatives by privatization. As a result of growth in the construction industry, the years from 2000 to 2008 was a period were many construction contractors have emerged to join the sector (Zinabu, 2016).

Grade one (GC-1 or BC-1) construction contractors in Ethiopia (which are the highest level of contractors in the country) according to the data (2019) registered by the Ministry of Construction (MoC) for the budget year 2018/2019 ([www.moc.gov.et](http://www.moc.gov.et)) are 122 in number out of 5553 contractors in total. They have a relative equivalence capacity with foreign contractors to undertake larger local and international construction projects. They have better organizational structural, human and financial capability than contractors at lower level; and they have impact on the country's construction industry as any improvement achieved by them will significantly contribute to the overall improvement of construction industry's performance (Yimam, 2011).

### 2.7.2. Foreign Construction Contractors

The growing economy of Ethiopia is inviting both local and foreign contractors to enter in to competition. But there is a relative deference in terms of performance capacity and experience between them Biniyam (2009), which is stated as a reason for project execution performance difference. The number of foreign contractors operating in Ethiopia usually fluctuate as they come in when there is a need for mega (international construction contract) projects and leave after completion. There are also many companies that have stayed for longer and run construction business.

There was a period that foreign construction firms have dominated the Ethiopian construction industry. Some authors (Mengesha, 2004; Ayalew et al., 2016) classified this dominance and evolutionary development in to six (6) periods. A tabulated description of each individual period features has been specified but listed here (Ayalew et al., 2016, p.2);

1. Pre – 1968 :- Foreign company domination
2. 1968 – 1982 :- Emergency of small scale local construction companies
3. 1982 – 1987 :- Parastatal companies domination
4. 1987 – 1991 :- Fragmentation of phases
5. 1991 – 2001 :- Era for re-emergency of privatization
6. Since 2001 :- Emergency of integration and capacity building

It was few years ago that Chinese construction contractors joined the Ethiopian construction industry and developed active partnership. Chinese contractors understand the large potential market of Africa and open their way to Ethiopia through the Addis Ababa ring road project; the first important Chinese project (Peng Mo et al., 2008). Chinese government is among the international financiers for many later projects through loan and aid. Having their positive impact to add on the Ethiopian infrastructure development, the SWOT analysis by Peng Mo et al. (2008), for Chinese contractors showed the following major weaknesses;

- Lack of skilled and semi-skilled labour
- Weak communications / infrastructure
- Low standards of safety & health, and occupational hazards on jobsites.

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### 2.7.3. Claims on Foreign Contractors

Claims are natural phenomena of the construction industry when there is change in design, contract conditions or lack of clarity. Awarding construction contracts to a relatively higher capacity (like foreign/international) contractors does not guarantee the non-occurrence of claims; as claims are inevitable. Even if claims are usually for demands of money (compensation) and/or extension of time, it has its own drawbacks on both the claiming and non-claiming parties in terms of legal expenses and affect their work-relationship (Abebe & Girmay, 2003).

The article by Abebe & Girmay (2003), has also showed that contracts with international contractors in Ethiopia lack clear provision of conditions on labour related issues including local employees' minimum wages which later be reason to rise claims and quit the project work.

The Ethiopian labour proclamation (LP 1156/2019) deemed that contract of employment is formed when the parties (employers and employees) directly or indirectly agreed for a piece of work with consideration in wages. The labour proclamation separately stated the rights and obligations employers and employees. Rights of labourer starts with having formal contract of employment agreement either made in writing or not made in writing form. Accordingly, the parties sign a written contract specifying the type of employment, work place and wage rate [art. 4 (3)] or employer shall issue the signed written contract within 15 days for contracts not made in writings [art. 7 (1)] despite whether the work is for definite or indefinite period.

### 2.7.4. Previous Comparison Studies of Local and Foreign Contractors

#### 2.7.4.1. Financial Comparison

Biniyam (2009), has depicted a project work on comparing the financial performance of local and international (foreign) contractors in Ethiopia. Information to this study was acquired through reviewing financial document of each side obtained from Federal Inland Revenue Authority (FIRA) to measure financial performance of each group and compare to each other. A sample of 8 companies 5 years financial statements are analyzed for by using financial ratios and a sample of 5 contractors' financial statements are analyzed for distress test. The outcome of the study revealed that foreign contractors operating in Ethiopia perform financially better than local contractors and also concluded that local contractors are in financial distress.

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#### 2.7.4.2. Performance Comparison

Azeb (2016), conducted a performance measurement research as “Comparative Analysis on Factors Affecting Performance of Local and International Contractors in Road Projects Administered by Ethiopian Road Authority”. The research was aimed at identifying the major factors affecting the performance of local and international contractors working for ERA. Questioner survey were used to collect information from senior professionals from both of the contractors as about 37 factors that affects local and international contractors and 15 factors that particularly affects the performance of international contractors were and among them the top 10 significant factors are identified at the conclusion.

Another recent comparison research has been done by Tsegaye (2016), studying under the title of evaluation of project performance compering local and Chinese contractors on some selected road projects under the Ethiopian federal state. The study has identified the internal and external factors that challenge the performance of both local and foreign / Chinese contractors. The study have compared the two group of contractors in terms of key performance indicators; time performance, cost performance and quality performance and has concluded that both contractors are performing lower in terms of time but relatively with in the specified quality requirements except that the Chinese contractors better performance in terms of cost overrun control. The general difference of foreign / Chinese and domestic contractors is that the Chinese had enough resource capacity (finance and equipment), experience and better commitment to works.

### **2.8. Labour Productivity and Labour Management**

Most engineering researchers are more interested on identifying the factors that affect the labour productivity and concluded that labour management is the major one (Tewodros, 2006; Koshe & Jha, 2016; Annigeri et al., 2018). But only little work has been done on how the construction labour management affects and what factors affect the construction labour management itself including the manpower problems Soe & Cho (2014), because productivity is mostly affected by the management of the labour directly involved with on-site activities. Similarly, the labour management should consider project work conditions including; (1) Job size and complexity, (2) Job site accessibility, (3) Labour availability, (4) Equipment utilization, (5) Contractual agreements, (6) Local climate, and (7) Local cultural characteristic (Essays, 2016).

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## **2.9. Summary of Literature Review**

The concept of labour is stated as a task requiring the exertion (execution) of mind and the physical body or both to combine other resources in order to produce a product. Labour management is a communication process of driving (channeling) the mankind's energy, skills and abilities towards the organization's business targets which can be controlled by the following three methods; control of wage rate, control of working rules, and practices of sound labour management techniques. The human resource (workforce) is the most valuable but also most complex resource to manage as construction industry is mostly criticized for lack of appropriate approach towards HRM policies and applicable structures. The effect of human resource policies and practices be classified in to three critical success factors of a construction projects as time, cost and quality.

Labour management is the best expression of good project management techniques and used by project managers as it has a considerable contribution on effectiveness with respect to technology and material. The performance of labour can mainly be improved by the implementation of good management practices which also increase the profit margin of any construction firm by increasing productivity. Different countries and even individual construction firms may adopt different management practices depending on the situation, organizational culture and management approach as the needs, coverage and effectiveness can be different from place to place, project type and conditions.

The literature review found out the most commonly stated construction labour management practices and more importantly relevant to developing countries; manpower planning, selection and recruitment, development and training, wage and payment, retention and etc. The main factors leading to affect these building construction labour management practices in the construction industry have been discussed in detail and summarized in Table 2.2 below.

Developing countries like Ethiopia spend most of their annual budget on infrastructures even though construction projects are mostly known by consumption of extra cost and extension of time with dissatisfaction of each involved parties at the end. Performance of project management practice level face many challenges in terms of properly applying management functions, tools, techniques and control over risks, quality, resource utilization and safety. Shortage of skilled labour in the market is the country's common problem. Availability and recruitment of highly

skilled, experienced and qualified personnel and competency development are the major problems of the industry which requires series of capacity development. Specialization in labour management practices, strategies, tools and techniques are required with detailed knowledge and continuous studies by sectorial professionals to decrease the mismatch between required and available skilled labourers.

Both domestic and foreign (international) contractors play their parts in the Ethiopian construction industry. But lack of clear conditions on labour related issues are causes for claims. Previously conducted comparison research works has proved that dominancy of foreign contractors in terms of finance and performance, but nothing or little to say about their labour management practices.

Table 2.2. Summary of Labour Management Practices and Their Factors

<b>Management Practices</b>	<b>Sources</b>	<b>Factors Leading to Affect management practices</b>
Manpower Planning	(Sharma & Pathak, 2015; Soe & Cho, 2014; Itika, 2011)	<ul style="list-style-type: none"> <li>• Availability</li> <li>• Proper work scheduling</li> <li>• Precisely forecast number of workforce needed</li> <li>• Effective utilization of workforce</li> <li>• Provide necessary facilities</li> </ul>
Recruitment and Selection	(Soe & Cho, 2014; Zannah et al., 2017; Fernando et al., 2016; Wachira, 2001)	<ul style="list-style-type: none"> <li>• Grading labour</li> <li>• Recruitment of unskilled labour</li> <li>• Physical strength and stamina</li> <li>• Manual dexterity and condition</li> <li>• Knowledge and analytical skills</li> <li>• Knowledge on handling tool &amp; equipment</li> </ul>
Training and Development	(Ojambati, 2012; Tabassi & Bakar, 2009; Lill, 2008)	<ul style="list-style-type: none"> <li>• Labour only subcontracting</li> <li>• Opportunity for skill development</li> <li>• Workers performance measurement</li> <li>• Show / learn new methodologies</li> <li>• Repetitive training for every workforce</li> </ul>

		<ul style="list-style-type: none"> <li>○ On-the-job training             <ul style="list-style-type: none"> <li>▪ Job rotation</li> <li>▪ Understudy assignment</li> </ul> </li> <li>○ Off-the-job training</li> <li>● Discussion with labour to make decisions</li> <li>● Encouraging creativity through training</li> </ul>
Wage and Payment	(Annigeri et al., 2018; Zannah et al., 2017; Sivakumar, 2017)	<ul style="list-style-type: none"> <li>● Standard minimum wage scale</li> <li>● Irregular salary</li> <li>● Fair payment scale</li> <li>● Pay-slip for every payment</li> <li>● Clear statement for every deduction</li> <li>● Equivalent service for payments deducted</li> <li>● Reconsider interest of labour with low wage</li> </ul>
Retention	(Newman & Rose, 2017; Nkomo & Thawal, 2009; Bartlett, 2007; Garrity, 1999)	<ul style="list-style-type: none"> <li>● Regularly loose workers</li> <li>● Guaranteed overtime</li> <li>● Reduced workforce demand</li> <li>● Intensive use of automated technology</li> <li>● Key employees relationship</li> <li>● Better working condition</li> <li>● Poor management approach</li> <li>● Talent recognition</li> <li>● Terms of motivation</li> <li>● Harassment</li> <li>● Poor relationship with colleagues</li> <li>● Age consideration</li> </ul>

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## **2.10. Gap Identified**

As discussed above, human resource management in construction is a very wide concept that individual firms or countries could drive and successfully implement their own different practices with a number of factors on their smooth implementation. Most of the identified factors in the literature review that can affect the labour management practice are common in different countries. Like any other countries, Ethiopian construction industry is a source of employment for many skilled and unskilled labourers. The industry accommodates both domestic and international construction contractors. Previous financial and general performance studies (Biniyam, 2009; Azeb, 2016; Tsegaye, 2016), have indicated that foreign construction firms in Ethiopia have a better relative capacity and performance (by financial and project capability); but still one of the poor performing country in terms of project management.

Experiences of other countries showed that; there are different construction labour management practices and also many challenges that needs to be resolved early before they become worse. Issues related to minimum wage rates, discrimination, labour standards, provision of welfare facilities, exploit of labour force, lack of skills, talent development...etc. including reasons to rise work strikes are among the major gaps identified. Unfair treatment of employees leads to protests and personal strikes that greatly affect contractor's performance and economy of the country. Therefore, a critical attention should be given to the identified factors affecting the management practices so that both foreign and local contractors fairly manage their workers in order to avoid the occurrence of labor protests, improve labour productivity, contractor's performance and create perfect competition among local and international contractors.

CHAPTER THREE

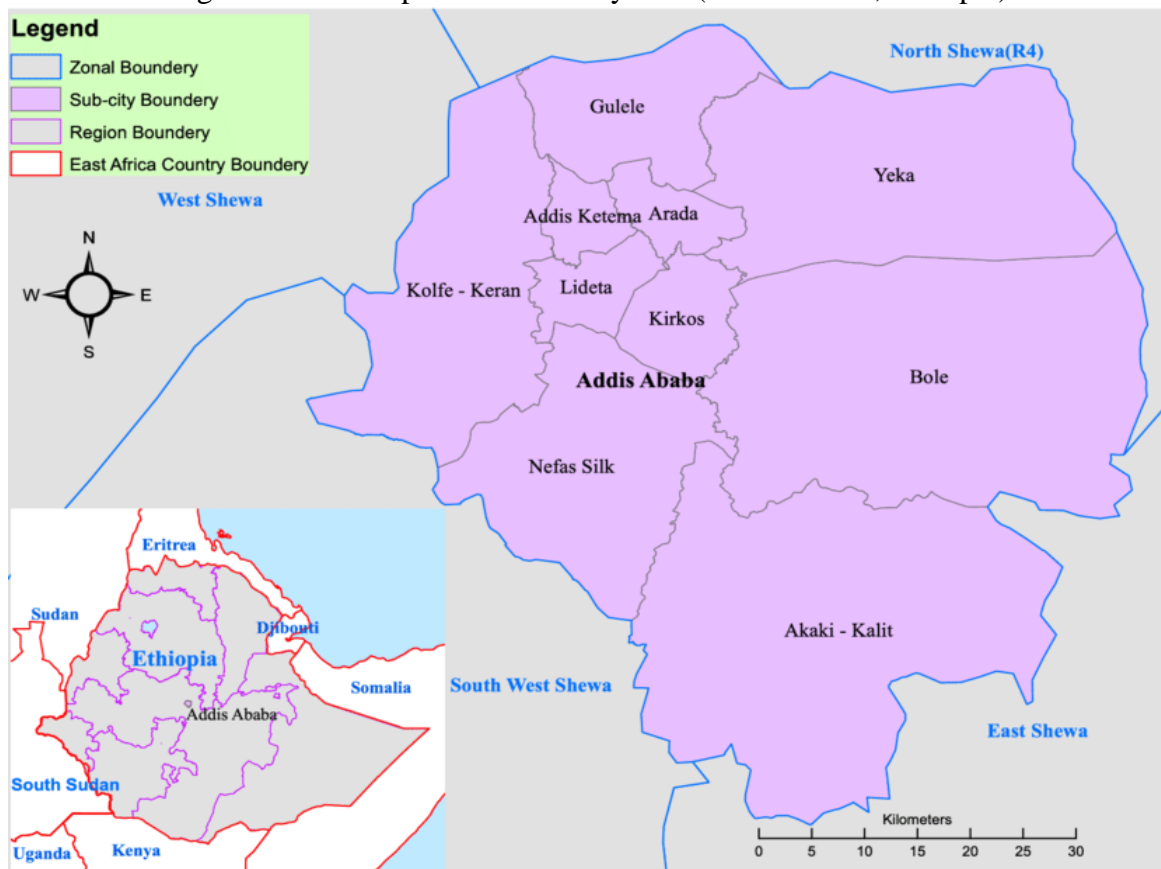
3. RESEARCH METHODOLOGY

3.1. Research Area

Ethiopia is one of the most populated country in Africa next to Nigeria, having estimated population of more than 110,000,000 with an average population density of 83 people per square mile (214/sq. Km) ([www.worldpopulationreview.com](http://www.worldpopulationreview.com)) as reviewed on July 20, 2019.

Having a landscape of 1,100,000 square kilometers (420,000 sq. mile) total area at an average altitude of between 2,000 m and 3,000 m above sea level, the country is bordered by Eritrea to the north and northeast, Kenya to the south, Sudan and South Sudan to the west, and Djibouti and Somalia to the east (Mengesha, 2004; Alem, 1999; Ayalew et al., 2016). Addis Ababa is the capital city of Ethiopia located centrally. The city has divided in to 10 sub-cities organized by “Woredas”. (See Figure 3.1, below).

Figure 3.1. Description of the study area (Addis Ababa, Ethiopia)



Source:<http://www.researchgate.net/figure/Map-showing-Addis-Ababa-Sub-cities>

The capital city, Addis Ababa is one of the best diplomatic center in Africa (Peng Mo et al, 2008). All countries that have embassy in Ethiopia and many organizational headquarters and main offices of business firms are sited in Addis Ababa. Both foreign (international) construction firms and most of the local grade one construction firms also have head office and some project sites there. Therefore, the study will inclusively search for the experiences and labour management practices in different parts of the capital which also help to reach majority of grade one companies and more experienced professionals. According to the list registered by the MoC in 2019 there are some grade one construction contractors that have located their head office in regional cities and are excluded in this research.

### **3.2. Research Design and Instruments**

The research has both quantitative and qualitative nature. Most of the data collected has a descriptive form while the others are in numeric form when prioritizing the factors. The research methodology is designed in a way that it enables to collect adequate information so that the research can properly answer and clarify the objectives. Therefore, the most known and familiar ways of data collection mechanisms has been employed. The literature review has been revised from reference books, articles and related literatures. It has been used as a base to draw the primary data collection instruments. Primary source of data were obtained in the form of survey questionnaire and interviews. These are key methods to address the diffident levels of management (top level, middle level and lower (technical) level management) including the opinions of labourers and responses of the management.

#### **3.2.1. Literature and Survey Questionnaire**

The literature review in chapter two (2) as part of the research methodology was more important to identify effective construction labour management practices, techniques and factors. The practices and the leading factors were later used to evaluate and analyze the current practices of construction labour management both in domestic and foreign contractors operating in Addis Ababa. The literature have identified about 39 most important leading factors that can affect the management practices and summarized in table (See Table 2.2 above).

The second method of data collection instrument is semi-structured survey questionnaire (Wachira, 2001; Soe & Cho, 2014) which contains both closed and open ended questions. The close-ended questions contain choices of possible answers. The survey questionnaire has been prepared based on the tools and techniques specified under the literature review and personal experiences which was aimed at finding out the labour management approaches of contractors and the relative interest of the labour. So that it has included the opinions of participating parties including office administrators, HR managers, site engineers, office engineers, project managers and construction managers.

### 3.2.1.1. Structure of the Survey Questionnaire

The survey questionnaire was aimed to address two different parties; engineers at project site (including SE, OE, PM and CM) and contractors (the company) at head office. Therefore; two different survey questionnaires has been prepared according to their perspective positions.

#### 3.2.1.1.1. Structure of Questionnaires for Contractors head office

Questionnaires for the contractors have three sections (*See appendix A*). In the first section the general information about the company and respondents has been gathered. The second section seeks mostly the current practices of the company in terms of its labour management practices. The third and the last section is an open ended questions that mostly search for the challenging factors affecting the labour management of the companies.

#### 3.2.1.1.2. Structure of Questionnaires at Project Site

This questionnaire form consists four structural sections that are organized in a logically pattern. The first part (Section A) contains questions to address the general information (profile) of the respondents and employees a particular project host to get proportioning and leave. The second part (Section B) assesses the level of awareness on the concepts of labour management. The third section of the questionnaire (section C) is a table of list of construction labour management practices and their detailed factors that respondents are asked to judge the practices of their company. Respondents are asked to use the Likert's scales of five ordinal to judge the level of practicability based on their opinion. The factors have five rating scales arranged in ascending order (i.e. 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree) (Likert, 1932). Open ended questions are presented on the last section (section D) of the

questionnaire. It give respondents an opportunity to specify uncovered factors, compare themselves and remedies to be taken in the future (*See appendix B*).

The survey questionnaire responses from those respondents has been analyzed by using the following Relative Important Index (RII) Equation 3.1 to prioritize the factors.

$$RII = \frac{\sum W}{An} \dots\dots\dots [Equation 3.1]$$

Where, W, is the weight of given to each factor by the respondent

A, is the highest weight

N, is the total number of samples

RII, is the relative index  $0 \leq RII \leq 1$

### 3.2.2. Interview with Foreman (Craftsmen)

A semi-structured interview has been prepared separately for Foreman (Craftsmen) as lower (technical) level management and are also labourers. This will help to identify the managerial problems and challenges the labour actually facing on the site and collect the remedies to improve the management practice. It is not quit fair to exclude the opinions of the labour while talking about labour management and best way is to interview them. The interview has been administered and recorded by the researcher personally using simple and translated to local language.

#### 3.2.2.1. Structure of the Interview

The interview has structured in to three sections which the first section assesse the general background information of the respondents including their work trend (specialization), experience, level of education and employment formalities. At the second section partially collect the feelings of the labour and their complaint on their company including its effect. The third section of the interview collect the preference of the labour comparing the local and foreign construction contractors to work with (*See appendix C*).

Finally based on the literature review, outcome(s) of the survey questionnaires and the interview; analysis has been be done comparing the two group of contractors (local and foreign contractors) building construction labour management practices and then conclusion and recommendations for further improvement has forwarded.

### **3.3. Research Population and Sampling**

To have the right picture of both local and foreign contractors operating in Addis Ababa, a representative sample of contractors from both groups has been selected on their relevant ways. First for local contractors, a cluster sampling technique has been used to identify the sample group from grade one (G-1) classes and then random sampling was used to select respondents. Therefore, the study population is limited to only grade one local contractors i.e. General contractor (GC-1) and Building contractor (BC-1) and foreign (international) contractors.

The sample selection of foreign contractors has been carried out by a pilot observation of projects in the city. The pilot survey observation is used to search and identify the contractors who are participating (operating) in building construction projects. Accordingly, the preliminary observation has identified that there are only nine (9) Chinese construction contractors having building projects under construction in Addis Ababa.

Most of those Chinese contractors targeted have high-rise public or private building projects at hand for office and/or commercial purposes. Their project size determine the needs and extend of labour management practices. List of contractors, their categories including about their projects at hand has been stated at the appendix (*See appendix D*).

The sample population of the study for local contractors were selected from the ‘contractors list’ published by Ministry of construction (MoC) official website which were registered and renewed for the 2018/19 budget year (from Hamle, 1/2010 to Yekatit, 14/2011, Ethiopian calendar). From a total number of 5553 contractors, 122 of them are categorized under grade one contractors as assessed on June, 10/2019. Some of the contractors listed by MoC are specialized on other construction sectors like road projects and foundation works which are more dependent on heavy construction machineries than human labour forces. Therefore, they are excluded from the sample population group, hence 114 grade one contractors remained. However, 20 of them are outside Addis Ababa, hence they are out of the research area. Therefore, the study will take only 94 (GC-1 and BC-1) contractors as sample population (group) (*See appendix E*). Considering the time availability and cost of the research, the required sample size has been calculated by using the following Kish sampling formula both for local and foreign contractors (Kish, 1965; cited also by Ayalew et al., 2016), (See Equation 3.2 and Equation 3.3, below).

$$n' = \frac{pq}{v^2} \dots\dots\dots [Equation 3.2]$$

- Correction for finite population

$$n = \frac{n'}{1 + \frac{n'}{N}} \dots\dots\dots [Equation 3.3]$$

Where:  $p$  = the proportion of the characteristics being measured in the population (50% - 50%)

$q$  = complement of  $p$  (i.e.  $q = 1 - p$ )

$v$  = maximum allowable standard error

$n'$  = the first estimate of sample size for infinite population

$N$  = total number of population

$n$  = final sample size

Based on the above formula, for a confidence level of 90% and maximum allowable standard error of ( $\pm 5\% = 0.05$ ) for a total number of 94 local contractors and 9 foreign (international) contractors the statistical sample size has been calculated as 48 for local contractors and 9 for foreign contractors. The foreign construction contractors participating in building construction projects in Ethiopia are very limited in numbers.

A total of 57 contractors have been taken for sampling and questionnaires should be distributed to the contractors (top level) and engineers (middle level) with interview to Foreman (lower (technical) level management). This means that 2 questionnaires and 1 interview from each contractors were targeted to conduct. Therefore, at total of 171 respondents from both local and foreign contractors at the three level of management has been targeted to be involved.

To select the 48 sampled local contractors from the list, random sampling has been done using Microsoft Excel sheet of 2013 version. First, the list of all the 94 grade one local contractors has inserted in the sheet (column B) as obtained from the web of MoC, with a numbering in column A. Second, on a new column (column C) the random sampling function “= RAND ( )” has inserted to generate random number and dragged to the entire row. Then, the random numbers are sorted in order of smallest to the largest to pick the first 48 sample populations from locals.

### **3.4. Method of Data Analysis**

The research design has included both close-ended and open-ended questions. In addition to this, interview with Foreman (Craftsmen) has been included. These allows the research to use both quantitative descriptive statistical and qualitative method of data analysis. The data analysis was supported by the 20.0 version of SPSS software. The final result of the research is to be a composition of both descriptive statistics and qualitative data.

After analyzing the required data, all the necessary information like; percentage of responses, frequency of responses, factors prioritization and additional findings; discussion of findings has been presented. Finally, drawing of conclusions and relevant recommendations are made.

## CHAPTER FOUR

### 4. DATA ANALYSIS AND DISCUSSIONS

#### 4.1. Introduction

Building construction labour management practices and those factors leading to affect the management practices has been identified in chapter two. Therefore, this chapter presented the comparative analysis and discussion of the practices between local and foreign contractors based on the identified factors. The management practices and the leading factors are summarized and tabulated in the summary of chapter two and also used as parts of questionnaires for project sites. Questionnaires for contractors at head office and for engineers at project site are analyzed separately from the semi-structured interviews with senior Foreman (Craftsmen).

#### 4.2. General Profile of Respondents

##### 4.2.1. Questionnaire Distribution and Response Rate at Contractors' Head Office

##### 4.2.1.1. Distribution and Response Rate

The survey questionnaire has been distributed for 49 (86%) contractors out of 57 sampled population. From the sample population addressed, the target contractors has a composition of 21 (42.9%) local GC-1, 19 (38.8%) local BC-1 contractors and 9 (18.4%) foreign contractors.

As indicated in Table 4.1 below, from the total number of questionnaires distributed for both contractors 40 (81.6%) of them has filled and returned completely; the others 3 (6.1%) were incomplete answers and 6 (12.3%) unreached and has not been collected on time of analysis. The smallest amount of response rate received was from BC-1 contractors which is 14 (73.7%). Therefore, analysis has been done by calculating the percentiles using responses received from 33 local and 7 foreign contractors.

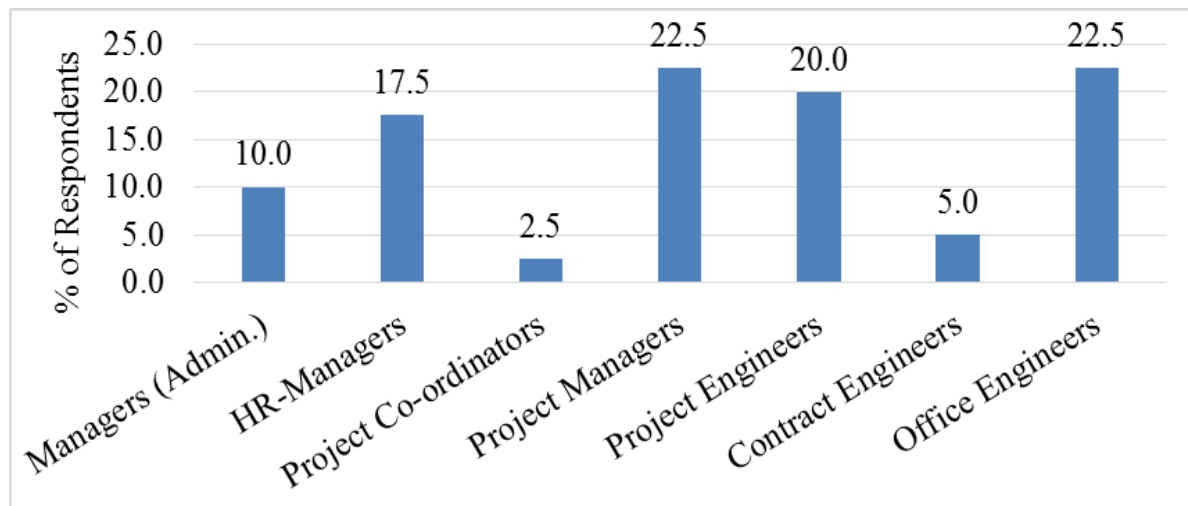
Table 4.1. Contractors' Distribution and Response Rate

No.	Contractors	Category	No. of Distributed	No. of Valid Response	% of Received Response
1	Local Contractors	BC-1	19	14	73.7
		GC-1	21	19	90.5
2	Foreign Contractors (Grade - 1)		9	7	77.8
<b>Total</b>			<b>49</b>	<b>40</b>	<b>81.6</b>

#### 4.2.1.2. Position of Respondents

From the contractors' questionnaires received as a top level, those management personnel who directly concern labour issues in the company were targeted as much as possible. And found the following respondents' positions to give valid responses (Figure 4.1). From the total number of responses at head office, (10%) of them were Managers (Administrative Personnel), (17.5%) where HR-Managers, (2.5%) were Project Co-coordinators, (22.5%) were Project Managers, (20%) Project Engineers, (5%) Contract Engineers and (22.5%) of them were Office Engineers

Figure 4.1. Position of Respondents



#### 4.2.1.3. Experience of Respondents and Companies

As to Table 4.2 shown below, the experiences of respondents who participated in the contractors questionnaire at the office; most of them (87.5%) are experienced in the company more than two ( $\geq 2$ ) years which is enough to notice the management practices. Therefore, their experience have increased the weight of their responses and outcomes of the study too. At the same manner, experience of the companies since establishment and experience of foreign companies in Ethiopia are presented in Table 4.3 below.

Table 4.2. Experience of Respondents

No.	Respondents	Percentage (%)			
		$\leq 2$ years	2 – 5 years	5 – 10 years	$\geq 10$ years
1	Local Contractor	24.2 (8)	45.5 (15)	15.2 (5)	15.2 (5)
2	Foreign Contractors	14.3 (1)	57.1 (4)	28.6 (2)	-

Table 4.3. Experience of Companies since Establishment

Experience	Contractors	Percentage (%)			
		Below 2 years	2 – 5 years	5 – 10 years	Above 10 years
Since Established	Local	-	6.1 (2)	24.2 (8)	69.7 (23)
	Foreign	-	14.3 (1)	14.3 (1)	71.4 (5)
In Ethiopia	Foreign	-	28.6 (2)	-	71.4 (5)

Table 4.3 validates that (70%) of the construction companies have experience more than 10 years in the sector since established and 71.4% foreignness with Ethiopian construction industry too.

#### 4.2.2. Questionnaire Distribution and Response Rate at Project Site

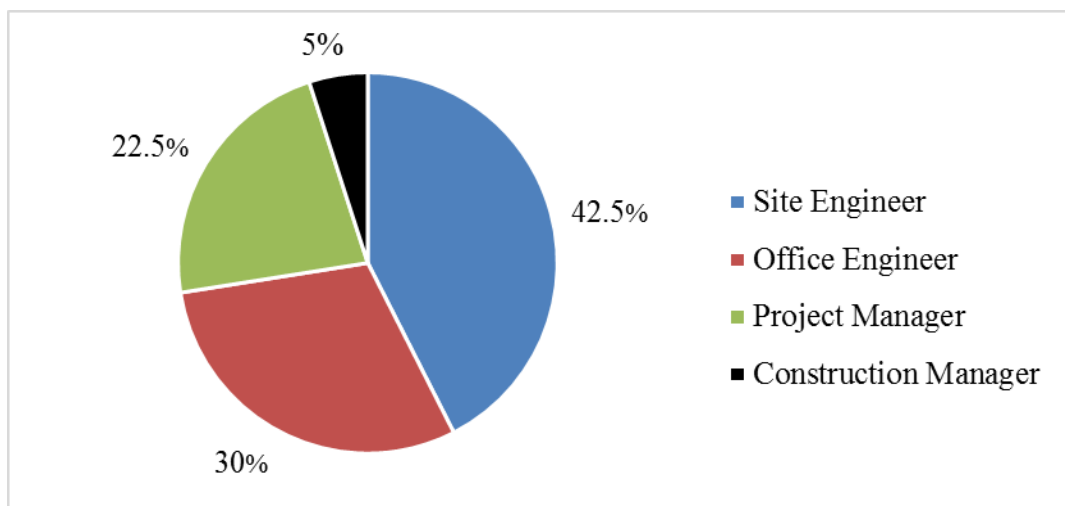
##### 4.2.2.1. Response rate at project site

Contractors' team who are working at building project site (for the above contractors only) participated in a separate questionnaire and respondents (100%) having the following composition. These was required to evaluate the practicability of labour management practices and to identify labour problems directly from the sites.

##### 4.2.2.2. Background of respondents at project site

According to Figure 4.2 below, from the questionnaires distributed and received; respondents have the following backgrounds. From the total number of respondents, 17 (42.5%) of them were Site Engineers, 9 (22.5%) were Project Managers, 12 (30%) were Office Engineers and the remaining 2 (5%) of them were Construction Managers.

Figure 4.2. Background of Respondents



#### 4.2.2.3. Experience of Respondents at Project Site

Experience of respondents in the company were asked and found that 9 (22.5%) of them are experienced below 2 years, 14 (35.5%) between 2-5 years, 8 (20%) were between 5-10 years and 9 (22.5%) were experienced  $\geq 10$  years. Respondents experience proves the validity of responses.

Table 4.4. Experience of Respondents at Project Site

Response	Percentage (%)			
Experience	Below 2 years	2 - 5 years	5 - 10 years	$\geq 10$ years
	22.5 (9)	35.5 (14)	20.0 (8)	22.5 (9)

### 4.3. Current Practices of Building Contraction Labour Management

The following questions has been addressed to investigate the current management practices of both local and foreign contractors in the building construction sector. Most of the questions are provided with choices of possible answers for simplifications as obtained from the literature review; but some are followed by quest for further explanations as open answers are easier to explain wider and prevailing recommendations. The responses given for each questions are presented here below comparing the two contractors group.

#### 4.3.1. Practice of Assigning HRM Personnel

1. Does your company have HRM personnel who is responsible to deal with Manpower Planning, Selection and Recruitment of Labour?

Labour management starts with assigning of HRM personnel. It has been discussed in chapter two how important it is for large scale construction companies to have HRM personnel on their project sites for the smooth work flows, workforce availability, facilities provision and etc. According to the results (Table 4.5, below), all the foreign contractors (100%) have HRM personnel; whereas (45.5%) of local contractors have assigned too; but most (54.5%) have not.

Table 4.5. Assigning HRM Personnel

No.	Response	Percentage (%)	
		Local Contractors	Foreign Contractors
1	Yes	45.5 (15)	100 (7)
3	No	54.5 (18)	-

From those who not assigned a personnel; it has been gathered their specific experiences how they recruit their workforce and found the following ways listed below;

- Calling daily labourer from the pool
- Evaluation and selection by Foreman and/or Site Engineer
- Recruit skilled labour with his helpers
- By recommendations

#### 4.3.2. Practice Concerning Management of manpower planning and availability

Manpower planning will be next thing of labour management starting with identification of current and future resource availability to set selection criteria.

##### 1. Does your company face shortage of certified skilled labour to hire?

To achieve good quality of construction products, availability of labour with proper skill is key factor. Lack of certified skilled labour from institutions is a common problem in construction. Here, the intention was to know if the construction companies are facing such a problem in Addis Ababa. According to the responses obtained (Table 4.6, below), (33.3%) of respondents from local contractors confirmed the existence of shortage of certified skilled labour answering “Yes” while others (45.5%) face the shortage “sometimes” but fewer respondents (21.2%) argued that there is “No” certified skilled labour shortage. The problem is minor for foreigners.

Table 4.6. Shortage of Certified Skilled Labour

No.	Response	Percentage (%)	
		Local Contractors	Foreign Contractors
1	Yes	33.3 (11)	-
2	Sometimes	45.5 (15)	42.9 (3)
3	No	21.2 (7)	57.1 (4)

##### 2. Do you face any seasonal unavailability of workforce?

Table 4.7. Seasonal Unavailability Labour

No.	Response	Percentage (%)	
		Local Contractors	Foreign Contractors
1	Yes	36.4 (12)	14.3 (1)
2	Sometimes	45.5 (15)	42.9 (3)
3	No	18.2 (6)	42.9 (3)

It has been reviewed in the literature (Chapter 2, above) that one of the main reason for the delay of construction projects in Ethiopia is seasonal unavailability of workforce (fluctuating availability of labour season to season). Seasonal unavailability of labour is the occurrence of labour shortage in time of harvesting and due to remoteness of the project sites. It is mainly related with the availability of HRM personnel to deal with and organization of project activities (planning).

This question recalls the existence of the problem in Addis Ababa and tried to find what solutions contractors are taking and also how it is affecting them. The result showed that foreign contractors almost face less such a problem (only 1 (14.3%) respondent selected “Yes”). But figures from respondents showed that (Table 4.7); (36.4%) of local contractors responded “Yes”, (45.5%) “Sometimes” and the remaining (18.2%) did not have such a problem (selected “No”).

However, contractors (mostly local) are suffering from seasonal unavailability of workforce both in terms of cost and time due to the measure they take when facing such a problem. The followings (Table 4.8), are list of measures they provided as a solutions and its impact has been analyzed in terms of cost and time of project implementation (Sharma & Pathak, 2015).

Table 4.8. Implication of Labour Seasonal Unavailability

<b>Measure</b>	<b>Implication</b>
<ul style="list-style-type: none"> <li>• Rescheduling activities</li> <li>• Requirement of additional time (activity duration)</li> <li>• Lag activities (temporarily stopping)</li> <li>• Including on scheduling uncertainty (pre-identification)</li> </ul>	Time
<ul style="list-style-type: none"> <li>• Hiring labour with extra wages</li> <li>• Overtime work</li> <li>• Mechanization</li> </ul>	Cost
<ul style="list-style-type: none"> <li>• Subcontracting</li> <li>• Transporting from other site (switching/ Mobilization)</li> <li>• Assigning temporary manpower (for skilled)</li> <li>• Increasing workload on available workforce</li> </ul>	Time & Cost

### 4.3.3. Practice of Labour Selection and Employment

#### 1. What criteria have you set to select the labour force for your construction jobs?

Pre-stated criteria is key for bringing-in the right people for a job that keeps consistency of company's performance. Both foreign and local contractors were asked to list some of their labour selection criteria for their building construction jobs. Table 4.9 below summarized their repeated specific answers according to their descending number of frequencies.

Table 4.9. Labour Selection Criteria of Contractors

<b>Labour Selection Criteria of Contractors</b>			
<b>Local Contractors</b>	<b>Freq.</b>	<b>Foreign Contractors</b>	<b>Freq.</b>
• Previous work experience/ Certification	[20]	• Previous experience with other foreigners	[5]
• Trial for few days	[14]	• Age 18 - 35	[3]
• Good behaviour, commitment	[12]	• Knowledge and physical test (Interview)	[3]
• Physical appearance	[11]	• Communication skills	[2]
• Age $\geq 18$	[9]	• Good health status	[2]
• Labour cost (wage demand)	[8]	• Acceptance and respect of company rules and regulations	[2]
• Peer advice for skilled labour	[6]	• Educational background	[1]
• Communication skills	[6]	• Medical examination certificate	[1]
• Sex based on works type	[3]	• Innocence certificate (crime free) from police station	[1]
• Non-alcoholic	[2]		
• Physical examination by nurse	[1]		

#### 2. Companies sign formal employment agreement with all (including short-term) labour?

The intention was to know if the construction companies sign formal employment agreement with all labourers based on the Ethiopian LP 1156/2019 [art. 4 (3)], including the short-term labourers. From the Table 4.10 shown below, (72.7%) local respondents confirmed that they sign formal agreement during recruitment. But, (57.1%) of foreign respondents had no formal employment agreement with short term labourers. It is one of the basic requirement for labour-relations as they have obligations to identify and track claims up to the final decisions but labourers with low wages are unable to join trade unions and take a part to fight for their rights.

Table 4.10. Formal Employment Agreement with All Labour

No.	Response	Percentage (%)	
		Local Contractors	Foreign Contractors
1	Yes	72.7 (24)	42.9 (3)
2	Not with short-term	18.2 (6)	57.1 (4)
3	No	9.1 (1)	-

#### 4.3.4. Practices Concerning on Facility Management

##### 1. Does your company conduct employees' satisfaction survey?

According to the survey result (Table 4.11), most of the local companies (75.8%) do not have a trend of conducting regular employees' satisfaction survey. It is very important to search and know what the labourer wants and what things to be improved. Actually, it is a duty of the HRM personnel to do this job. As experience of other countries has shown, complaints of the labourers for better working condition, suitable accommodation, safety and health, and etc. were leading to affect productivity, low performance, reduced commitment, conflicts and strikes.

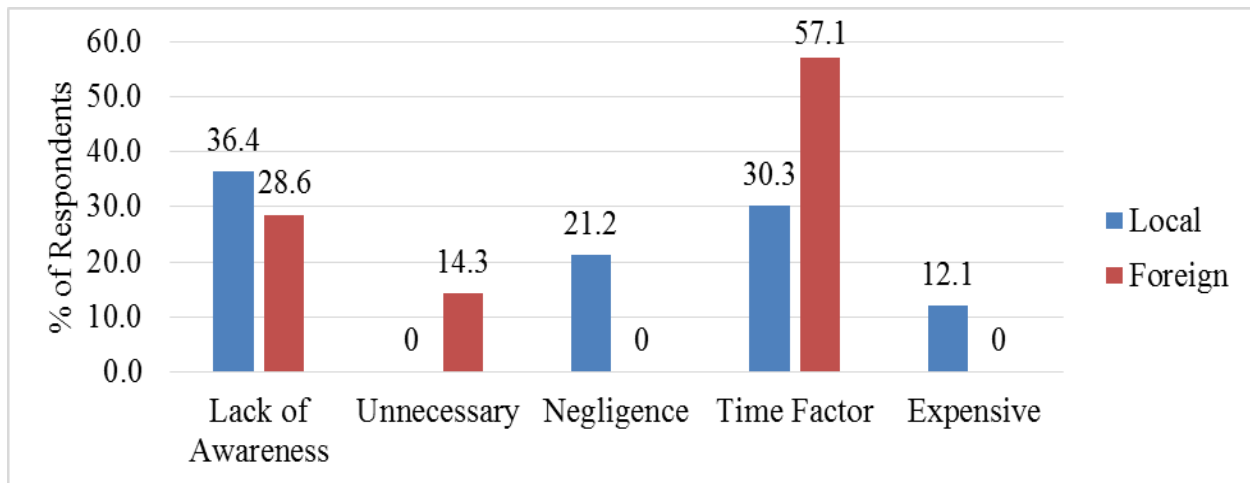
Table 4.11. Conducting Satisfaction Survey

No.	Response	Percentage (%)	
		Local Contractors	Foreign Contractors
1	Yes	24.2 (8)	57.1 (4)
2	Sometimes	36.4 (12)	42.9 (3)
3	No	39.4 (13)	-

##### 2. What is the reason for less conducting of employees' satisfaction survey?

According to the respondent's opinion (Figure 4.3), the most common reason for the less trend of conducting employees' satisfaction survey for local contractors is led by lack of awareness (36.4%) and time factor (30%). Nearly about quarter of local contractors (21.2%) neglect the necessity of conducting survey. While for foreign contractors, time factor (57%) is the major constraint and followed by lack of awareness (28.6%). However, (14.3%) of foreign contractors believed that conducting labour satisfaction survey is unnecessary.

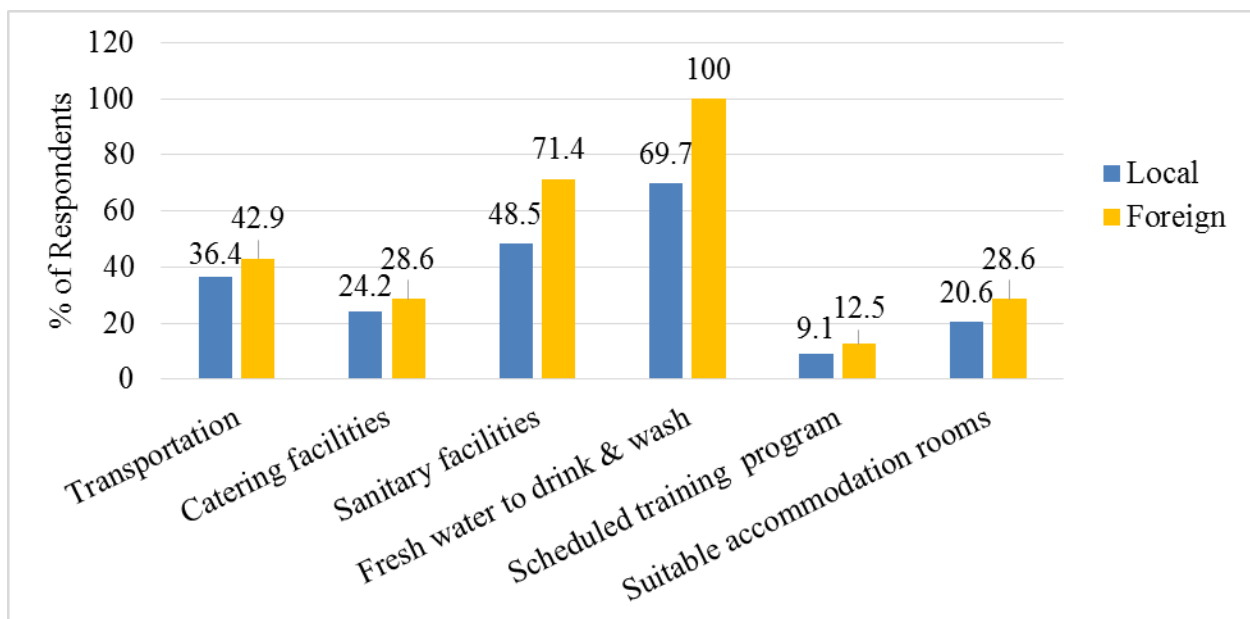
Figure 4.3. Reasons for Less Conduct of Satisfaction Survey



3. What facilities did your company provide to the labour?

Provision of welfare facilities are instruments for the consistency of labour performance. Project management need to consider provisions of necessary facilities for the workforce as it plays an important role on improving the performance and productivity of labour. According to Figure 4.4, most of the contractors (9.1% for locals and 12.5% for foreign) did not provide scheduled technical skill trainings and catering facilities (24.2% for locals and 28.6% for foreign). However, it is found lower for local contractors in all categories.

Figure 4.4. Labour Facility Management



4.3.5. Practice Related to Performance Management

1. Do you agree that your company have clear, measurable and influential performance appraisal system for labourers?

Sometimes it is an option of management to develop and retaining your own workers instead of hiring occasionally. Once hired, they need to be trained, helped to develop their skills and retained in the company. Such a management system requires setting up of clear, measurable and influential performance appraisal system for the labour. Result of the survey (Table 4.12), showed that foreign contractors (71.4%) are implementing such a system and only (45.5%) from locals agree on “Yes”, (39.4%) to choose “Sometimes” and remaining (15.2%) were disagreed.

Table 4.12. Performance Appraisal System

No.	Response	Percentage (%)	
		Local Contractors	Foreign Contractors
1	Yes	45.5 (15)	71.4 (5)
2	Sometimes	39.4 (13)	14.3 (1)
3	No	15.2 (5)	14.3 (1)

2. The management is satisfied by the performance of the labour force?

Even though there are many factors to affect the performance of contractors and construction projects, labour’s performance is the one among the main. Their performance can directly affect the cost, quality and duration of projects. Locals were asked about the satisfaction of management on the labour performance and found (33.3%) are satisfied, (48.5%) are satisfied sometimes and (18.2%) are not satisfied. But the table have another figures for foreign contractors as only (42.9%) are satisfied, (57.1%) are satisfied some times (see Table 4.13).

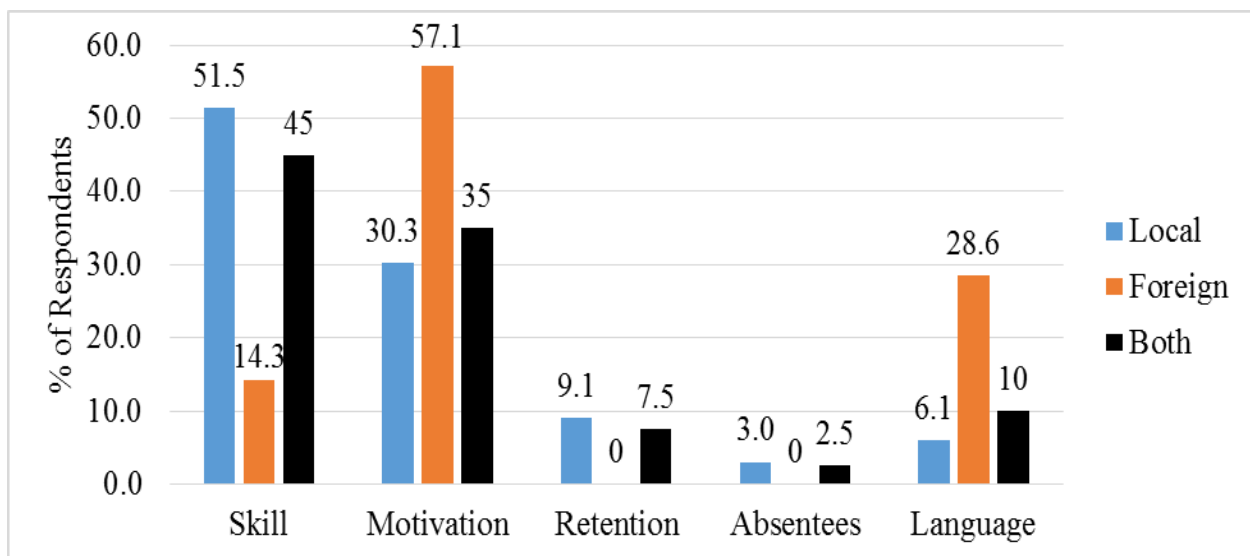
Table 4.13. Management Satisfaction by Labour Performance

No.	Response	Percentage (%)	
		Local Contractors	Foreign Contractors
1	Yes	33.3 (11)	42.9 (3)
2	Sometimes	48.5 (16)	57.1 (4)
3	No	18.2 (6)	-

3. What is the most common problem you face with your labourers?

Following the above questions, respondents were asked to choose the most common problems of local labourers from the list or asked to identify if there is any other. According to the results from respondents; the most common problem of labourers that construction companies are facing is found to be skill problems (51.5% & 14.3%), motivation (30.3% & 57.1%), retention (9.1% & 0%), Absentees (3% & 0%) and Language (6.1 % & 28.1%) respectively for local and foreign companies. The results are shown in Figure 4.5 below.

Figure 4.5. Most Common Problems of Labour



4.3.6. Practices Related to Wage and Payment

1. In what occasion your company delay to pay employees wage and payment?

Table 4.14. Causes of Wage and Payment Delay

Local Contractors	Foreign Contractors
<ul style="list-style-type: none"> <li>• Delay from clients (usually public projects)</li> <li>• Disagreement on work done</li> <li>• Payment approval processing</li> <li>• Conflict among involving parties</li> <li>• Banking system</li> <li>• Late interim payment collection</li> </ul>	<ul style="list-style-type: none"> <li>• Banking system</li> <li>• Delay of payment for sub-works</li> <li>• Incompleteness of works as per schedule (for subcontractors)</li> </ul>

Most of the contractors (84.8% for locals and 85.7% for foreign) agreed that they did not delay wages of employees, especially the labour force as they work on causal bases. But they also agreed that there is occasions that forces them to delay. According to the results obtained in Table 4.14 above, there are internal and external occasions that force companies to delay wages and payments of the labourers.

2. How do you compensate if payment delay occurs?

Even though payment delayed in any case; almost all contractors have no compensation systems for the delay except one (1) foreign company providing (5%) bonus of monthly payment for the delay. Companies those who delay payment did not considered the motivational and retention impact of wage delay on their workforce.

4.3.7. Practice Related to Labour Development

1. What is the most successful method your company do to promote talent development?

- Assigning as (awarding) senior leadership with respective benefits (perks)
- Giving responsibility and accountability downwards
- Motivating by bonuses
- Promotion to reliable positions
- Workshop setup
- Timely training (when necessary)

It has been observed that only fewer companies (10%) managed talents of their labourers. They have provided the above measures as their successful method of labour talent development. Most of the contractors did not responded quit reasonable methods to develop labour's talent.

The idea of proportioning Sivakumar (2018), that the relative ability and skill level of labour determine the proportion of labourers; is used here to proportion skilled and unskilled labourers. It also has a capacity to determine the trainings required for skill development (improvement) as more productivity can be achieved by fewer skilled labourers than recruiting many unskilled. Even if the number of workforce on construction project varies according to the current activity and project size; Engineers on project site were asked to indicate the average number of skilled and unskilled labourers in the project at hand. The average result of number of labourer are given in Table 4.15 below; and also the skilled to unskilled labour proportion has been calculated.

Table 4.15. Average Labour Proportioning

No.	Employment	Local Contractors		*Ratio	Foreign Contractors		*Ratio
		Skilled	Unskilled		Skilled	Unskilled	
1	On Hourly Bases	6	21	1:4	52	85	1:2
2	On Salary Bases	10	26	1:3	6	0	-

\* Ratio (Proportion) = Unskilled/Skilled

According to the expectation of Engineers; from the available number of labourer, by average (39.1%) of skilled and (30.9%) of unskilled labourers are expected to quit their job from local contractors. Calculated with the same principle; an average of about (27.4%) of skilled labourers and (24.3%) unskilled labourers are expected to leave from the foreign companies just within the first six months after being hired. These figures gives initial ideas how frequently labourers are leaving the construction companies.

#### 4.4. Observation of Factors Affecting Contractors on Current Practices

The responses given for the following open-ended questions has presented based on their descending response rate and analysis has been done on the most significant responses.

##### 4.4.1. Results to Factors Affecting Both Contractors

##### 1. What labour related factors affecting your retention management (retention plan)?

- Effectiveness of the labour [Freq. 19]
- Communication and understanding skill [Freq. 18]
- Labour cost (continuous search of increased wage demand due to price escalation of basic need) [Freq. 13]
- Availability of labour [Freq. 10]
- Work culture and environment [Freq. 10]
- Behaviour (punctuality, honesty and obeying rules) [Freq. 7]
- Selection of the labour (if trained or not) [Freq. 4]

The labour retention practice of both contractors is factored mostly by effectiveness of the labour, communication and understanding skill. Which means, the retention strategy of companies depend on the performance of the labour which requires the HR personnel careful and strategic selection and trainings to develop efficiency and skills.

2. What other labour related problems affect your management practices?

- Low skill of labour [Freq. 16]
- Cost of labour (wages) [Freq. 16]
- labour conflicts (personal behaviours) [Freq. 14]
- Lower motivation of labourer [Freq. 10]
- Low labour commitment to works [Freq. 9]
- Low labour performance (output measurement) [Freq. 8]
- Language [Freq. 5]
- Non-productive wastage of time by labour [Freq. 4]
- Labour wage competition between local and foreign contractors [Freq. 1]

According to the responses given above; issues related to labour skill (33%), labour wage (33%), labour conflict (29%) and lack of motivation (20%) respectively are the most problems that both local and foreign companies are facing related to general labour management practices.

3. What factors mostly challenge your company to facilitate training programs for labour?

- Budget/economical factor (Finance) [Freq. 26]
- Time factors [Freq. 14]
- Negligence of the labour (low initiative of labour to train) [Freq. 12]
- Low commitment of top management [Freq. 10]
- Lower technical concept of labour about construction [Freq. 9]
- Lack of skilled personnel (trainer) [Freq. 8]
- Lack of short-term labour training centers [Freq. 8]
- Lower desire of labour to stay [Freq. 5]
- Lack of construction skill training manuals [Freq. 4]
- Educational background of skilled labourer [Freq. 3]
- Lack of pressure from government (lack of legal requirement) [Freq. 2]
- Work environment (organization of project site) [Freq. 1]
- Incentive requirement of the labour [Freq. 1]
- Organizational selection criteria of labour [Freq. 1]
- Business target of contractors [Freq. 1]

Analysis of the results from all respondents has showed that; (53%) respondents responded financial problem (budget allocation) is the most challenging factor of contractors' to facilitate trainings. Time factors (29%), negligence of the labour to take trainings (24%) and commitment of top management (20%) are also the next top factors respectively.

#### 4.4.2. Results to Factors Affecting Foreign Contractors

##### 1. What policy related factors affect your labour management practices?

- Lack of clear provision on contract agreement to labour related issues
- Difficulties to cope with signing formal agreement every six (6) months
- Lack of distinguished labour proclamation
- Lack of directions on labour wage scales
- Low awareness of foreigners about Ethiopian labour laws (unfamiliarity)

Respondents from foreign contractors (85.7%) have not seen much policy related factor affecting their labour management except the above responded by fewer proportion of respondents.

##### 2. How do you compare skills and performance of Ethiopian labourers with other countries?

- Ethiopian labourers are always ready to work friendly with foreign labourers
- Availability of potential youth labour in Ethiopia
- Comparatively Ethiopian labourers are technically less skilled
- Labourer lack consistent work culture looking for incentives
- Local labourers have lower desire and pursue to explore new skills
- Some difficulties on communication due to language

Even though local labourers have positive custom of friendly working, the most complain of the respondents here also are lack of skills with lower desire to explore and consistency of performance.

#### 4.4.3. Results to Factors Affecting Local Contractors

##### 1. What do you think the government should do to increase your competency?

- Setting uniform (minimum) but reasonable wage scale of construction labour throughout the country
- Help local contractors to increase their technological, financial and human capacity

- 
- Increase project follow-up related to labour management
  - Facilitate and revise skillful manpower development programs
  - Improve the timely payment of governmental (public) projects
  - Facilitate pre-financing opportunities for automated technological equipment to increase the quality of construction productivity
  - Favor the local contractors rather than foreign in large scale projects to increase the project performance (capacity development) of local contractors
  - Infrastructure development

Here (84.8%) of respondents agreed with the necessity of setting minimum wage, development of skilled manpower and the role of government on project follow-up and capacity building.

#### **4.5. Ranking of Factors Leading to Affect Labour Management Practices**

This section of the study presented the rankings of the factors leading to affect the current building construction labour management practice based on their RII and prioritize the management practices which have direct and indirect impact on the contractors' performance. Contractors' team at project site are selected to participate in this ranking because they have practical experience of the management and company's practice on the ground. The main purpose of ranking the factors is to identify those problems that requires due attention of the management from both local and foreign contractors and work for their improvement to minimize their impact on the contractors performance.

In this section, respondents were requested to judge their company's management practice using the Likert scales specified. The scales range from 1 (for the worst practices) to 5 (for the best practices). The analysis has been done using the RII ranking and the most bottom practices and factors leading to affect the building construction labour management has been identified in the following tables (Janagan & Thirumalairaja, 2014). Therefore, the ranking is based on respondent's set of attitude. Table 4.16 presents the summary of RII rankings of the factors.

Table 4.16. RII Ranking of Factors Leading to Affect Labour Management Practices

Factors Leading to Affect Management Practices		Local		Foreign	
A	Manpower Planning	RII	Rank	RII	Rank
1	Precisely Forecasting Workforce	0.76	3	0.91	1
2	Effective Utilization of Labour	0.73	10	0.74	9
3	Proper Work scheduling	0.72	14	0.89	2
4	Availability of Planned Workforce	0.71	18	0.69	9
5	Providing Necessary Facilities	0.65	29	0.71	13
<b>B</b>	<b>Recruitment and Selection</b>				
6	Grading Labourer	0.75	6	0.69	21
7	Examine Handling tool & Equip.	0.7	21	0.69	21
8	Examine Physical strength	0.66	28	0.69	21
9	Examine Knowledge and Skills	0.61	32	0.60	35
10	Control over Recruiting Unskilled Labour	0.6	35	0.89	2
11	Examine Manual Dexterity	0.56	38	0.74	9
<b>C</b>	<b>Training and Development</b>				
12	Work Performance Measurement	0.75	6	0.74	9
13	Creating opportunity for Skill Development	0.73	10	0.71	13
14	Show/Learn new work Methodology	0.72	14	0.74	9
15	Discussion With Labour on Decisions	0.72	14	0.69	21
	Providing repetitive training for every workforce				
	• On-the-job training				
16	▪ Job rotation	0.68	25	0.66	28
17	▪ Understudy assignment	0.61	32	0.63	31
18	• Off-the-job training	0.47	39	0.60	35
19	Labour only Subcontracting	0.61	32	0.63	31
20	Encouraging creativity through training	0.60	35	0.71	13
<b>D</b>	<b>Wage and Payment</b>				
21	Avoiding Irregular Salary	0.78	2	0.57	38
22	Giving clear statement for Deduction	0.74	9	0.71	13

23	Standard Minimum Wage Scale	0.73	10	0.80	4
24	Giving Pay-slip for Every Payment	0.71	18	0.69	21
25	Implementing Fair Payment Scale	0.68	25	0.69	28
26	Reconsidering Interest of Low Wage Labour	0.67	27	0.69	21
27	Giving Equivalent Service For Payments Deducted	0.7	21	0.63	31
<b>E</b>	<b>Retention</b>				
28	Providing Guaranteed Overtime	0.8	1	0.77	6
29	Key Employees Relationship	0.76	3	0.77	6
30	Avoiding (Controlling) Harassment	0.76	3	0.63	31
31	Age Consideration on Work Assignment	0.75	6	0.77	6
32	Controlling Poor relationship With Colleagues	0.73	10	0.54	39
33	Good Management Approach	0.72	14	0.60	35
34	Talent Recognition	0.71	18	0.71	13
35	Control Over Regularly Loosing Workers	0.7	21	0.71	13
36	Reduced Workforce Demand	0.69	24	0.71	13
37	Intensive Use of Automated Technology	0.59	37	0.80	4
38	Providing Better Working Condition	0.65	29	0.57	39
39	Providing Terms of Motivation	0.63	31	0.66	28

#### 4.5.1. Findings from Ranking

The study have identified the building construction labour management practices affecting the performance of local and foreign contractors from the bottom-up ranking. At the same manner those most five factors leading to affect those management practices are also identified from both contractors, respectively.

The most important factors that are agreed by respondents from both contractors having relatively good practices of management from the factors leading to affect the building construction labour management practice were; (1) Guaranteed overtime [RII= 0.79], (2) Precisely forecasting workforce [RII= 0.79], (3) Key employees relationship [RII= 0.77], (4) Age consideration on work assignment [RII= 0.76] and (5) Work performance measurement [RII= 0.75].

#### 4.5.1.1. Management Problems from Bottom-Up of RII

Based on the above RII ranking (Table 4.16), the bottom most building construction labour management practices are ranked in Table 4.17 below.

Table 4.17. Bottom-Up Management Practices of Contractors

Management Practices	Both		Local Contractors		Foreign Contractors	
	Rank	RII	Rank	RII	Rank	RII
Training and Development	1	0.658	2	0.654	2	0.679
Recruitment and selection	2	0.660	1	0.647	4	0.717
Retention	3	0.710	3	0.708	3	0.698
Wage and Payment	4	0.712	5	0.716	1	0.678
Manpower planning	5	0.724	4	0.714	5	0.788

#### 4.5.1.2. Bottom-Up Problems of Local Contractors

The most bottom five (5) factors (problems) leading to affect the building construction labour management practices of local contractors according to the rankings are identified as;

1. Of-the-job training [RII = 0.47]
2. Examine manual dexterity [RII = 0.58]
3. Intensive use of automated technology [RII = 0.59]
4. Encouraging creativity through training [RII = 0.60]
5. Control over recruiting unskilled labour [RII = 0.60]

Here from the ranking table, control over recruiting unskilled labour has scored different ranking result for local contractors (35th) [RII=0.6] and foreign contractors (2nd) [RII=0.89]. This shows that foreign contractors are much better than locals on controlling recruiting unskilled labour.

#### 4.5.1.3. Bottom-Up Problems of Foreign Contractors

The most bottom five (5) factors (problems) leading to affect the building construction labour management practices of foreign contractors according to the rankings are identified as;

1. Controlling poor relationship with colleagues [RII = 0.54]
2. Avoiding irregular salary [RII = 0.57]
3. Good management approach [RII = 0.60]
4. Off-the-job training [RII = 0.60]
5. Examine knowledge and skills [RII = 0.60]

According to the result obtained, the ranking of avoiding irregular salary has showed large differences for local and foreign contractors. The score for local contractors [RII=0.78] ranked 2nd but for foreign contractors with result of [RII=0.57] ranked 38th, which clearly show that local contractors are good at controlling (avoiding) irregular salary to the labour.

From the combined RII ranking of the factors leading to affect both construction contractors' building labour management, Table 4.18 below presented the most bottom-up factors.

Table 4.18. Results of Most Leading Factors (Bottom-Up) RII Rankings

Rank	Factors leading to affect management practices	RII
1	Off-the-job trainings	0.49
2	Examine manual dexterity and condition	0.59
3	Labour only subcontracting	0.61
4	Examine knowledge and skills	0.61
5	Giving understudy assignment	0.61
6	Encouraging creativity through training	0.62
7	Intensive use of automated technology	0.63
8	Providing terms of motivation	0.64
9	Control over recruiting unskilled labour	0.65
10	Providing necessary facilities	0.66

#### 4.5.2. Results for Open Ended Question at Project Site

1. What personal (behavioral) problems you have observed on local labourers that makes the labour management difficult?
  - Lack of communication due to language
  - Unproductive waste of time
  - Inconsistency of labour with their daily work performance (productivity)
  - Low attitude of labour towards construction
  - Conflict between labourers, rebellion and aggressiveness
  - Irresponsibility
  - Cheating for sick leave

Respondents at project site were also asked to indicate the most personal problems of labour that can affect the management which in turn can affect the contractors' performance. The most and repeated responses given based on respondents' experience were grouped and specified. Accordingly, lack of communication, waste of time and lack of consistent work performance are found to be the most labour-related personal problems respectively.

2. What facilities your company failed to provide for the labour that were very necessary?

- Personal Protective Equipment (PPE)
- Trainings and other incentives
- Medical facilities
- Transportation
- Utilities

The intention of this question was to identify the most necessary facilities at project site and also to crosscheck the responses of contractors at head offices on the provision of welfare facilities. It was found that most of the respondents are in need of personal Protective Equipment (PPE), trainings and other incentives, medical facilities, transportation and other utilities respectively.

3. What gaps have you observed in labour management practices compare to local and foreign contractors trend?

- Lack of communication between workers in foreign contractors
- Discontinuity of works in local contractors
- Lack of on-site training in local contractors
- Influential chain of commands of foreign contractors from top to lower technical level management on procedures and implementation of works as per the schedule
- Foreign contractors are relatively good at allocating the right person for a job due to the availability of HRM personnel on their project sites.
- Organizational structure, finance and technological advancement of foreign contractors makes them to handle their labour better without any precondition
- Punctuality of foreign contractors to activities scheduled
- Foreign contractors are good in controlling wastage of time (Effective time management)
- Foreign contractors demand of higher output from every employee

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The responses given above for gap identification has been analyzed and grouped in to; good time management, manpower management, scheduling and training in foreign contractors except lack of communication. In most of the cases, local contractors were ranked relatively lower including their discontinuity of project works.

4. Please list some measures to be taken in the future for a better labour management.

- Working on motivation of labourer (provision of bonus, incentives)
- Developing trends of administrative meeting with labourers to train and discuss about skills, safety and health issues
- Developing strategic construction project management planning towards developing training and skill development practices.
- Development of skilled personnel to train labourers
- Increasing the role of government on competency development of project management
- Control over the contractors safety and management practices
- Proper time management
- Consideration on taking serious measure on work discipline
- Allocating finance and proper personnel

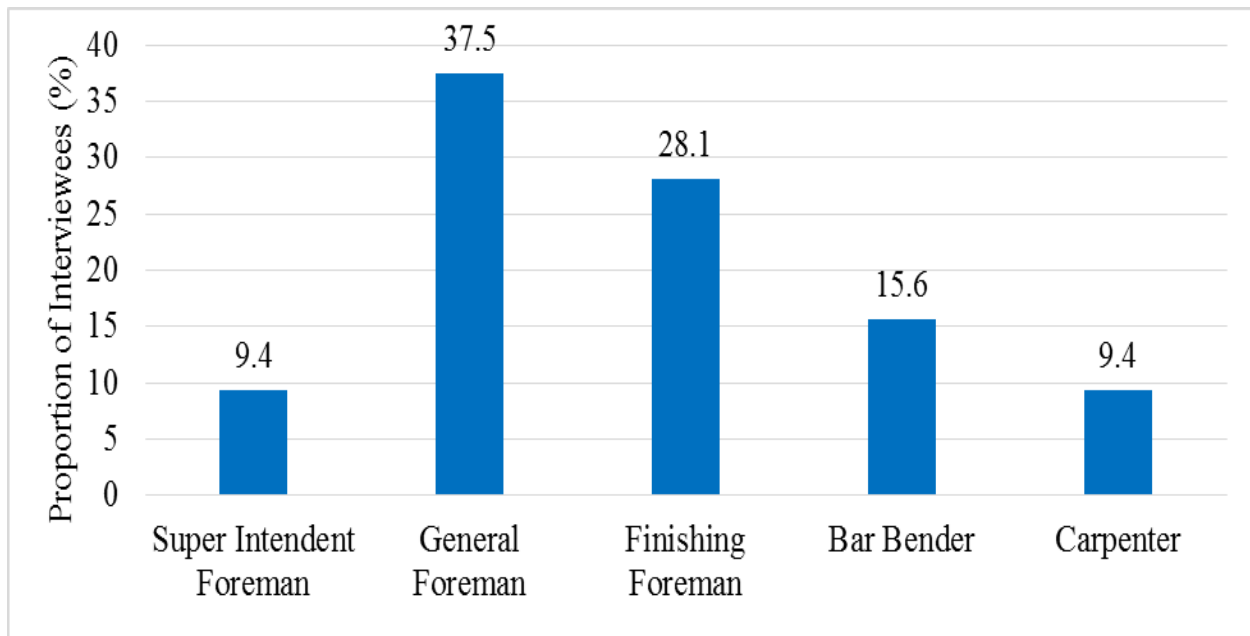
The most repeated and significant suggestions made by respondents for the improvements of building construction labour management has been analyzed and presented above in accordance to their frequencies quoted. It was found that; improvement on motivation, allocation of finance and right personnel for training and the big role of government are most successful approaches.

#### 4.6. Analysis of Interviews

##### 4.6.1. Background of Interview Respondents

The interview has been made with selected and experienced Foreman and skilled labourers (Craftsman) in the companies (26 interviewers from local and 6 from foreign companies). As the study is looking for practical experiences of labour management, one (1) experienced technical level manager has been selected from each project sites. The selection has considered personal experience and experience within the company. According to the data obtained, respondent's work trades (specialization) were composition of 3 (9.4%) super intendant Foreman, 12 (37.5%) General Foreman, 9 (28.1%) Finishing Foreman, 5 (15.6%) Carpenters and 3 (9.4%) Bar-benders (See Figure 4.6, below). All (100%) of the interviewed respondents were male.

Figure 4.6. Work Trade (Specialization) of Interviewers



Most of the interviewed respondents 17 (53.1%) have educational background of matriculation, 11 (34.4%) Diploma and the remaining 4 (12.5%) have taken primary education. From the respondents, most of them have a well-developed practical experience of above ten ( $\geq 10$ ) years 13 (40.6%), those who have experienced between 5-10 years were 4 (12.5%), between 2 - 5 years were 12 (37.5%) and only 3 (9.4%) of them have experience of below 2 years.

#### 4.6.2. Analysis of Data from Interview

##### 4.6.2.1. Membership of Carrier Related Trade Union

This question was aimed at identifying the availability and practice of being membership of any carrier related trade unions (labour relations). As stated in chapter two of this study, trade unions are key to manage the employee-employer interaction. According to the survey result, it is found that there is no any active labour unions working with the construction labourers as all of them (100%) are not member of any carrier related trade unions from both contractors.

##### 4.6.2.2. Formal Employment Agreement

The intention here was to crosscheck the responses of companies if they sign formal employment agreement according to the Ethiopian labour proclamation, LP 1156/2019 [art. 4 (3)] with all labourer, including the short term labourer. According to the responses from the Table 4.19 below, 22 (68.8%) respondents confirmed that they sign formal agreement during recruitment. Fewer respondents, 10 (31.2%) had no formal contract agreement with labourers (especially with short-term). Based on the proclamation of the country, contractors are required to sign formal contract with all labourers after probation period. According to interviewees who have not signed, foreign contractors are using the trial period as ‘gap of law’ to recruit a labour and fire early before the trial period(s) ends so that only fewer demand their rights. Although the causal employment system creates poor image of the construction industry, it also greatly affecting the performance of contractors by becoming reason for growing of labour conflicts.

Table 4.19. Formal Contract Agreement (Interviewers)

No.	Response	Percentage (%)		
		Local Contractors	Foreign Contractors	Both
1	Yes	76.9 (20)	33.3 (2)	68.8 (22)
2	No	23.1 (6)	66.7 (4)	31.2 (10)

##### 4.6.2.3. Carrier Related Training

When asked that if they have taken any trainings before; all of them (100%) has agreed that their company does not provided any carrier related trainings to develop their skills but 4 (12.5%) of them were taken trainings and the COC exam personally before being hired in the company. Very fewer foreign contractors partially (informally) train the local labourers on-the-job training bases just only to gate the job done.

4.6.2.4. Labour Complains as Obtained from Foreman (Craftsmen)

In this section, Foreman and/or Craftsmen from both side have been asked representing the labour if they have ‘complains’ in some of their company’s labour management practices. Respondents were asked to answer “Yes” if they have and “No” if they do not. Some questions contained further detailed questions to find out the reason(s). Table 4.20 summarized the response given.

Table 4.20. Rate of Response for Complains of Foreman (Craftsmen)

No	Interview Questions Do you have complains on your company’s? “I have complain on...”	Local		Foreign	
		Yes	No	Yes	No
1	Company’s minimum wage rate as to the current market price?	19(73%)	7(26%)	4(67%)	2(33%)
2	Overtime payment rate?	11(42%)	15(58%)	2(33%)	4(67%)
3	Working hour limitation & overtime duration?	4(15%)	22(84%)	4(67%)	2(33%)
4	Paid public holidays, sick & maternity leaves?	11(42%)	15(58%)	4(67%)	2(33%)
5	The company’s compensation in the form of salary, benefit and other rewards in not (less) comparable to the market?	10(39%)	16(61%)	3(50%)	3(50%)
6	Discrimination in hiring, development and compensation?	3(12%)	23(88%)	3(50%)	3(50%)
7	Company have no applicable minimum wage standards to pay you accordingly?	19(73%)	7(27%)	3(50%)	3(50%)
8	Delay of wages and payments?	15(58%)	11(42%)	3(50%)	3(50%)
9	Not pay enough compensation on termination?	12(46%)	14(54%)	5(83%)	1(17%)
10	Violation of applicable national and/or sectorial laws (standards)?	3(12%)	23(88%)	4(67%)	2(33%)
11	Superiors have no willing to accept and try ideas from workers?	9(35%)	17(65%)	5(83%)	1(17%)
12	Ignoring you to discuss when making decisions involving you?	9(35%)	17(65%)	5(83%)	1(17%)

13	Site Engineer's reaction to your mistakes is not justified?	5(19%)	21(81%)	5(83%)	1(17%)
14	Site Engineers does not clearly share useful information with workers?	6(23%)	20(77%)	4(67%)	2(33%)
15	I think company's current wage (payments) does not attract the best workforce?	17(65%)	9(35%)	1(17%)	5(83%)

#### 4.6.2.4.1. Extend of Overtime

According to Table 4.21 below, most local contractors have a trend of overtime working less than one (1) hour in average ( $\leq 12.5\%$  of normal working time) and foreign contractors have about 1-2 hours in average ( $12.5\% - 25\%$  of normal working time). These values are very high according to the estimation of Suby (2007), which was  $[5\% - 7.9\%]$  and becomes cause for fatigue affecting performance, disengagement, job dissatisfaction and turnover.

Table 4.21. Extend of Overtime

No.	Extend of overtime	Percentage (%)	
		Local Contractors	Foreign Contractors
1	< 1 hours	53.8 (14)	33.3 (2)
2	1 – 2 hours	38.5 (10)	66.7 (4)
3	3 – 4 hours	7.7 (2)	-
4	5 – 6 hours	-	-

Another question has been forwarded following question number 3 of Table 4.20 above. Respondents were asked how the overtime affects their performance and has given the following impact of overtime.

- Additional work for less payment and/or the same scale
- Safety concerns increases more when working at night
- Lack of sufficient rest (being tired)
- Transportation problem
- Being late when traveling to home
- Lack of time for academic education (classes)
- Insecurity

Respondents in some foreign companies 1(16.7%) have also explained that they are being forced to work more extended hours (from 7:00 am - 12:00pm to 2:00pm - 6:30pm), and others 2(33%) (From 7:20am - 11:30am to 1:00pm - 5:30pm) without any additional payments which is against the labour proclamation of the country.

#### 4.6.2.4.2. Delay of Wages

Following the complaint on the delay of wages and payment; (as most of respondents agreed “Yes” were workers from local contractors) also asked how long it will extend. Accordingly, 17(65.4%) of them agreed on delay less than a week (Table 4.22), and 5(19.2%) on between 1-2 weeks.

Table 4.22. Delay of Wages

No.	Delay of Wages	Percentage (%)	
		Local Contractors	Foreign Contractors
1	Not at all	15.4 (4)	33.3 (2)
2	< 1 Week	65.4 (17)	33.3 (2)
3	1 – 2 Week	19.2 (5)	16.7 (1)
4	2 – 3 Week	-	16.7 (1)
	≥ Month	-	-

#### 4.6.2.5. Opinions of Foreman’s (Craftsmen)

1. What other management practices do you strongly suggest your company to improve?

It was intended to gather recommendations from labourers that contractors need to improve on labour management. Accordingly, they have suggested the following points.

##### A. For Local Contractors

- Safety and health management practices [Freq. = 20]
- Improve payment scale (financial incentives) [Freq. = 19]
- Providing necessary facilities [Freq. = 17]
- Continuity of work (proper scheduling) [Freq. = 13]
- Team organization [Freq. = 9]

B. For Foreign Contractors

- Communication problems [Freq. = 4]
- Unequal payment for the same job with foreigners [Freq. = 3]
- Personal protective equipment (rather than just providing head protection (HP) and high visibility cloth (HVC), other equipment are necessary) [Freq. = 3]
- Conduct (control fighting with labour) [Freq. = 1]

2. Which company do you prefer to work with?

From respondents conducted 20 (62.5%) were experienced working with both contractors. Based on their experience 16 (80%) of them preferred to work with foreigners and just only 4 (20%) are interested with local contractors.

3. How long do you want to stay in your current company? Why?

This question was aimed at identifying the severity of labour retention practice (retention management) of the companies. According to the results found from those senior employees, it has been found four (4) responses. As a result of their response, about (38.5%) from local contractors and (50%) from foreign contractors agreed to “Stay for a long time” within the company even after the completion of current project at hand. Therefore, they are clear to proceed and work with the contractor for (if any) coming projects (See Table 4.23, below).

Table 4.23. Retention of Labourers

Responses	Percentage (%)	
	Local contractors	Foreign contractors
Until I start private business	7.7 (2)	-
Until I found better paid job	38.5 (10)	16.7 (1)
Until End of this project	15.4 (4)	33.3 (2)
Stay for a long time	38.5 (10)	50.0 (3)

The above two questions (2 & 3) were aimed to identify the severity of contractors’ management practices on retaining the labour (retention). About half of the labourers preferred working with foreign contractors mostly due to; (1) Continuity of work, (2) Better technology, (3) Better equipment (mechanization) and (4) Better safety and health management with all the arguments on problems stated above.

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#### 4.6.3. Findings from Interviews

According to the above analysis of interviews it has been observed that; there is no significance difference between local and foreign companies in terms of providing labour training and development. Few interviewers from foreign contractors take some basic on-the-job trainings just to get the job done but less on knowledge development. Almost all the labourer including the ‘skilled’ working in the local contractors have not taken proper training. Most of them acquired their skills through longer experience. Other problems like lack of trade union (membership) and lack of standard minimum wage scales are analyzed to be challenging factors affecting the labour and labour management of both contractors by interviewees.

It has also been found that extend of work time and overtime are among the factors affecting performances of the local labourers working with foreign contractors due to lack of sufficient rest, incentives, transportation and the same payment scale with regular work times. The study has observed that almost there is no discrimination in hiring except complains of local labourers for unfair payments with foreign labourers for the same type of works.

In addition to the above, based on the analysis of the interview; factors that are challenging the labour management of local contractors found to be (1) Wage delay, (2) Lack of labour retention, (3) Safety and health, (4) Discontinuity of work, and (5) Welfare facilities. Whereas those factors affecting labour management of foreign contractors according to the interviewers are; (1) Extend of working hours and overtime duration, (2) Discrimination on wage scale and irregular salary, (3) Lack of communication, (4) Engineers reaction to mistakes (conduct), (5) Formal contract agreement, and (6) Compensation on termination.

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#### **4.7. Discussion of Results**

Based on the respondents ranking of factors and responses for different questions stated above; the factors that affects the labour management practices of both local and foreign construction contractors has been identified and summarized below. Most of the management practices investigated from Contractors and Engineers has been checked and over crossed by the interview of Foreman (Craftsmen) and most of them are almost found true and similar but at some points, they are different.

##### **4.7.1. Factors Related to Training and Development Practices**

According to the results obtained from rankings in this research; training and development (RII = 0.658), is the least building construction labour management practice to be implemented on the ground. The training and development category contained seven (7) main factors and three (3) sub-factors leading to affect the management practices. Among these, respondents have agreed and ranked (1) Off-the-job training (RII = 0.49), (2) Giving understudy assignment (RII = 0.61) and (3) Labour only subcontracting (RII = 0.61) respectively as the most factors (less practiced management problems) related to training and skill development of labour. Off-the-job training and understudy assignment help labourers to develop technical and problem-solving skills. Even though the problems affects both local and foreign contractors, the practice is much less in local contractors. Labour only subcontracting also determines the need and extend of training requirement. There is no significance difference between local and foreign contractors on giving works of building construction projects for labour only subcontractors. Therefore, subcontracting does not affect neither of the two side contractors' training program needs.

To increase the performance and competency level of construction companies; maintaining the labour with consistent productivity by providing training is necessary. According to the suggestions stated under literature review sub-section 2.4.1.3, performance assessment and satisfaction level is the first step to plan for training followed by recognition of training needs. Then, organizing the training through either of demonstration, on-the-job training, off-the-job training, case study and etc. are to be followed.

Based on the data collected from the contractors' questionnaire; most of the local contractors face shortage of skilled labour certified from institutions and seasonal unavailability of labour in the market. Interviews with senior Foreman (Craftsmen) also approved that; companies did not

provide any carrier related trainings to any of their skilled and unskilled labourers except some who undertake trainings privately. These ideas were also supported by respondents from Engineers as about more than half of them (51.5%) has agreed that lack of technical skill is the most common problem of local labourers. Furthermore, Engineers were asked whether the management is satisfied or not by the performance of labour. It is found that mostly they are not satisfied or satisfied sometimes. With the current labour performance, skill level of labour and form of employment (with lower technical selection criteria); all the above has proved that there is a need of training and skill developments in the sector.

According to the skilled to unskilled labour proportion of local contractors (which is 1 skilled to 4 unskilled; 1:4); it is difficult to control the larger number of employees as most of the jobs are demanding large pool of unskilled labour. The reverse is relatively simple in foreign contractors as they employ larger number of skilled labour (with a ratio of 1:2). It has a great implication on quality, cost and duration of activities as project works will be managed by very close follow-up. Furthermore, these figures has implications on the knowledge transfer and training programs.

The factors preventing contractors from providing trainings are analyzed and categorized in to three; (1) Contractors-related problems i.e. commitment of management, time factor, budget and project organization etc.; (2) Labour-related problems including negligence, low construction concept, incentive requirement and etc.; and (3) Governmental authorities-related problem that are beyond the capacity of contractors. These are due to lack of legal enforcement (government pressure) with lack of providing necessary facilities and infrastructure including development of training personnel, lack of training manuals and short-term training centers.

#### 4.7.1.1. Most Significant Labour Training Areas

Based on the above analysis, the most significant areas where labour trainings are necessary has been identified. Accordingly; respondents from project site agreed that the most common problem of labour is technical skills (45% in common response) which was also supported by respondents at head offices as low skill of labour (40%) (Section 4.4.1, question number 1 & 2). Other problems that needs training like labour effectiveness (47.5%), communication (45%), conflict management (35%) and time management (10%) are also identified from respondents at head offices. Existence of these problems are also approved by respondents at project site (Section 4.5.2, question number 1).

It has been stated that training and development is the best method to develop the human resource in construction. However, educational background of labourers, low interest to take trainings, incentive requirements and lower retention practices will be challenges to facilitate trainings. Construction companies needs to allocate finance in order to develop their human capital and maintain their competency. It is up to the companies to choose the relevant, economic and appropriate method of training considering availability of facilities and also labour level of education, motives, salary, and retention as labour have wage problems and requires incentives. The strategic framework of training has been suggested by Fernando et al., (2016).

#### 4.7.2. Factors Related to Recruitment and Selection

The competency of local construction contractors with that of foreign contractors is heavily dependent on the recruitment and selection of skilled and experienced personnel and labour. The hard physical work of construction is directly related to the labour which requires high skills and good performance.

Practice of contractors' labour recruitment and selection [RII = 0.660] is ranked the second most problem by both group of respondents. The category has six (6) factors leading to affect the practice. Their recruitment and selection is mainly factored by examining manual dexterity and condition [RII = 0.59] and examining knowledge [RII = 0.61] from both contractors group. But the practice is much worsen from local contractors.

The labour selection criteria of both group of contractors were stated in Table 4.9 above. It is understood that most of them are recruiting skilled and unskilled labourers based on their physical appearance and previous experiences. It is difficult to visually analyze the knowledge and competency of the labourers for a job without examining his/her construction knowledge. Both contractors given less attention for technical capacity and knowledge requirement of the labour as a selection criteria as they mainly focus on legal requirements. It seems better with foreign contractors but there is no clearly identified, certain and pre-stated qualification requirements from both contractors. Furthermore, their basic construction knowledge is necessary for improvement in productivity, waste minimization, safety and health...etc.

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#### 4.7.3. Factors Related to Labour Retention

Labour retention practice of contractors is ranked third both individually and in combination [RII=0.710]. Motivation and provision of welfare facilities took larger proportions from the factors affecting the retention of labour in a construction industry. Respondents from both local and foreign contractors have agreed that motivation is the other most common problem of local labourers (57.1%). Lack of motivation in construction is more disaster due to its consequences. Lack of motivation affects the productivity of labour and performance of contractors causing low labour morale at work, increased defective products, reworks, wastage of materials, accidents, conflicts, absentees and high labour turnover (Soe & Cho, 2014).

Lack of communication and poor management approach ([RII = 0.60] from foreign) are other berries affecting retention of labour. The problem is more from foreign contractors. A successful completion of construction projects require effective communication between both skilled and unskilled labour and with the management too like any other materials. According to Wachira (2001), there is a direct relationship between communication [(amount and quality of information flow) from the management ordering the job to those doing the job (technical personnel)] and their productivity. A clear communication about what requires to be done is a source of labour effectiveness.

Generally, there is expectation of un-stability of labour searching for a better paid, equipped and organized companies as large proportion of skilled (39.1%) and unskilled (30.9%) labourers are expected to leave within the first six (6) months. It has found from rankings that the practice of using automated technology [RII = 0.61] to reduce the effort of labourer is low and has also indicated that (46.2%) of labourers expected to leave before completion and (15.4%) after completion of project. Only the remaining (38.5%) are comfortable in the companies.

Respondents were asked to suggest companies' management the practices to be improved and accordingly labour from local contractors are in need of improvement on; (1) Safety and health management, (2) Payment rate, (3) Labour communication and (4) Team organization. Whereas, from foreign contractors improvement of; (1) Labour communication problems in terms sharing information, discussion, conduct and reaction to mistakes, (2) Facilities for the labourers like transportation, low cost catering are expected.

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#### 4.7.4. Factors Related to Wage and Payment

Wage and payment management practices of both contractors group is ranked as the fourth most problem (RII = 0.712) by respondents. Under the ranking table, wage and payment has seven (7) factors leading to affect. Accordingly, considering the interest of low wage labour (usually daily labourers) for some incentives and implementing fair payment scale are found to be the major problems of local contractors. Moreover, paying irregular salary (RII = 0.57) for labour is found the worst practice of foreign contractors.

Lack of standard payment scales is found to be the major factors affecting the labour. Even if labourer are free to negotiate or leave; results from interviewees (73%) labourer from local and (50%) labourer from foreign contractors are complaining about the lack of minimum wage standard. It has also observed that labour wage competition between local and foreign contractors is becoming a problem. This is affecting local (more of financially less capitalized) contractors as labourers are searching for better paying contractor.

Minimum wage is among the factor affecting the labour productivity. When difference in payment is added; it becomes worsen. Wage delay has been also found another problem of management from both contractors group especially (67.4%) local contractors delay wages about a week. Labourers also lack motivation due to lack of financial incentives, work for extended working hours with the same pay scale. These problems need to be solved early for not to become serious and causes for labour strikes. Ratification of the ILO convention of fixing minimum wage scale should be reached to the ground in construction projects and is expected to protect the labour with the law enforcement.

#### 4.7.5. Factors Related to Manpower Planning

Manpower planning in this research is ranked the least problematic practice (fifth) from bottom-up), [RII = 0.724]. From the five factors leading to affect manpower planning; providing necessary facilities (RII = 0.66) is the least practiced factor in both group of contractors.

It was stated that having the right HRM personnel is key to manage the manpower planning and provide the necessary facilities. HRM personnel is responsible for insuring availability of labour, formal agreements and organizing facilities. It is found that most of the local contractors does not assign a responsible personnel at their project sites.

Lack of other facilities like safety and health, medicals and utilities were found to be factors affecting the labourer at building project sites. Senior Foreman (Craftsmen) has also suggested companies to improve their safety & health management practices at least by providing PPE. It is duty of employer to take all necessary occupational safety & health measures LP 1156/2019 [art. 12 (5)]. According to the estimation of international labour organization (ILO) report at 2016, construction site accidents are becoming more serious as from all work place accidents estimated about 30% of the fatal accidents are registered at construction sites. This estimation is more realistic in developing countries as per the statement of Dukpa & Dendup (2017), that construction work of developing countries is ten (10) times more dangerous than developed.

The other problem of manpower planning according to the ranking is found to be availability of planned workforce on time (RII = 0.71 both). Continuity of work flow largely depends on the availability of workforce (labour). As discussed in literature review part (Chapter two), seasonal unavailability of labour have a part for the 352% delay of project's contractual time by Koshe et al. (2016); this study has also proved the existence of seasonal fluctuating labour unavailability in case of Addis Ababa and its financial impact (cost factor) and forced to hire with extra cost (extra wage) and others reschedule the works (time factor) as most of the respondent (45.5%) has agreed that they face shortage "sometimes".

#### **4.8. Identifying Key Gaps in Labour Management and Major Labour Problems**

As discussed on the analysis part of section 4.5.2 (question number 3), respondents at project site has identified the gaps between local and foreign contractors in terms of building labour management. Accordingly, it was found that good time management, manpower management, scheduling and 'training' are the better practices of foreign contractors. According to the respondents; foreign contractors are relatively good at effective time management on controlling wastage of time by labourer. In addition to this respondents agreed that allocation of right person for a job with punctuality to activities scheduled is the other key difference between local and foreign contractors. These of course, is supported by the advancement of foreign contractors in effective chain of command, organizational structure, finance and technology as per respondents.

However, lack of communication between workers has been stated as drawbacks of foreign contractors and also exploit labour force demanding higher output from every labourer. These were proved by interviewees as working for extra time with less or no additional payment.

What drawbacks found on foreign contractors' means; local contractors are relatively good at. However, local contractors were also criticized for their lack of on-site-trainings and discontinuity of works. Discontinuity of works is among the main reasons for less retention of labourer (skilled 39.1% and unskilled 30.9%) which was proved by engineers and interviewees.

Finally, it has been observed that findings of this study have a closer similarities with findings of researches conducted in other developing countries like the one with Wachira (2001), Soe & Cho (2014), and Rounds & Huang (2017). Based on the thoughts of Odesola et al. (2013), also cited by Zannah et al. (2017), other findings of this research from respondents ranking, responses of open ended questions and interviews stated above; factors affecting the building construction labour management of both local and foreign construction contractors are summarized in the following two broad groups (management-related and labour-related) (See Table 4.24, below).

Table 4.24. Management-Related and Labour-Related Problems

<b>Management-Related Problems</b>			
	<b>No.</b>	<b>Local Contractors</b>	<b>Foreign Contractors</b>
<b>Results From Rankings</b>	1	Off the job training	Poor relationship with colleagues
	2	Examine manual dexterity	Irregular salary
	3	Automated technology	Poor management approach
	4	Encouraging creativity through training	Off the job training
	5	Recruiting unskilled labour	Examine knowledge and skills
<b>Results From Questionnaires and Interview</b>	1	Lack of HRM personnel	Lack of formal contract agreement
	2	Wage delay and work continuity	Lack of communication
	3	Safety and health (PPE)	Irregular salary
	4	Lack of labour facilities	Lack of labour facilities
	5	Labour retention	Safety and health (PPE)
<b>Results From Questionnaires</b>	<b>No.</b>	<b>Common Labour-Related Problems</b>	
	1	Low labour skills	
	2	Lack of motivation and commitment	
	3	Low communication skills (Language)	
	4	Low construction awareness	
	5	Labour conflicts	

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## CHAPTER FIVE

### 5. CONCLUSIONS AND RECOMMENDATIONS

The main objective of the research is to compare current trends of building construction labour management, identify major challenging factors and providing appropriate recommendation(s). After analyzing the data collected to identify the findings in chapter 4, the following conclusions has been made and relevant recommendation with future research areas has been forwarded.

#### 5.1. Conclusions

1. Lack of clear labour selection criteria is found to be the major factor affecting the performance of both local and foreign contractors. Selection criteria of both contractors mainly focus on legal requirements rather than examining the technical capacity (knowledge) of the labour. There is no clearly identified, certain and pre-stated qualification requirements for a job from both contractors group.
2. Current labour performance, skill levels and form of employment with shortage of certified skilled labour in the building construction sector dictates the serious need of training and skill development. No significant difference between contractors on giving works for labour-only subcontractors, which does not affect neither of their training program needs.
3. It is observed that unavailability and lower practice of assigning HRM personnel responsible to manpower planning, availability, technical skill qualification, selection and recruitment of labour at project sites is among the factors hindering local contractors' performance.
4. Low practices of safety and health management especially providing personal protective equipment (PPE) is found one of management drawbacks from both contractors which is not more than giving head protector & HVC. The problem is more in local contractors.
5. Lack of minimum wage scale in construction is creating imperfect competition affecting financially less capitalized contractors as skilled labourers are searching for better paid jobs; and hence, local contractors are in a continuous risk of losing their senior 'skilled labourers'. Some foreign contractors have extended working hours without overtime payment; and irregular salary is another drawback of foreign contractors management affecting the performance of labour mainly due to lack of formal contract agreement.
6. Lack of welfare facilities including medical, catering and transportation are also found other management problem of both contractors group affecting labour performance. It is also due to lack of trade unions to force the management and stand for labourers.

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## **5.2. Recommendations**

In order to have a competitive advantage over contenders and completing construction projects within the budget allocated and time frame by increasing labour productivity; contractors need to start implementing strategic labour management and the following points are recommended.

- **For Both Group of Contractors:-**

1. Both foreign and local contractors needs to implement selective recruitment of skilled and unskilled labourers to improve their productivity and competitive advantage by setting effective and technical selection criteria to select qualified labourers for a job considering their education level, fitness, health and mental well-being.
2. Strategic management to guiding the labour towards short and economic training programs will significantly improve contractors' performance by avoid mismatch between required and available skilled workforce. Therefore, contractors should be obliged and other stakeholders should take the responsibility too.
3. Improvement in safety and health management of contractors needs to start with regular trainings and by providing personal protective equipment (PPE) for labourers. The effort of stakeholders including the labour relations, contractors, clients and authorities of labour affairs play significant role here. Contractors need to develop a trend of conducting medical examination before hiring labour for safety caution and productivity as well.
4. By taking the necessary considerations; fixing the minimum wage scale in construction will solve many wage related problems including wage standards and irregular salaries so that there will be fair payment scales throughout and incentives to motivation.
5. Increased financial benefit of labour by setting fair wage scale, extra bonus, and provision of welfare facilities are necessary to increase labour willingness, retention and improved productivity as well. Contractors can be force by trade unions. To fight these, authorities, contractors and labourer themselves has to work for establishment and practical impact of construction trade unions.
6. As the experience of other countries shown, simple questions of labour becomes causes for national labour strikes. Therefore, contractors need to consider answering labour questions at their very beginning as soon as possible before they become worse.

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- **For Local Contractors:-**

7. For a better control of labour productivity in local contractors, it is necessary to assign HRM personnel at project sites and perform effectively so that it would be easy to select and assigning the right number and kind of labour to do the right job at the right time and place.

- **For International Contractors:-**

8. International contractors need to increase their knowledge of specific project areas (Addis Ababa, Ethiopia) to be familiar with local operating proclamations, expectations, the local labourers' quality, work culture and social norms comparing the difference with other countries practices.
9. Finally, it is found that labour inspection guideline of ILO is found very useful to set clear and uniform system (inspection guideline) to follow-up the labour management throughout the building construction projects in Addis Ababa. It is also important and serve as a base to draft locally compatible labour inspection guidelines.

### **5.3. Recommendations for Future Researchers**

1. As an initial study on construction labour management practice in Addis Ababa, this research is believed to open the door for further and more detailed studies of management practices on individual topics including; manpower planning, recruitment and selection, communication, motivation, wage and payments, retention, and etc. are further research areas.
2. Studying the role and impact of labour-only subcontracting on contractors' performance.
3. Investigating the impacts of labour management on project performance indicators i.e. on time, cost and quality individually is another way of studying labour management in detail.
4. Analysis on acceptance and conformability (amenity) of multi-skilled labourers in the Ethiopian construction industry.
5. Study on the necessary considerations of fixing minimum wage scales of construction labour in Ethiopia.

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## **APPENDIX**

### **Questionnaires and Interviews**

[Appendix A]

Addis Ababa University

Addis Ababa Institute of Technology

**Questionnaire for Contractors at Head Office**

Dear Respondent;

I am currently working on a research concerning on “*Comparative Analysis on Building Construction Labour Management Practices of Local and Foreign Contractors in Addis Ababa.*” This research survey is intended to fulfill an academic requirement for Master of Civil Engineering in stream of Construction Technology and Management at Addis Ababa University, Addis Ababa Institute of Technology (AAU, AAiT).

A successful construction project execution requires an effective construction labour management despite technology and equipment. Productivity of any construction project relies mainly on labour force as labour play an integral part in the success of the project. Ineffective construction labour management will cause claims, conflicts, absentees, unproductivity, employment discourages, poor performance and quality, cost overrun and delay affecting overall performance of the project. But having a good labour management is a source of competitive advantage for any company while eliminating imperfect competition among construction contractors.

Therefore, I kindly request your participation and support on the assessment by answering (filling) this survey questionnaire and return it quickly as much as possible. I would like to confirm you that your response will be kept strictly confidential as the research data and results are used for academic purposes only.

Thank you in advance for your co-operation!

Advisor: - Abebe Dinku *Prof. (Dr.-Ing.)*

Mesfin Bekele Tesema

Please contact me for any clarification, via

Phone: +251906471029, Email: [Mafibekele@gmail.com](mailto:Mafibekele@gmail.com)

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**Section A: General Background**

The following questions are required to get the general information of respondents and their company. Please show your response by ticking (X or √) inside the box or by filling the blank spaces provided as required.

Company Name: \_\_\_\_\_ (optional)

Position of Respondent: \_\_\_\_\_

1.1. What is the legal nationality of your company?       Local       International

If Local, category;       GC-1       BC-1

1.2. Your experience in the company?

Below 2 years       2 - 5 years       5 – 10 years       above 10 years

1.3. Experience of the company since establishment?

Below 5 years       5 – 10 years       above 10 years

1.4. If your company is foreigner (international), your company's experience in Ethiopia?

Below 2 years       2 - 5 years       5 – 10 years       above 10 years

**Contact address (optional)**

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

**Section B: Please Show Your Response for the Following Questions**

1.5. Is your company face shortage of certified skilled labour to hire?

Yes                       Sometimes                       No

1.6. Is the company sign formal employment agreement with all (including short-term) labourer?

Yes                       Not with short-term                       No

1.6.1. If your answer contains (Not), why?

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1.7. What criteria have you set to recruit and select the labour force for your construction jobs?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

1.8. In what occasion your company delay to pay employees wage and payment?

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1.9. How do you compensate if payment delay occurs?

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1.10. Is your company conduct employee's satisfaction survey?

Yes                       Sometimes                       No

1.11. Which could be the reason for less conduct of employee's satisfaction survey?

Lack of awareness     Unnecessary     Negligence     Time factor     Expensive

1.12. What facilities did your company provide to the labour? (Mark  for all that it apply)

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Transport           | 4. <input type="checkbox"/> Fresh water to drink & wash  |
| 2. <input type="checkbox"/> Catering facilities | 5. <input type="checkbox"/> Scheduled training program   |
| 3. <input type="checkbox"/> Sanitary facilities | 6. <input type="checkbox"/> Suitable accommodation rooms |

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**Section C: Open Ended Questions for Local Contractors**

1.13. What is the most successful method your company do to promote talent development?

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1.14. What factors mostly challenge your company to facilitate training programs for labour?

1. 

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2. 

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3. 

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4. 

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5. 

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1.15. What labour related factors affect your retention management practices (retention plan)?

1. 

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2. 

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3. 

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4. 

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5. 

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1.16. What other labour related problems affect your management practice?

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1.17. What do you think the government should do to increase your competency?

1. 

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2. 

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3. 

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**Thank you!**

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**Section C: Open Ended Questions for Foreign Contractors**

1.18. What policy related factors affect your labour management practices?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

1.19. What is the most successful method your company do to promote talent development?

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1.20. What factors mostly challenge your company to facilitate training programs for labourer?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

1.21. What labour related factors affect your labour retention management practices (plan)?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

1.22. How do you compare the skills and performance of Ethiopian labour with other country?

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1.23. What other labour related problems affect your management practice?

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**Thank you!**

[Appendix B]

Addis Ababa University

Addis Ababa Institute of Technology

**Questionnaire at Project Site**

Dear Respondent;

I am currently working on a research concerning on “*Comparative Analysis on Building Construction Labour Management Practices of Local and Foreign Contractors in Addis Ababa.*” This research survey is intended to fulfill an academic requirement for Master of Civil Engineering in stream of Construction Technology and Management at Addis Ababa University, Addis Ababa Institute of Technology (AAU, AAiT).

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Therefore, I kindly request your participation and support on the assessment by answering (filling) this survey questionnaire and return it quickly as much as possible. I would like to confirm you that your response will be kept strictly confidential as the research data and results are used for academic purposes only.

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Mesfin Bekele Tesema

Please contact me for any clarification, via

Phone: +251906471029, Email: [Mafibekele@gmail.com](mailto:Mafibekele@gmail.com)

**Section A: General Background**

The following questions are required to get the general information of respondents and their company. Please show your response by ticking ( X or √ ) inside the box or by filling the blank spaces provided as required.

Company Name: \_\_\_\_\_ (optional)

Category of your company? 1. Local  GC-1  BC-1          2. International

2.1. What is your position (role) in the company, act as?

Site Engineer       Office Engineer       Project Manager       Construction Manager

2.2. Your experience in the company

Below 2 years       2 - 5 years       5 – 10 years       above 10 years

2.3. Your Sex?                       Male                       Female

2.4. Average number of employees under the current project at hand

<b>Employment</b>	<b>Skilled Labour</b>	<b>Unskilled Labour</b>	<b>Others, if any</b>
<b>On Hourly Bases</b>			
<b>On Salary Bases</b>			

2.5. Please put your expectation on the following forecasting point based on your experience.

✓ What percentage of skilled labourers quit within the first six months after being hired? \_\_\_%

✓ What percentage of unskilled labourer quit within the first six months after being hired? \_\_\_%

**Section B: Please show your response for the following questions**

2.6. Does your company have HRM<sup>1</sup> personnel who is only responsible to deal with Manpower Planning, Selection and Recruitment of Labour?

Yes

No

2.6.1. If your answer is (No or Sometimes), how do you recruit workforce for your job?

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2.7. Do you face any seasonal unavailability of workforce?

Yes

Sometimes

No

2.7.1. When you face such a situation, what measures do you take?

(a) \_\_\_\_\_

(b) \_\_\_\_\_

(c) \_\_\_\_\_

2.8. Do you agree that your company have a clear, measurable and influential performance appraisal system for labourers?

Yes

Sometimes

No

2.9. The management is satisfied by the performance of the labour force?

Yes

Sometimes

No

2.10. What is the most common problem you face with your labourers?

Skill

Physical

Health

Motivation

Retention

Others; \_\_\_\_\_

HRM<sup>1</sup> = *Human Resource Management*

**Section C: Please Judge the Practice of Your Company's Labour Management**

The following table contains some common construction labour management practices and list of their leading factors obtained from different literatures. By using the scales specified below, please judge the practices of your company on;

**Note:** - Use the following scales; e.g. “*I agree / disagree that my company has a practice of \_\_*”.

1. Strongly Disagree (SD)                      3. Neutral (N)  
2. Disagree (D)                                      4. Agree (A)                                      5. Strongly Agree (SA)

MANAGEMENT PRACTICES		SD	D	N	A	SA
<b>1.1. Manpower Planning</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.	Precisely forecast number of workforce needed					
2.	Applying proper work scheduling					
3.	Ensuring availability of planned workforce on time					
4.	Effective utilization of workforce					
5.	Provide necessary facilities to workers					
<b>1.2. Recruitment and Selection</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
6.	Control over recruitment of unskilled labour					
7.	Examine Physical strength and stamina					
8.	Examine Manual dexterity and condition					
9.	Examine Knowledge and analytical skills					
10.	Examine Knowledge on handling tool & equipment					
11.	Grading labour					
<b>1.3. Training and Development</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
12.	Labour only subcontracting					
13.	Creating opportunity for skill development					
14.	Workers performance measurement					
15.	Show (learn) new work methodologies					

16	Providing repetitive training for every workforce					
	<ul style="list-style-type: none"> <li>• On the job training                             <ul style="list-style-type: none"> <li>○ Providing Job rotation</li> <li>○ Giving understudy assignment</li> </ul> </li> <li>• Off the job training</li> </ul>					
17	Discussion with labour to make decisions					
18	Encouraging creativity through training					
<b>1.4. Wage and Payments</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
19	Applying standard minimum wage scale					
20	Avoiding irregular salary					
21	Implementing fair payment scale					
22	Giving pay-slip for every payment					
23	Giving clear statement for every deduction					
24	Giving equivalent service for payments deducted					
25	Reconsider interest of labour with low wages					
<b>1.5. Retention</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
26	Control over regularly loose workers					
27	Providing guaranteed overtime					
28	Reduced workforce demand					
29	Intensive use of automated technology					
30	Good key employees relationship					
31	Providing better working condition					
32	Good management approach					
33	Talent recognition					
34	Providing terms of motivation					
35	Avoiding (controlling) harassment					
36	Controlling poor relationship with colleagues					
37	Age consideration on work assignment					

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**Section D: Open Ended Questions**

2.11. What personal (behavioral) problems you have observed on local labourer that makes the labour management difficult? (if not specified on the table above)

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2.12. What facilities your company failed to provide for the labour that were very necessary?

1. 

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2. 

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3. 

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4. 

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2.13. What gaps have you observed in labour management practices compare to local /foreign contractors trend?

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2.14. Please list some measures to be taken in the future for a better labour management practice?

1. 

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2. 

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3. 

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4. 

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**Thank you!**

[Appendix C]

Addis Ababa University

Addis Ababa Institute of Technology

**Interviews for Foreman (Craftsmen)**

Dear Respondent;

I am currently working on a research concerning on “*Comparative Analysis on Building Construction Labour Management Practices of Local and Foreign Contractors in Addis Ababa.*”

This research survey is intended to fulfill an academic requirement for Master of Civil Engineering in stream of Construction Technology and Management at Addis Ababa University, Addis Ababa Institute of Technology (AAU, AAiT).

A successful construction project execution requires an effective construction labour management despite technology and equipment. Productivity of any construction project relies mainly on labour force as labour play an integral part in the success of the project. Ineffective construction labour management will cause claims, conflicts, absentees, unproductivity, employment discourages, poor performance and quality, cost overrun and delay affecting overall performance of the project. But having a good labour management is a source of competitive advantage for any company while eliminating imperfect competition among construction contractors.

Therefore, I kindly request your participation and support on the assessment by answering following survey interviews kindly and honestly as much as possible. I would like to confirm you that your response will be kept strictly confidential as the research data and results are used for academic purposes only.

Thank you in advance for your co-operation!

Mesfin Bekele Tesema

Advisor: - Abebe Dinku *Prof. (Dr.-Ing.)*

**Section A: General Background**

The following questions are required to get the general information of respondents and their company. Please show your response by ticking (X or √) inside the box or by filling the blank spaces provided as required.

Company Name: \_\_\_\_\_ (optional)      Site Location: \_\_\_\_\_

Category of your company? 1. Local     GC-1     BC-1      2. International   

4.1. Work trade (Work Specialization): \_\_\_\_\_

4.2. Your experience in the company

Below 2 years       2 – 5 years       5 – 10 years       above 10 years

4.3. Your Sex?       Male       Female

4.4. What is your level of education?

Primary       Matriculation       Diploma       Degree

4.5. Are you a member of any carrier related labour trade union(s)?     Yes     No

4.6. Have you signed a formal employment agreement with your company?  Yes     No

4.6.1. If your answer is (No), why?

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4.7. Have you taken any training before, related to your current work trade?

Yes       No

What? \_\_\_\_\_

**Section B: Please Show Your Response for the Following Questions**

5. Do you have any of the following complains on your company? I have a Complain on;

5.1. Minimum wage rate? Yes No

5.2. Overtime payment rate? Yes No

5.3. Paid public holidays, sick leave and maternity leaves? Yes No

5.4. Working hour limitation and over time duration? Yes No

5.5. How long of overtime extends mostly?

< 1 hour  1 – 2 hours  3 – 4 hours  5 – 6 hour

5.6. How the overtime affects your performance?

(a) \_\_\_\_\_

(b) \_\_\_\_\_

(c) \_\_\_\_\_

5.7. The company's compensation in the form of salary, benefit and other rewards is Not

(less) comparable to the market Yes No

5.8. Discrimination in hiring, development and compensation? Yes No

5.8.1. How? \_\_\_\_\_

5.9. Company have no applicable minimum wage standards to pays you? Yes No

5.10. Not pay enough compensation on termination? Yes No

5.11. Delay of wages and payments? Yes No

5.11.1. If your answer is (Yes) for how long could the payment delays?

Not at all  ≤ 1 Week  1-2 Week  2-3 Week  ≥ Month

1.1. Violation of applicable national and/or sectorial laws (standards)? Yes No

- 1.2. Superiors have no willing to accept and try ideas from workers Yes No
- 1.3. Ignoring you to discuss when making decisions involving you? Yes No
- 1.4. Site Engineer's reaction to your mistakes is not justified  Yes No
- 1.5. Site Engineers do not clearly share useful information with workers Yes No
- 1.6. I think my company's current wage (payments) does not attract the best workforce?
- Yes  No

**Section C: Please Indicate Your Opinion Based On Your Experience**

1.7. Which company do you prefer to work with?

With Locals or  With Internationals

Why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Just only heard about  Experienced

1.1. What other management practices do you strongly suggest your company to improve?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1.2. How long do you want to stay in this company?

Why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Thank you!**

**List of Contractors**

**[Appendix D]**

**List of Foreign Contractors**

No.	Chinese Contractors Undertaking Building Projects In Addis Ababa	Project Site	Category
1	China Communication Construction Company (CCCC)	AA-Bole International Airport Expansion & CCCC Complex Building Projects (Bole)	G-1
2	China Hanjan Construction Plc.	CCECC Complex Building Project (Sar Bet)	G-1
3	China Gansu International Cooperation for Economic & Technical Cooperation (CGICOP)	B + G + 8 Complex Building Project (Hanna, Nifas Silk-Lafito)	G-1
4	China Geology Corporation Overseas Construction (CGCOC)	Addis Africa International Convention & Exhibition Center (AAICEC), (CMC, Yeka)	GC-1
5	China Jiangsu Construction Co.Ltd	Bank of Abissinia Reconstruction (B+G+15)	G-1
6	China Jiangxi Construction Co.Ltd	B+G+25 Complex Building Project (Kirkos)	G-1
7	China State Construction Engineering Co.Ltd (CSCEC)	Commercial Bank of Ethiopia (CBE), Head Quarter Building Project, (La-Gare, Kirkos)	G-1
8	Qian-Tang Construction Company	Tsehay Real Estate Projects, (CMC, Yeka)	G-1
9	China Wu Yi Co.Ltd	Amhara Credit & Saving Inst. 4B+G+M+25 Building Project (La-Gare, Kirkos)	G-1

**[Appendix E]**

**List of Local Contractors**

MINISTRY OF CONSTRUCTION				
Construction Professionals Company And Construction Machineries Industry Development And Regulatory Bureau				
Assessment and Competency Certification Bureau				
List of registered contractor's for 2011 budget year				
From Hamle 1-2010 up to Yekatit 14-2011 (Taken partially in Addis Ababa)				
No.	Organization Name	Sub-city	Con No.	Category
1	Adam Construction P.L.C.	Bole	CON/1124	BC-1
2	Addis Gelaw Building Contractor	Bole	CON/0524	BC-1
3	Afewerk Gidey Berhe	Yeka	CON/2584	GC-1
4	Afro-Tsion Construction P.L.C.	Bole	CON/0380	GC-1
5	Alas Construction P.L.C.	Kirkos	CON/3383	BC-1
6	Aser Construction P.L.C.	Bole	CON/6090	GC-1
7	Ashtho Engineering P.L.C.	Yeka	CON/3832	BC-1
8	Asmelash & Sons Construction P.L.C.	N/Silk	CON/1137	BC-1
9	Aynalem Gashaw Argie	Bole	CON/3253	BC-1
10	B.G.M. Construction	N/L	CON/4873	BC-1
11	Bamacon Engineering P.L.C.	Bole	CON/2604	BC-1

12	Beaeka General Business P.L.C.	Gulele	CON/6034	GC-1
13	Bencon Construction	Bole	CON/5437	BC-1
14	Bereket Endashaw W/Hana	Kirkos	CON/3749	GC-1
15	Berhan Tobiaw Mareye	N/L	CON/0009	BC-1
16	Bershacon Construction P.L.C.	Bole	CON/16255	BC-1
17	Bifacon Engineering P.L.C.	Bole	CON/6235	BC-1
18	Birhanu Abebe Building Contractor	N/Silk	CON/1840	BC-1
19	Birhanu Ashebir Construction P.L.C.	Yeka	CON/1219	BC-1
20	Bright Construction P.L.C.	Bole	CON/0599	BC-1
21	Buelkon Construction P.L.C.	Bole	CON/11715	BC-1
22	Crafts Construction P.L.C.	Bole	CON/2230	GC-1
23	Dawit Emiru Building Contractor	Bole	CON/1967	BC-1
24	Dawit Girmay Negash	Yeka	CON/1508	BC-1
25	Dawit Wondimu Building Contractor	Gulele	CON/0683	BC-1
26	Desalegn Asreda Building Contractor	Bole	CON/0064	BC-1
27	Dinova Engineering & Construction P.L.C.	Lafto	CON/11771	BC-1
28	Dugda Construction P.L.C.	Arada	CON/5717	BC-1
29	Elshine Trading P.L.C.	Yeka	CON/16970	BC-1
30	Etete Construction	Bole	CON/4056	BC-1
31	Ethiopian Construction Works Corporation	Yeka	CON/7877	GC-1
32	FAL General Contractor	Yeka	CON/2784	GC-1
33	Felema Construction P.L.C.	Bole	CON/7088	BC-1
34	GAD Construction P.L.C.	N/L	CON/0993	BC-1
35	Genale Construction P.L.C.	N/Lafto	CON/0049	BC-1
36	Getachew Atsbeha Kidanu	Bole	CON/0635	BC-1
37	Giga Construction P.L.C.	Bole	CON/0659	GC-1
38	GYG General Contractor	Kirkos	CON/6696	BC-1
39	Hawa Adem Musse	N/L	CON/4421	GC-1
40	Henok Construction	Bole	CON/6673	GC-1
41	Homa Construction P.L.C.	Bole	CON/0760	GC-1
42	IFH Engineering P.L.C.	A/K	CON/1846	GC-1
43	Justice Building Contractor P.L.C.	Kirkos	CON/3100	BC-1
44	K.K.G Construction	Lideta	CON/4352	BC-1
45	Kassa & Sons Construction P.L.C.	Yeka	CON/0295	BC-1
46	Kassahun Million Construction	A/K	CON/14163	BC-1
47	Kibish Construction	Kirkos	CON/0934	GC-1
48	Koracon Construction	Arada	CON/0645	BC-1
49	Luci Engineering P.L.C.	Bole	CON/2869	BC-1
50	M C G Construction P.L.C.	Bole	CON/10490	GC-1
51	Mat General Contractor P.L.C.	Kirkos	CON/1157	GC-1
52	Maven Construction	N/L	CON/2550	BC-1
53	Megelta Construction P.L.C.	Lideta	CON/4415	BC-1

54	Melcon Construction	Bole	CON/4991	GC-1
55	Merid Dechasa Garedeu	Yeka	CON/1422	BC-1
56	Mesay Oli Atomsa	N/Lafto	CON/0415	GC-1
57	Mescon Construction	A/K	CON/2456	BC-1
58	Mikada Engineering & Trading P.L.C.	Bole	CON/6145	GC-1
59	Modocon Engineering P.L.C.	Bole	CON/4734	BC-1
60	Mohammed Abas Building Contractor	Bole	CON/3391	BC-1
61	Mudcon Construction P.L.C.	K/Keranyo	CON/5630	GC-1
62	Mureza Leja Balcha	Lideta	CON/0806	BC-1
63	N K H Construction P.L.C.	N/L	CON/0996	GC-1
64	Orbit Engineering & Construction P.L.C.	Bole	CON/0166	BC-1
65	Powercon P.L.C.	Yeka	CON/2268	GC-1
66	Rabah & Sons PLC	Kirkos	CON/1669	GC-1
67	Rama Construction P.L.C	Bole	CON/0915	GC-1
68	Rediete Dagem Engineering & Construction P.L.C	Bole	CON/0265	BC-1
69	Roel Constrsuction	Yeka	CON/3574	BC-1
70	SA Construction P.L.C.	Bole	CON/2108	BC-1
71	Safer Construction	Bole	CON/2040	GC-1
72	Samkete Engineering & Construction P.L.C.	Yeka	CON/4865	GC-1
73	Samuel S/Mariam Endale	Arada	CON/0311	BC-1
74	Santa Maria Construction P.L.C.	Bole	CON/0283	GC-1
75	Serja Construction & General Trade P.L.C.	N/Lafto	CON/5805	BC-1
76	Seyfe Wondie Adenew	Bole	CON/2890	BC-1
77	Sunshine Construction P.L.C.	Kirkos	CON/0135	GC-1
78	Tekleberhan Ambaye Construction P.L.C.	Yeka	CON/0981	GC-1
79	Teklehaimanot Asgedom	Bole	CON/0515	GC-1
80	TIKS Construction	Yeka	CON/5320	GC-1
81	Tiku Berhane Gebereyesus	Yeka	CON/3025	BC-1
82	Tilahun Abebe G/Mariam	Kirkos	CON/4569	GC-1
83	TNT Construction & Trading	Yeka	CON/2972	GC-1
84	Trust Construction	Kirkos	CON/0853	BC-1
85	United Construction P.L.C.	Bole	CON/3294	BC-1
86	Unity Engineering P.L.C.	Bole	CON/1031	BC-1
87	Wogen Building Construction	Kirkos	CON/6322	BC-1
88	Workneh Guday Teshale	Bole	CON/0692	BC-1
89	Xuekai Yu	Bole	CON/6535	GC-1
90	Yencomad Construction P.L.C.	Kirkos	CON/1202	GC-1
91	Yoda Construction	A/Kaliti	CON/0888	BC-1
92	Yohannes Haile Building Contractor	Bole	CON/3675	BC-1
93	YOT Construction P.L.C.	Bole	CON/6641	BC-1
94	Zamra Construction P.L.C.	Yeka	CON/0620	GC-1