



**UNIVERSITY OF NAIROBI
COLLEGE OF ARCHITECTURE AND ENGINEERING
SCHOOL OF THE BUILT ENVIRONMENT
DEPARTMENT OF REAL ESTATE AND CONSTRUCTION MANAGEMENT**

RESEARCH TOPIC:

**AN INVESTIGATION ON THE CHALLENGES FACING CONSTRUCTION FIRMS IN
RECRUITING SKILLED ARTISANS IN KENYA**

BY

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**RESEARCH PROJECT SUBMITTED TO THE UNIVERSITY OF NAIROBI,
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DECLARATION OF ORIGINALITY

I ANDREW GITAU, hereby affirm that this research project is my original work and has not been presented for examination for a degree in this university or any other university.

.....

.....

Signature

Date

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This research has been submitted for examination with my approval as the university supervisor

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.....

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Signature

Date

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I would like to appreciate and give thanks to the Almighty for making this paper a success. My special appreciation also to my supervisor Dr. Arch. Ralwala Oduor for the constant guidance in this research project. May God bless you abundantly.

DEDICATION

This research project is dedicated to my family and colleagues because of their unwavering support. I would also like to thank the entire faculty and staff at University of Nairobi Department of Real Estate and Construction Management for their immense support during my studies. Thanks abundantly.

ABSTRACT

The purpose of the research was to explore the challenges facing construction firms in recruiting skilled artisans in Kenya. This investigation was steered by the ensuing particular research targets; to establish the influence of labour diversification in recruiting skilled artisans, to assess the influence of reduced technical training in institutions in recruiting skilled artisans, and to examine the influence of high wages in recruiting skilled artisans in construction firms in Kenya. The research embraced a descriptive technique in breaking down, translating, and displaying information. The descriptive research technique was the most suitable for this study. This is due to the fact that it fixated on the connection between recruitment challenges and recruiting skilled artisans in construction firms. The research utilized questionnaire to get information from respondents. The study focused on 1810 construction company owners, human resource officials, engineers and site supervisors of construction companies in Kenya registered with National Construction Authority (NCA). Using 10% proportionate, the study adopted stratified random sampling technique on the targeted population to derive a sample size of 181 respondents. The study used a descriptive and inferential statistics in the purposes of examining information and thereafter presenting the information. The study information was investigated utilizing Statistical Package for Social Sciences (SPSS) and Microsoft excel programs. Additionally, tables and figure were utilized as a part of displaying information.

The study established how labour diversification influences recruitment of skilled artisans in construction firms. The study found that construction firms do not easily employ old workers as they are expensive. The old workers also do not adopt to workplace changes and new technology. The study reveals that ethnic diverse teams at the construction firms led to more creativity and innovation. This led the firms to prefer heterogeneous age group of employees other than homogenous age group. The study revealed how technical training affects recruiting skilled artisans in construction firms in Kenya. The study found that the government has invested adequate resources for training in construction hence construction firms invest in training their employees on technical skills as they go on with their job. There are great partnerships between the government, the firm and employees to anchor the learning environment to the working environment. The study examined the effect of high wages on recruitment of skilled artisans in construction firms in Kenya. The study reveals that high wages have helped the organization attract better quality job applicants and improved morale. There is high retention rates of employees at the firm hence high wages at the firm have led to increased productivity.

The research settles that there is a significant positive relationship between age and recruitment cost. Older people are more experienced in a specified field hence they ask for more salaries than their young and inexperienced counterparts. Due to this construction firms in Kenya seldom employ old workers. To enhance skills in construction industry and facilitate employment, government is putting more resources in training. It was found that construction firms are paying artisans very well hence the highest paying firm attracts and retain the best skills in artisan hence achieve competitive advantage over others. The study recommends construction firms to highly invest in skills. This means that they should emphasise on training and developing young and upcoming talents who can easily innovate new ideas and add value to the firm. The government should understand importance of skill development and implement a policy that can enhance and facilitate trainings in. The study also recommends construction firms to increase employee wages as it leads to organization attracting better quality job applicants and improved morale.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

As indicated by Odediran and Babalola (2013), extensive amount of capital is put aside yearly for the construction sector in both developed and developing states. The efficiency of this area is seen to add to the national yield consequently representing a sizeable extent of the Gross Domestic Product (GDP). This sector likewise assumes a noteworthy part in creating employment and development of the economy of any country. Ogunsemi and Jagboro (2016); Mitullah and Wachira (2013) bolster this contention showing that the construction industry is critical as it adds to employment opportunities, contributing to economic growth of a country. Leeds (2016) states that construction is one of the largest business divisions on the planet, as indicated by 2014 PWC report, representing in excess of 11 percent of worldwide GDP. This is relied upon to develop to 13.2 percent by 2020 (ibid).

With in excess of 6 million specialists utilized in the business' more than 780,000 firms, the construction business is portrayed by terms, for example, "fragmented," "diverse," and "change." The industry is populated both by huge contractors recruiting a many individuals and also little shops utilizing maybe a couple people. The construction of a multimillion-dollar office building can have laborers utilized by big contractors working alongside with small-scale specialty projects performed by a one- or two-person shop. However every one of these specialists, utilized under altogether different conditions, are in a similar industry (Gerald, 2013). The construction business is likewise portrayed by an assorted variety of business sectors. Notwithstanding, the construction business has an immense number of shops without payrolls, which are not atypical in this industry. These have a tendency to be the independently employed people or associations that have not joined (Sumanta and Koehn, 2006). In 2005, for instance, while there were more than 787,700 establishment with payrolls, there were likewise more than 2.3 million establishments without payrolls. Following the examples of the industry all in all, New York State in 2005 had 46,448 establishments with payrolls and more than 104,000 without payrolls (www.census.gov, 2012). The expanding nearness of national and multinational organizations is changing the idea of the business. Despite the fact that the quantity of little shops stays about the same, their work share has dropped significantly. Accordingly, the quantity of firms utilizing 100 to 1000+ workers has become just marginally, from 0.67 percent of all organizations in 1993 to 1.5 percent in 2005.

Be that as it may, the work offer of these expansive firms has expanded from 20.3 percent to 27.6 percent. Then, the offer of the littlest firms—those that utilize less than 10 specialists—tumbled from 29 percent of aggregate work in 1993 to 9.4 percent in 2005 (Gerald, 2013).

In spite of the commitment of the construction industry to the economy, the construction business isn't homogenous all through the globe. There is a substantial contrast between firms in the developing and developed countries (Koehn and Roy, 2006). Uwakweh (2011) shows that, contractual workers and construction firms in developing nations are work serious utilizing various untalented specialists. These organizations have poor construction administration strategies and need information in the area of specialized supervision for extensive scale ventures (ibid). Subsequently, construction in developing countries is inclined to higher mischance rates and the nature of work has a tendency to be mediocre contrasted with that of created nations.

Continous improvement of the construction firms and their items requires viable business, proficient and administrative abilities to guarantee that construction ventures are adequately executed (Oke, Aigbavboa, and Khangale, 2017). Be that as it may, in today's economic condition, absence of gifted workforce postures challenges for organizations and this has huge effect on different ventures. (Connor, 2006; McCausland, 2008). The construction business is unfavorably influenced by absence of a talented workforce. This influences expenses and calendars of huge activities bringing about postponed culmination. This puts in danger, the economic advantages that a venture is intended to create (Ireland, 2007).

The Construction business is encountering extreme and delayed deficiencies of 'human power', not simply regarding amount of laborers that puts the world's developing economy in danger, however - the nature of workforce is likewise a perceptible factor (COOA 2005; Connor 2006; McCausland 2006). There has never been such a period in history when the broadening of art occupations has expanded the difficulties of talented workforce preparing; on the grounds that as independent work keeps on rising, rivalry is getting to be harder, contract times are shorter, net revenues are littler and specialization and fracture of different exchanges is expanding (Dennis 2007; CPA 2004; TCE 2007). By and by, it is exceptionally hard to discover gifted specialists, for example, bricklayers, carpenters, masons and circuit repairmen (ibid).

As per Uwakweh (2000), the construction business in developing nations faces different difficulties including the deficiency of semi-gifted and talented work, needy individuals management abilities and absence of capital and insufficient generation of construction materials. Accordingly, critical national activities in different developing nations have brought about the procuring of universal contractual workers from developed nations to administer the undertakings. Poor construction administration strategies, incompetent workforce and supervision in the construction business in the developing world has made the nature of work of construction firms in the developing world to be second rate contrasted with the quality in the developed world (Sumanta & Koehn, 2006). As indicated by Offei-Nyako, Osei-Tutu, Adinyira and Fugar (2014), an organization's nature of work is reliant on its workforce to accomplish an organization's objectives. The nonattendance of gifted staff, brings about an association's underperformance (in the same place).

As per Chartered Institute of Building (CIOB) Report (2008), abilities deficiency in the UK construction industry keeps on being a test and is probably going to compound as the request increments. The Academy of Social Sciences Australia (ASSA) (2008) report expresses that the request in the construction business in the market can't be met by the local workforce and this outcomes in the nation looking for work frame the different migrants in the nation. Breslau and Patterson (2013) show that the construction business today is in a more assorted state than it was in the previous years. In spite of the moderate recuperation, the construction business prevailing with regards to withstanding general stuns to the U.S. economy from 2012 to 2013 (on the same page). The recuperation of the U.S. lodging market has driven construction action and work into positive territory, and the construction business has been hailed for including occupations (in the same place).

Offei-Nyako, et.al (2014) demonstrate that in South Africa, the construction business requires 12,500 craftsmen regardless of the business creating 5000 artisans for every year. This outcome in absence of talented workforce and this has turned into a noteworthy business requirement for around 40% of South African Private Construction Firms (Tshele and Agumba (2009). Thus the construction business encounters cost overwhelms and delays in ventures and the activities that are finished are of low quality (Bilau, Ajagbe, Kigbu and Sholanke, 2015). This circumstance is like the case in Ghana where talented artisans are hard to discover and those utilized hard to hold bringing about the business depending on

untalented workforce who makes up 60% of the workforce in the construction business. This has brought about undertaking fruition time being endangered.

Craftsman as per Oxford Learners Dictionary (2006) is a man who does skilled work and makes things with his hands. With this definition, craftsmen in the construction business are woodworkers, joiners, artisans/bricklayers, circuit testers, handymen, painters, plant administrators, crane drivers, steel fixers and tile pilgrims. Exercises in construction industry can be dispassionately hurtful physically or rationally to the people associated with them, particularly the craftsmen. Experts in the construction business assume an extremely vital part to the survival and development of the business as they are for the most part occupied with the viable acknowledgment of development ventures. Specialists in the construction segment assume an exceptionally basic part to the survival and improvement of the segment as they are straightforwardly engaged with construction activity (Medugu, et al, 2011; Rafee, 2012). Despite the fact that African countries are blessed with abundant labor, authors place that the circumstance in the part is, best case scenario mocking. Fagbenle (2004) and different scientists revealed that the business is the most astounding boss of the country's labor after horticulture, though it is as yet looked with deficiencies of in fact gifted skilled workers which influence profitability, work quality, ventures term and by and large hierarchical benefit (Ruchi, 2012; Kuroshi and Lawal, 2014; Alinaitwe et al., 2007; Durdyev and Mbachu, 2011).

In Kenya, construction is one of the drivers of the nation's GDP (Kenya National Bureau of Statistics, 2016). The yield of this industry has ascended by 13 percent since 2014. Anyway there is an expected hole in the workforce in this industry of around 30,000 architects, 90,000 experts and 400,000 artisans, with the deficiency of mid-level professional and artisans hampering the prospects for financial development. (Mugo, 2017). The lack of talented artisans in Kenya's construction industry has brought about an expansion in every day duty of gifted artisans ascend to between Ksh. 2000 and 2,500 from between Ksh. 500 and 1500 out of 2012 (Makena, 2017).

1.2 Problem Statement

The construction business is certainly not a favored work alternative in any nation. There is a societal conviction that everybody must head off to college. The absence of learning and comprehension about the construction business as a work alternative powers the Kenyan

Youth to pass up a great opportunity for circumstances in the part. In the event that this was not the situation, the work lack and continuous utilization of untalented workforce would not happen (Bartlett, 2007). Makena (2017) includes that understudy evade specialized instruction for courses that would prompt an office work, raising construction costs because of absence of gifted workforce. Absence of talented workmanship in the construction segment turned out to be more noteworthy in 2012 when previous leader of Kenya Mwai Kibaki overhauled most schools to colleges leaving just a couple of colleges to give professional and specialized abilities. Therefore, there is a deficiency of gifted artisans, handymen, painters and circuit testers, compelling development engineers to swing to incompetent workforce. Henceforth the nature of gauges of construction in the nation, has been imperiled in numerous construction ventures (Bartlett, 2007).

As indicated by Business Sweden (2017), framework speculations are relied upon to drive Kenya's economy development at a rate of 6% out of 2017. New enactment that was acquainted in 2015 with direct the construction business will support rivalry and lift neighbourhood organizations limits (ibid). Cytonn Report (2016) states that the construction part was esteemed at USD 3.53 billion out of 2015 and this normal construction at a rate of 6.8% by 2020. The National Construction Authority (NCA) has stepped up with regards to give another enroll of contractual workers cleared to work in Kenya. In spite of this exertion, different construction works keep on collapsing prompting the death toll and property (Mthethwa, 2016). What's more, NCA has collaborated with various private associations to prepare artisans with its arrangement of preparing 1 million artisans in the following four years (Makena, 2017). Notwithstanding, Mugo (2017) demonstrates that, little consideration has been placed in preparing centre level construction specialists and artisans who constitute the mass workforce in the construction business. More consideration has been placed in guaranteeing better principles of skill for designers, architects and constructors (ibid). This demonstrates a hole in the Kenyan construction industry that should be tended to.

Construction business in Kenya, are depicted by dangerous working environments; wide outsourcing (sub-contracting), impermanent and flimsy employments, poor working conditions and a high mischance rate. Notwithstanding the way that the casual apprenticeship in construction gives critical aptitudes procurement in a considerable measure of countries, it is watched that a more prominent number of the craftsmen can't comprehend and decipher illustrations without the assistance of a specialist on location Makena (2017). Some of them

too don't have the correct stuff expected to change as per introduce day designs in the business. By far most of the craftsmen don't comprehend the conduct of some fundamental materials on location which impacts the quality, unwavering quality and security of using the last item (Adinyira and Fugar, 2014). There is a limited opportunity for learning out how to function successfully. This research therefore seeks to come out with the challenges facing construction firms in recruiting skilled artisans in Kenya.

1.3 General Objective

To investigate the challenges facing construction firms in recruiting skilled artisans in Kenya.

1.4 Specific Research Objectives

The study is guided by the following objectives:

- 1.4.1 To establish the influence of labor diversification in recruiting skilled artisans in construction firms in Kenya
- 1.4.2 To assess the influence of reduced technical training in institutions in recruiting skilled artisans in constructions firms in Kenya
- 1.4.3 To examine the influence of high wages in recruiting skilled artisans in construction firms in Kenya

1.5 Research Questions

The following research questions will be used in guiding this study:

- 1.5.1 To what extent does labour diversification influence recruiting of skilled artisans in construction firms in Kenya?
- 1.5.2 To what extent does reduced technical training in institutions influence recruiting of skilled artisans in construction firms in Kenya?
- 1.5.3 To what extent do high wages influence the recruiting of skilled artisans in construction firms in Kenya?

1.6 Hypothesis

The study hypotheses are as follows:

- 1.6.1 Labour diversification has no significant influence on recruitment of skilled artisans in construction firms in Kenya.
- 1.6.2 Reduced technical training in institutions has no significant influence on recruitment of skilled artisans in construction firms in Kenya.
- 1.6.3 High wages do not have significant influence on the recruitment of skilled artisans in construction firms in Kenya.

1.7 Significance of the Study

1.7.1 Construction Firms

The study will enable construction firms to understand the challenges in recruiting skilled artisans and how they can address them by focusing on the needs of the skilled artisans. This will ensure that they tap the right manpower to implement their construction projects.

1.7.2 Government

The study will inform the government on the current status of skills set in the construction industry and highlight the need of having more institutions offering technical and vocational skills to the youth to fill the gap that is currently being experienced in the country.

1.7.3 Scholars

This study will provide a basis for future research by providing literature on the challenges facing construction firms in recruiting skilled artisans.

1.8 Delimitations of the Study

This study investigates the challenges facing construction firms in recruiting skilled artisans in Kenya focusing only on construction firms listed at National Construction Authority (NCA) and based in Nairobi.

1.9 Limitations of the study

The study is restricted to construction firms in Nairobi due to limitation of resources and time allocated to complete the study, notwithstanding many construction firms in Kenya. Impact of ethnicity was not extensively investigated due to its sensitivity in Kenya.

1.10 Assumptions of the Study

The study assumes that no major changes will take place in the organizations constituting the target sample for this study, during the period of investigation.

1.11 Organization of the study

This research is organized into five chapters. Chapter one presents the introduction capturing the background of the study, problem statement, the objectives of the study, research questions, significance of the study, delimitations of the study, limitations of the study and assumptions of the study. Chapter two reviews literature based on the objectives of the study regarding the challenges faced by firms in recruiting skilled workers. This includes literature on labor diversification, reduced technical training in institutions and high wages of skilled artisans. The reviewed literature is taken from various scholars to get an overview of the current situation worldwide. Chapter three looks at the study's research methodology that was used. This includes the research design, study population, sampling procedure, data collection procedures, validity and reliability of research instruments, and data analysis techniques. Chapter four concentrates on data analysis, presentation and interpretation. Chapter five presents a synopsis of the results, conclusions and recommendation of the study.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This Chapter discusses the empirical literature review and theoretical literature review of the studies related to the topic. Finally, a conceptual framework of challenges facing construction firms in recruiting skilled workers is developed to guide the methodology of the survey which is outlined in Chapter three.

The construction industry can be separated into two noteworthy areas of activities to be specific building and structural designing. These complement each other. Construction industry definition incorporated general construction and partnered construction exercises for structures and structural designing works. It combines new work, repair, increments and modifications, the erection of pre-assembled structures or structures on the site and furthermore construction of a transitory sort (Barton and Nickerson, 2009). Construction firms are characterized into huge, medium and little size firms. Extensive construction manages huge contracts and can draw in and hold skillful craftsmen contrasted with small construction firms that have constrained assets to pull in and hold talented craftsmen and different classifications of workers. A craftsman as indicated by Oxford Learners Dictionary (2006) is a man who does skilled work and makes things with his hands. Experts in the construction segment assume an extremely fundamental part to the survival and advancement of the sector as they are straightforwardly engaged with construction task (Medugu et al., 2011; Rafee, 2012). The construction industry is the most elevated manager of the country's labor after horticulture, while it is as yet looked with deficiencies of actually gifted experts which influence profitability, work quality, ventures length and by and massive authoritative benefit (Ruchi, 2012).

2.2 Empirical Review

An empirical research article is an article which reports research based on actual observations or experiments. The empirical review for this study comes from authors who studies labour diversification, limited technical trainings and high wages in relation to recruiting skilled workers.

2.3 Labour Diversification and Recruiting Skilled Workers

Work assorted variety is progressively a reality at numerous work environments in developed nations. This result among others from the accompanying central point: policy measures to check populace maturing; expanded female work cooperation and anti-discrimination measures and the accomplished development in migration amid the most recent decades in many developed nations (Pedersen, Pytlíkova, and Smith, 2010). Besides, as an outcome of the overall globalization process and ability based mechanical change, governments found a way to build aptitude level of the workforce; by, for example, expanding the supply of college instructed people. These measures prompt an expanding decent variety of work compels in the type of abilities, age, ethnicity, and sexual orientation. At the comparative time, firms are tested by continually changing interest for merchandise and ventures, new clients and markets in the present globalized world and these organizations are in a consistent strain to meet the unique needs (Ottaviano and Peri, 2011).

2.3.1 Age Diversity

Because of generalizations and wrong suppositions, most firms are not successfully making utilization of the gifts of old specialists. The organizations, as per Taylor (2003), Davey (2009) McGregor and Gray (2011) expect that these specialists will probably encounter medical issues, they are exorbitant, they perform ineffectively, and they can't adjust to changes at working environment and innovation. The investigation additionally found that old workers in contrast with their more youthful partners are a poor profit for preparing speculation. The examination by Barton and Nickerson (2009) uncovered that groups with more blend in age were outstandingly less profitable. The discoveries of Barton and Nickerson are predictable with the revelations of Leonard and Levine (2010) that detailed that retail locations with bigger age decent variety among its laborers are less productive. Then again, Ilmarinen (2005) had discovered no particular connection between the representatives' generation and work execution. It is found from numerous different investigations that more contractors are as talented and as profitable as their more youthful partners. Williams and O'Reilly (1998) subsequently infer that a different age gathering of workers is more beneficial than a similar age gathering of representatives.

2.3.2 Gender Diversity

The investigation by Wood (1987) outlined that blended sexual orientation gatherings of workers perform superior to anything similar sex gatherings of representatives. The examination by McMillan-Capehart (2003) and Frink, Robinson, Reithel, and Arthur (2003), utilizing the asset-based view show the constructive outcome of the sexual orientation of assorted variety with hierarchical execution. The examinations evaluating the effects of sexual orientation decent variety on group execution results had discovered a negative impact when the populace was male overwhelmed and no repercussions when the populace was female commanded (Pelled, 2010). Gupta (2013) found that practical level of sexual orientation decent variety improves upper hand while a higher degree of sex assorted variety decreases execution of an association. Richard, Barnett, Dwyer, Chadwick, and Chadwick (2009) has inspected an upturned U-molded connection between's administration aggregate sexual orientation heterogeneity and efficiency, with genuinely heterogeneous administration bunches hinting at preferred execution over sex homogeneous administration gatherings.

Similarly, the result of an examination by Frink et al. (2003) built up a transformed U-molded connection between's sexual orientation structure and association execution. Sex decent variety delineated a constructive outcome of sexual orientation and execution in the service business and a negative impact on the manufacturing business. Subsequently, service enterprises may profit more from sexual orientation blend than firms in the manufacturing division. Therefore, high sexual orientation assorted variety may have a superior positive effect on execution in the service business than in the manufacturing business. This investigation acknowledges the impact of sex mixed variety on enlistment of talented specialists in the development industry.

2.3.3 Ethnic Diversity

The examination by Jackson, Joshi, and Erhardt (2010) demonstrated that ethnically different groups indicated poor execution than homogeneous groups of workers. Jehn and Bezrukova (2011) then again found that groups were less strong than teams. This implies multiculturalism and assorted variety may have a more negative impact on gather execution than group execution. The situation of the working environment has critical impact over the impact of decent variety on execution. Ethnically differing teams demonstrate the best approach to more advancement and innovation because of learning openings and

complementarities (Alesina and La Ferrara, 2005; Lee and Nathan, 2011; Ozgen, Nijkamp, and Poot, 2011). A sensible level of ethnic decent variety has no effect on the business results of the teams to be specific piece of the overall industry, benefit, and deals while an abnormal state of ethnic assorted variety improved business results (Sander and Mirjam, 2012). A practically identical beneficial outcome of ethnic decent variety on piece of the overall industry, efficiency, deals, and ingenuity was point by point by Gupta (2013) and the team execution of the multidisciplinary teams in gas and oil industry by Van and Bunderson (2005). Ely (2014) watched no connection between's ethnic decent variety and deals efficiency, consumer loyalty and deals income. Because of the delicate idea of ethnic issues at display in Kenya, this examination won't explore the effect of ethnicity on enrollment of artisans in Kenya development firms, in spite of its conceivable commitment.

2.3.4 Education Background

Bosses ordinarily reject enlisting work force whose instruction, experience, or preparing is judged to be inadequate (Tracy and David, 2011). Workers can't discover an occupation and perform amazingly with no enough instruction foundation. Additionally, Daniel (2009) set up that the rates distinctive versatility inside work can be influenced by dissimilar levels and kinds of rates. For example, the occupations accessible to those with working knowledge yet don't have a confirmed tertiary paper may vary from the individuals who have them. Versatility may vary over these occupations, making the portability of people with working knowledge be exceptional in accordance to those who do not have a working backkground yet have a degree endorsement.

A person, as indicated by Daniel (2009), will be more powerful relying upon the level of their instruction. The more instruction and preparing the individual laborer acquired the more powerful the specialist will be. Moretti (2014) investigated this thought and found that urban territories with more tertiary instruction level workers encourage people of all training levels to have higher pay rates. Different specialists have discovered that an expansion in city support Dee (2012) or a diminishing in wrongdoing rates Lochner and Moretti (2014) came about because of further developed instruction. Glaeser, Scheinkman and Shleifer (2009) additionally found that more instructed representatives and specialists in a specific city imply a higher financial development. Nonetheless, Zeng, Zhou and Han (2009) found that abnormal state chiefs with advanced education and staff whose length of administration is 11

to 15 years indicate strange decrease in work execution since they might not have discovered the reasonable improvement space, prompting brief separation

2.4 Limited Technical Training and Recruiting Skilled Workers

2.4.1 Training and Skills

Training and skills development is comprehended in expansive terms, covering the full succession of life stages. Primary education offers every individual a reason for the development of their potential, putting down the establishment for employability. Primary training gives the center work abilities, industry based and proficient skills and general information that make conceivable the progress from training into the universe of work. Long lasting learning keeps up people's abilities and capabilities as work, innovation and expertise prerequisites change. Different nations center around an assortment of components as they see relative shortcomings and qualities in their own particular abilities advancement frameworks, and as they take in more about developments and involvement in different nations (Ilmarinen, 2005).

2.4.2 Investment for Training

Investing means spending money on something in the desire for future return of advantage (Bilau, Ajagbe, Kigbu, and Sholanke, 2015). Associations are effective to the degree to which they convey things which are helpful to customers. Keeping in mind the end goal to run viably and productively, numerous associations invest a lot of energy and cash in expert and specialized preparing. Blain (2009) look into demonstrates that in Europe, 44% of workers get work related specialized abilities preparing and 33% get IT aptitudes preparing. 18% of representatives have embraced deals related preparing in the previous year, while 25% have attempted work force improvement abilities preparing, 21 % administration aptitudes preparing and 15% initiative aptitudes advancement.

Current practices in numerous associations demonstrate that workers are seen as important speculations (Greer, 2003). Today, expanding populace and human advancement, expanded decent variety of requirements, many-sided quality of employment relations, specialization of obligations and occupation duties, change in information and state of mind of staff et cetera have brought about changing strategies and techniques. Because of these progressions, most pioneers and powerful associations and foundations have given careful consideration to

arranging instructional classes so as to enhance HR more than previously (Farahbakhsh, 2010). Overwhelming interests in preparing will be vital for future procedures and upper hand (Greer, 2003). In any case, knowing the adequacy of instructional classes and their yield is critical for supervisors to decide the correct impacts and consequences of instructional classes on their association (Saatchi, 1989) as referred to by Farahbakhsh (2010). Concentrating exclusively on interest in physical assets, instead of HR, is shallow (Greer, 2003). Strategists have discovered that having prevalent generation offices or a better item are typically insufficient than maintain leeway over contenders.

Physical facilities can be copied, cloned, or figured out to never again give a reasonable preferred standpoint (Greer, 2003). There is little uncertainty that associations should put vigorously in their HR with a specific end goal to be aggressive amid the twenty-first century. Administration researcher Edward Lawler has depicted these speculation necessities as takes after: To be aggressive, associations in numerous enterprises must have exceptionally talented, educated laborers (Greer, 2003). They should likewise have a moderately stable work constrain since representative turnover works straightforwardly against getting the sort of coordination and authoritative discovering that prompts quick reaction and brilliant items and administrations. Truth be told, thinking about the accompanying variables is significant to technique based human asset venture choices including the association's administrative qualities; hazard and return exchange offs; the financial justification for speculations; the speculation examination approach of utility hypothesis; and outsourcing as another option to interests in HR. The discourse of these elements by singular associations will prompt thought of particular interests in procedure related preparing (Greer, 2003). Researchers, specialists, social researcher and school managers currently perceive the way that preparation is clearly crucial in the advancement of the people as well as encourage the profitable limit of the laborers (Olaniyan et al, 2008).

There are two interrelated problems of investing on employee training as to the individual representative and the association that utilizes them. On one side, the advantages of employee training just to the degree that employee add to the organization. Consequently, a firm should consider how it anticipates that a preparation program will influence worker endeavors and also representative turnover. On the opposite side, prepared specialists deliver at higher rates, which thus may influence the amount they contribute and how regularly they move to different firms in examination with untrained laborers (Glance, 1997).

2.4.3 Good-Quality Education and Skills

Skills development upgrades the individuals' abilities to work and their chances at work, offering more extension for innovativeness and fulfillment at work. The future success of any nation depends at last on the quantity of people in business and how profitable they are grinding away. A decent writing wins on the connections between instruction, profitability, financial and development aptitudes. Evaluations from European nations demonstrate that a 1 for each penny increment in preparing days prompts a 3 for every penny increment in efficiency, and that the offer of by and large profitability development owing to preparing is around 16 for each penny (Cedefop, 2007).

Open proof certainly sets up that an amalgamation of better education with training that is of more prominent quality and is pertinent to the work showcase; offers capacity to individuals to build up their full abilities and to seize business and social openings; expands profitability, both of specialists and of endeavors; adds to boosting future advancement and improvement; energizes both local and remote speculation, and subsequently work development, bringing down joblessness and underemployment; prompts higher wages; and when extensively available, grows work advertise openings and decreases social disparities (Mas, 2009).

2.4.4 Principles to Guide the Linking Skills and Work

Great value fundamental training for everybody is a concurred objective and a basic indispensable for advance aptitudes improvement. Setting up strong scaffolds between professional instruction, preparing and abilities advancement, and the universe of work makes it more probable that specialists will take in the "right" aptitudes, to be specific those required by the developing requests of work markets, endeavors and working environments in various financial areas and enterprises. Viable associations between governments, managers' and laborers' associations, and preparing establishments and suppliers are basic to grapple the universe of learning in the realm of work (Ottaviano and Peri, 2011).

Expansive and proceeded with access to preparing and abilities improvement opens up the open doors for and advantages of both starting and deep rooted figuring out how to every single, empowering lady and men everything being equal, in both urban and rustic zones, to satisfy their goals. Committed strategies and procedures are essential to encourage access to preparing and abilities advancement by people and gatherings blocked by different boundaries, including destitution and low pay, ethnic root, incapacity and transient status

(Yellen, 2009). Instruction and aptitudes approaches are more viable when all around composed with work, social security, modern, speculation and exchange strategies. By spending do-date data, persons working in instruction and preparing can evaluate the match between the aptitudes they are instructing and those sought after in the working environment. At the point when that data is put at the transfer of youngsters and specialists by business and professional direction administrations, it can assist them with making better-educated decisions about instruction and preparing (McCausland, 2008).

2.5 High Wages and Recruiting Skilled Workers

Market analysts have since a long time ago contended that increments in laborer pay can prompt enhancements in efficiency (undoubtedly, that it can really be beneficial to pay specialists higher remunerations). Alfred Marshall, the dad of present day financial matters, contended just about a hundred and twenty-five years back, "any adjustment in the circulation of riches which offers more to the pay recipients and a smaller amount to the business people is possible, different things being equivalent, to hurry the expansion of material creation." Subsequently at that point, market analysts have ordered rich information approving Marshall's theory that paying higher wages produces reserve funds in the long haul.

2.5.1 Employees are Motivated to Work Harder by Higher Wages

Yellen (2009) proposed that higher wages make the settings for specialists to be extra beneficial, indicating "diminished avoiding by representatives because of a higher cost of occupation misfortune; bring down turnover; a change in the normal nature of occupation candidates and enhanced spirit." Among the examinations archiving this point are Levine (2010) which broke down an example of expansive (generally Fortune 500) fabricating organizations, and Holzer (1990) which utilized information from a national example of firms finding that "high-wage firms can at times counterbalance the greater part of their higher wage costs through enhanced profitability and lower procuring and turnover cost." Reich, Peter and Ken (2003) reviewed bosses at the San Francisco airplane terminal after a wide based increment in wages and found that the businesses of the larger part of influenced laborers announced that their general execution had progressed. Mas (2009) examined the instance of New Jersey cops who were conceded a wage increment of 17 percent, and who were 12 percent more beneficial in clearing cases than the individuals who were declined the expansion.

2.5.2 More Capable and Productive Workers are Attracted by Higher Wages

The confirmation that higher wages draw in relatively great candidates for new occupations is critical. Dal Bó, Frederico and Martín (2013) demonstrate that offering higher pay rates yielded a candidate pool with a higher IQ and with identity scores and inspiration that improved them a fit for the publicized employments. Additionally, the principal firm to offer higher wages will probably draw in and hold more beneficial laborers.

2.5.3 Turnover, Costs of Hiring and Training New Workers are Reduced due to Higher Wages

Reich et al (2003) designed that archetypal turnover costs are in excess of \$4,000 for every laborer. In addition, Reich et al (2003) indicates that an expansion in compensation at the San Francisco air terminal prompted a decrease in turnover of 34 percent, yielding turnover-related funds of \$6.6 million every year.

2.5.4 There is a Reduction of Problems Related to Employee Discipline and Cases of Employees being Absent by Higher Wages

Cappelli and Keith (1991) archived that in industries where the employees were highly paid in respect to the nearby work showcase, less disciplinary activities were required. In like manner, almost 50% of those businesses studied by Reich et al. (2003) detailed an abatement in issues related to discipline through the raising of wages. Zhang, Huiying, Simon and Aslam (2013) appeared in a study of Canadian firms that truancy was more improbable when compensation were fairly high. Pfeifer (2010) records a comparative outcome in a vast German review.

2.5.5 Reduction of Resources essential for Monitoring by Firms with Higher Wages

It has been discovered that lucrative firms make a culture of diligent work where representatives screen their associates, decreasing the necessity to contract directors. Rebitzer (1995) found that low-wage upkeep specialists required extensive supervision in the petrochemical business. Bartlett (2007) demonstrated that all the more generously compensated attendants were likewise less administered. As indicated by Georgiadis (2008), homes that provide private care in the United Kingdom "higher wage costs were more than counterbalanced by bring down checking costs."

2.5.6 There is Decreased Workers Performance when they are Excessively Concerned about Income Security

An assortment of late examinations has exhibited this recommendation. Mani, Sendhil and Eldar (2013) enrolled purchasers in a shopping center and got some information about their funds. Scientists watched that the execution of poor subjects on an intellectual test crumbled on the off chance that they were requested to envision an extensive crisis consumption (a \$1,500 auto repair), yet no such disintegration was watched for well-off subjects. Mullainathan and Eldar (2013) surveyed a scope of related analyses, finding that psychological errands that recreate the consistent worry of destitution drove individuals to act in enthusiastic and inappropriate ways. Surely, the World Bank (2015) referring to various field examines, perceives that destitution assesses individuals' psychological limits and restraint.

2.6 Theoretical Review

2.6.1 Ethnic-Diversity Theory

The theory of ethnic-diversity was developed by Edward Lazear in 1999. So far the theory suggests that workforce diversity may affect firm performance through various channels. According to study by Lazear (1999), diversity in skills, education and tenure may generate knowledge spillovers and skill complementarities among the employees within a firm (as long as workers' information sets are relevant to one another). Thus, it has a positive effect on firm performance. Ethnic-cultural diversity may affect firm performance negatively as it may hinder potential knowledge transfers among workers; reduce peer pressure by weakening social ties and trust among them; and create non-pecuniary disutility of joining or remaining in a demographically diverse firm (Lazear, 1999). However, ethnic diversity may also lead to more innovation and creativity (Alesina & La Ferrara, 2005). Furthermore, workforce diversity may provide useful information to the firm about the product's market (Osborne, 2000), thereby implying that profit maximization requires workforce diversity if the firm is to sell its products in many markets.

2.7 Conceptual Framework

From the literature review, the study considered the three main variables (labour diversification, technical training and wages) to be critical in determining recruitment of

skilled employees. Based on this background a conceptual framework was developed as shown below, inclusive of the underpinning theory, deemed relevant to the study topic.

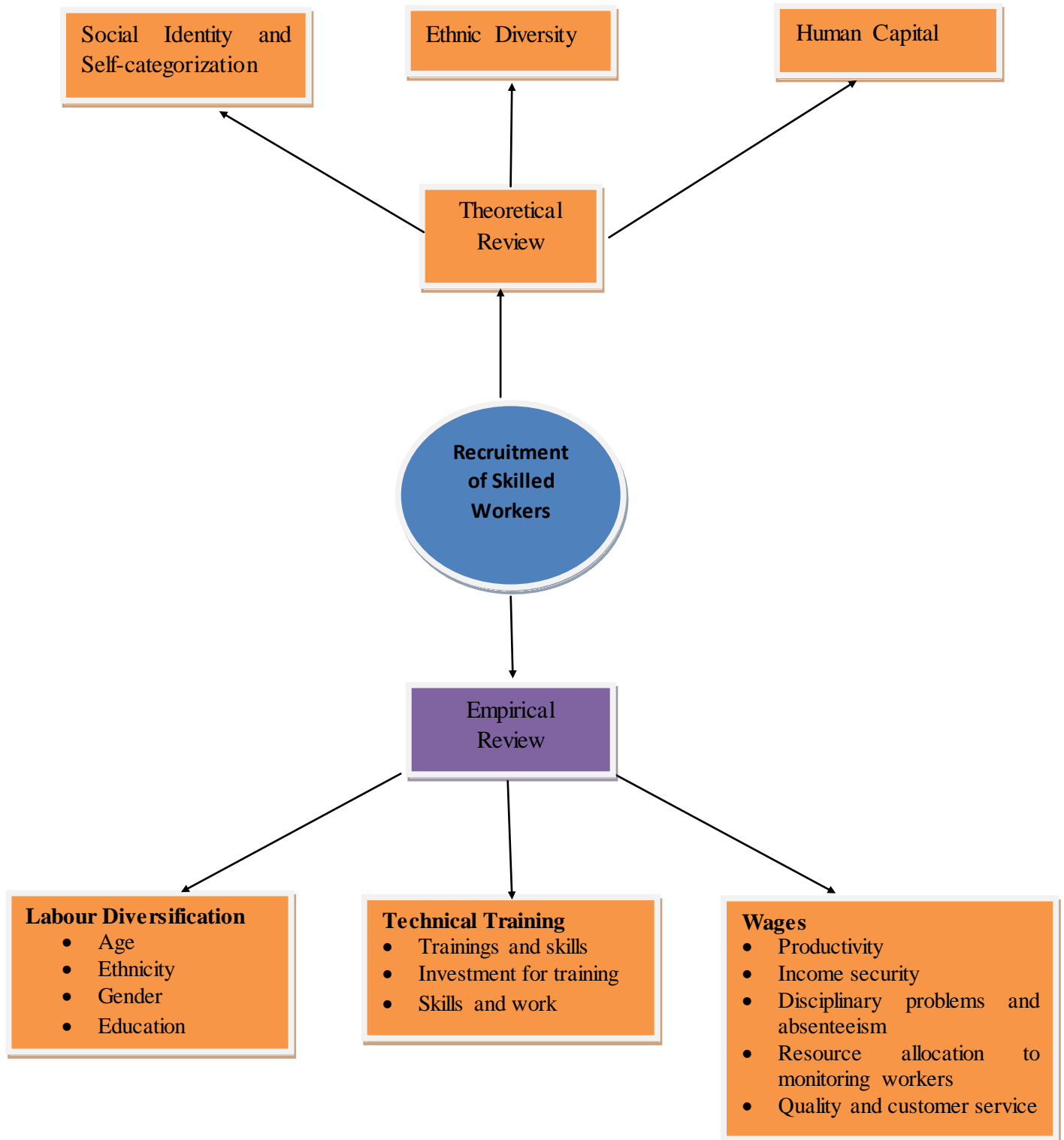


Figure 2.1: Conceptual Framework of the Research Study

2.8 Summary of Literature Review

The study reviewed literature based on the study objectives that were highlighted in Chapter one to gather the empirical review for this study. The literature review also focused on the

theoretical review that was grounded around Social Identity and Self Categorization Theory; Ethnic-Diversity Theory; and Human Capital Theory in relation to the study topic. To conclude, the study developed a conceptual framework to guide the study. Empirical aspects from this framework acts as a guide and anchor for the research methodology that is developed in Chapter three of this study.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This section introduces the research methodology that was utilized as a part of this investigation. The Chapter draws the study design, target populace, examining techniques, strategies for information accumulation, legitimacy and dependability and information examination strategies.

3.2 Research Design

A research design is the arrangement and structure of examination so imagined as to acquire answers to look into questions (Cooper and Schindler, 2013). It communicates both the structure of the research issue and the arrangement of research used to get exact proof on relations of the issue (Schindler, 2008). As per Maylor and Blackmon (2005), a research design is an arrangement or organized structure of how one means to take care of the study issue and to extend learning and comprehension.

The research design utilized in this study was descriptive in nature. Descriptive examinations portray qualities related with the subject populace (Cooper and Schindler 2013). A descriptive correlational outline was plainly useful in giving a depiction of the components that add to procedure usage holes. This plan was received because of its convenience in concentrates to test the connection between factors in a populace. It is likewise fitting in the accumulation of inside and out data about the factors under examination and along these lines empowering the investigation to give suggestions that are particular and important.

3.2 Target Population

Borg and Gall (2009) indicate that the target population is a universal set of research of all members of imaginary or actual people, objects, events for which an investigator generalizes the results. Mugenda and Mugenda (2008) indicate that, the target population is a complete set of individuals, objects or cases with common observable characteristics for which the study intend to generalize the results.

The target population for this study are construction firms in Kenya listed at the National Construction Authority (NCA) and with operations in Nairobi in category 1 to category 8.

The investigation or rather research focused on different categories of respondents from construction firms. These were the owners of the construction firms, the individuals working in the human resource of the construction firms, construction supervisors who included the engineers and the site supervisors in the construction companies. The target population of the study according to the NCA 2017 was 1810 as shown in Table 3.1 below.

Table 3.1: Target Population

Target Group	Population	Percentage
Owners	142	7
Human Resource Officials	253	10
Engineers	612	35
Site Supervisors	803	48
Total	1810	100

Source: Adopted from NCA provided data

3.3 Sample Size and Sampling Procedure

Cooper and Schindler (2008) portrays a sample frame as a rundown of the populace from which a sample is chosen from through examining. Sampling entails the selection of a certain number of subjects from a definite group to represent the entire population. This examination adopts stratified arbitrary testing procedure. As indicated by Dudovskiy (2015) stratified sampling is a likelihood testing strategy and a type of arbitrary inspecting where the populace is partitioned into at least two gatherings (strata) as per at least one basic properties. This ensures that all groups in the construction firms (that is the construction firm owners, human resource managers, engineers and site supervisors working in firms in Nairobi) are all incorporated in this study.

The study used 10% proportionate to derive a sample size of 181 respondents. As per Mugenda and Mugenda (2008), if a study populace is under 10,000 a sample of somewhere in the range of 10 and 30% is a decent portrayal of the target populace henceforth 10% is sufficient for this study. Therefore, 142 construction owners (142×0.1); 253 Human resource officials (253×0.1); 612 Engineers (612×0.1) and 803 site supervisors (803×0.1) will be considered making a larger population of 181 respondents as the sample size for this study. The investigation utilized stratified random sampling to choose the respondents. The study embraced stratified random sampling strategy on the grounds that the system is proficient and

financially savvy and enables use of factual techniques to the information, including distinguishing the level of mistake because of the examining.

Table 3.2: Sample Size and its Categories

Target Group	Population	Sample size
Owners	142	14
Human Resource Officials	253	26
Engineers	612	61
Site Spervisors	803	80
Total	1810	181

Source: Author, 2017

3.4 Research Instruments

This study will use a questionnaire as a data collection tool. Questionnaires are a primary data collection tool. Abawi (2013) defines questionnaires as an instrument with a series of questions used for gathering information from respondents. According to Lavrakas (2008) a questionnaire is a designed survey instrument used to collect data about a particular phenomenon. This can be classified as both quantitative and qualitative depending on the nature of questions. They entail closed ended that have multiple choice answer options analyzed using quantitative methods including percentages, bar-charts and pie-charts while the open ended questions are analyzed using qualitative methods involving discussions and critical analyses without use of numbers and calculations (Dudovskiy, 2015).

Questionnaires were the most preferred in this research because the time duration of collecting the data is favourable-It takes a shorter time to collect data using questionnaires. In addition, the cost of preparing the questionnaires is minimal and there are high levels of objectivity compared to other alternative methods of primary data collection. However, questionnaires may also have some disadvantages such as selection of random answer choices by respondents without properly reading the question and the absence of possibility for researchers to express their additional thoughts about the matter due to the absence of a relevant question (Dudovskiy, 2015).

The questionnaires in this research will be divided into various sections. Part A of the questionnaires will include the general information of the respondents, Part B, C and D will

entail questions based on the literature review in chapter two of this study geared towards the specific objectives of this study (See Appendix 2).

3.4.1 Piloting the Research Procedures

Before distributing the questionnaires to the respondents, a pilot study was conducted to pre-test the questionnaires. This took into consideration the need to identify the weaknesses in the data collection instrument that was used in the study before it was distributed to the respondents. The pilot test was conducted on a small sample of respondents with similar characteristics as the study respondents. The study used stratified random sampling to get the construction firm where thirteen (13) construction workers and construction site supervisors who were randomly selected. These participants would not be used as study respondents for the actual study. Mugenda and Mugenda (2008), indicate that the pilot sample ought to be 10% of the study sample based on the sample size for the study. The pilot study was carried out in Nairobi county among the construction companies that were not to be used in this study. These firms are among the 8 classes as registered with the National Construction Authority (NCA). Through the pilot study, vague questions were identified and rectified with proposed suggestions to improve the data instrument that was gathered through the pilot study and incorporated before the distribution of the final questionnaire to the respondents (Mugenda and Mugenda 2008).

A pilot study was done from thirteen (13) respondents. This tested for reliability and validity of the data collection instrument. The Cronbach's Alpha was utilized to test the validity. That was if the factors on the scale estimated a similar thing. A value more than 0.7 was considered satisfactory (Christensen, 2014). The outcomes from the pilot study were utilized to enhance and fortify the information gathering instrument particularly where the qualities were underneath 0.7.

3.4.2 Validity of the Research Instruments

According to Winterstein and Kimberlin (2008), Validity is often defined as the extent to which an instrument is reliable and measures what it purports to measure. This research adopts content validity which refers to the extent to which the measuring instrument provides adequate coverage of the topic under study. To ensure content validity, the instruments were reviewed by the research supervisor hence enabling the content to address the purpose and

avoid ambiguity. This ensured that all respondents understand the content of the questionnaire. Response options were provided for some of the questions to ensure that the answers given were in line with the research questions they were meant to measure.

3.5 Data Collection Procedure

After the approval of the proposal by the university, the researcher obtained an authorization letter from the university to seek the collection of data from the construction companies sampled for this study. This letter helped the researcher to seek permission from the research construction companies to conduct research on their employees (See Appendix 1). A research assistant was also involved in this research to assist in the collection of data from the research companies after thorough orientation with the data instrument, the intention of the study and moral values of research. After that, the questionnaires were administered distributed to the respondents face to face. The human resource officers at the construction companies were requested to assist with informing their employees of the research exercise to be carried out for easier data collection.

3.6 Data Analysis Techniques

The data collected using the questionnaires was then analysed by first sorting and organizing it to generate both qualitative and quantitative data. The questionnaires were then coded, entered and analysed using Statistical Packages for Social Sciences (SPSS) to derive descriptive statistics (in particular the mean and standard deviation to portray every variable under study). Factor Analysis was utilized as a part of measuring the variability of the variables that were observed and correlated. In addition, to test the level of significance of each independent variable against dependent variable the study used the model summary ANOVA and Regression Coefficient. The researcher utilized multiple regression examination to build up the quality of the connection amongst dependent and independent factors.

3.7 Ethical Considerations

This study was conducted taking into consideration that the ethics of the research were strictly adhered to. The respondents of the questionnaires participated in this study willingly and confidentiality of each respondent was ensured. The respondents were assured of anonymity and the fact that their responses would be used for academic purposes only.

3.8 Chapter Summary

The chapter highlighted the research methodology that this research adopted in conducting the study in order to answer the study's research questions. The research adopted descriptive research design and a target population of 200 employees of the targeted construction companies in class 1 to class 8 in Nairobi. Data accumulation was done by way of questionnaire and the information went into Statistical Package for Social Sciences (SPSS) program for information examination and understanding. The analyzed data would then be presented in tables and figures in Chapter four of this research project as findings and analysis of this study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter depicts the analyzed results and findings of the study on examining the challenges affecting construction firms on recruiting skilled artisans in Kenya. The first part discusses the response rate and its implications for the study. The second part discusses the background information, which shows the demographic characteristics of the respondents. Thereafter, the chapter deals with labour diversification and recruitment of skilled artisans, followed by limited technical training and recruitment of skilled artisans. Finally, the chapter discusses the high wages and recruitment of skilled artisans in the construction industry.

4.1.1 Response Rate of the study

Table 4a: Rate of Response

Response Rate		
	Frequency	Percent
Participate	148	82%
Did not participate	33	18%
Total	181	100%

Source: Author, 2017

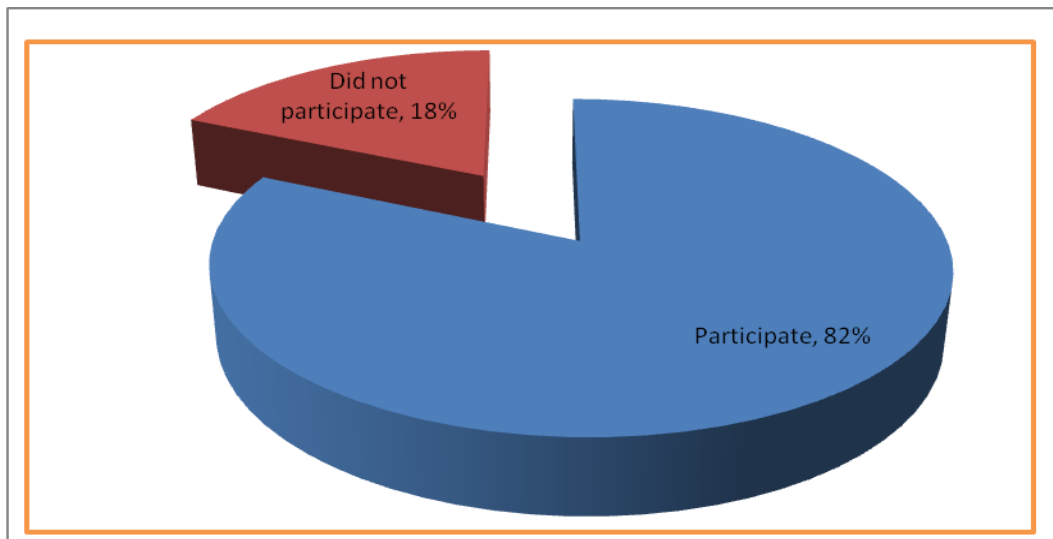


Figure 4.1: Response Rate in the study

Source: Author, 2017

A response rate is the aggregate number of respondents or people took an interest in an investigation and it is exhibited as percentage. This study had a population size of 1810 individuals working with construction companies that have attained NCA 7 and 8.

The investigation in Table 4a and Figure 4.1 speaks to the reaction rate of the examination. From the examination, plainly 82% of the respondents partook in the investigation while 18% did not take part in the examination. The investigation, along these lines, infers that the reaction rate regarded be utilized as a kind of perspective to the populace. A reaction rate of 60% is great and that of 70% or more is great (Mugenda and Mugenda, 2008). This demonstrates the reaction rate in this investigation was adequate to encourage examination of the information.

4.2 Background Information

4.2.1 Gender of Respondents

Table 4b: Respondents Gender

Gender of Respondents		
	Frequency	Percent
Male	105	71%
Female	43	29%
Total	148	100.0

Source: Author, 2017

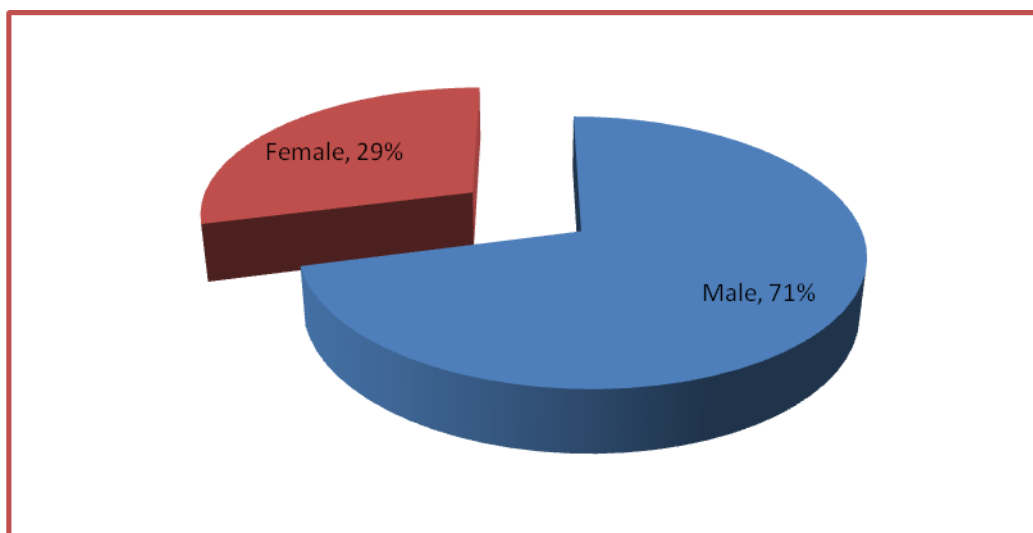


Figure 4.2: Gender of Respondents

Source: Author, 2017

To reveal the gender constitution of the study respondents, Table 4b and Figure 4.2 are used. It is well shown that 29 percent of individuals working with construction firms in Kenya are women and 71 percent are men. This means that majority of the workers in the industry are men and therefore the industry enjoys flexibility in working hours since men can work for longer hours than women and go for night shift which is a big challenge to married women.

4.2.2 Education Level of Respondents

Table 4c and Figure 4.3 represents the level of education of the population working in the construction firms in Kenya. The level of education was categorized into four levels as; secondary level education, tertiary level education, graduate level education and post graduate level education.

Table 4c: Respondents' Education level

What is your highest level of school completed?		
	Frequency	Percent
Secondary level	18	12%
Tertiary level (colleges, polytechnics)	19	13%
Graduate	99	67%
Post Graduate	12	8%
Total	148	100.0

Source: Author, 2017

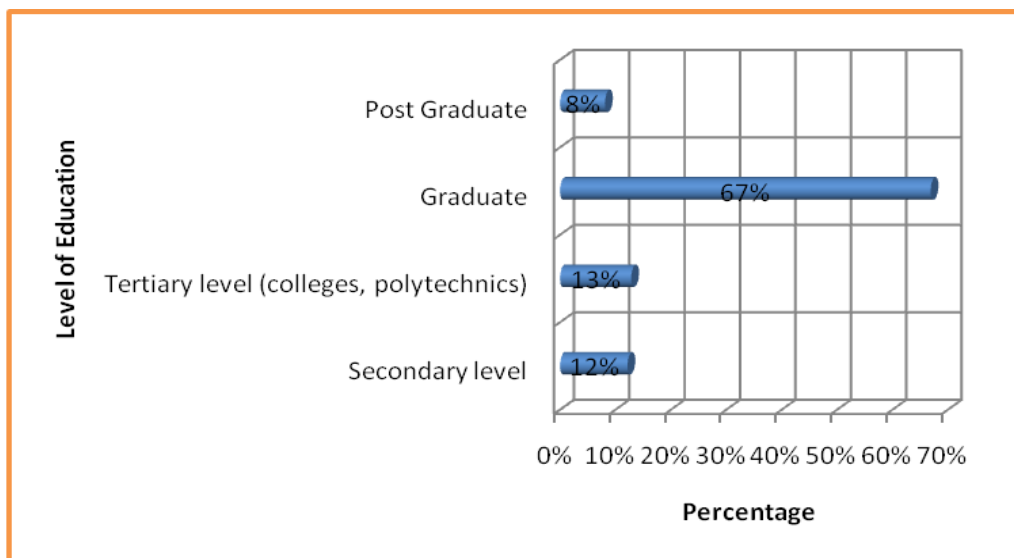


Figure 4.3: Level of Education of Respondents

Source: Author, 2017

From the table and figure, it is revealed that, 12 percent of the respondents had secondary level certificate, 13 percent had tertiary level diploma, 67 percent had graduate degree level of education, and 8 percent had post graduate degree level of education. This means that most

of the employees in the construction firms in Kenya hold graduate degree level of education which is an advantage to the industry since the more people are qualified to make informed decisions.

4.2.3 Working Experience of Respondents

Table 4d: Respondents’ Working Experience

Period worked with the company		
	Frequency	Percent
1 – 3 Years	4	3%
4 – 6 years	115	78%
7 – 9 years	16	11%
10-12 years	13	9%
Total	148	100%

Source: Author, 2017



Figure 4.4: Working Experience of Respondents

Source: Author, 2017

Table 4d and Figure 4.4 depict the respondents’ year of working experience at Kenyan construction industry. From the figure, 3 percent of employees have less than three years of working experience in the industry, 78 percent of the employees have four to six years of working experience in the construction industry, 11 percent of the staff have seven to ten years of working experience in the construction industry and 9 percent of the employees in the industry have more than ten years of working experience. The study implies that 78 percent of the workers, who were the majority, had a work experience of 4 to 6 years. This means that majority of the workers have moderate work experience and so the construction industry should engage their workers in trainings to enable them gain knowledge and expertise in construction skills.

4.2.4 Cadre of Respondents

Table 4e: Cadre of Respondents

Respondents' Position in the firm		
	Frequency	Percent
Consultant	18	15%
Supervising Engineer	19	45%
Human Resource Officer	99	13%
Contractor	12	27%
Total	148	100%

Source: Author, 2017

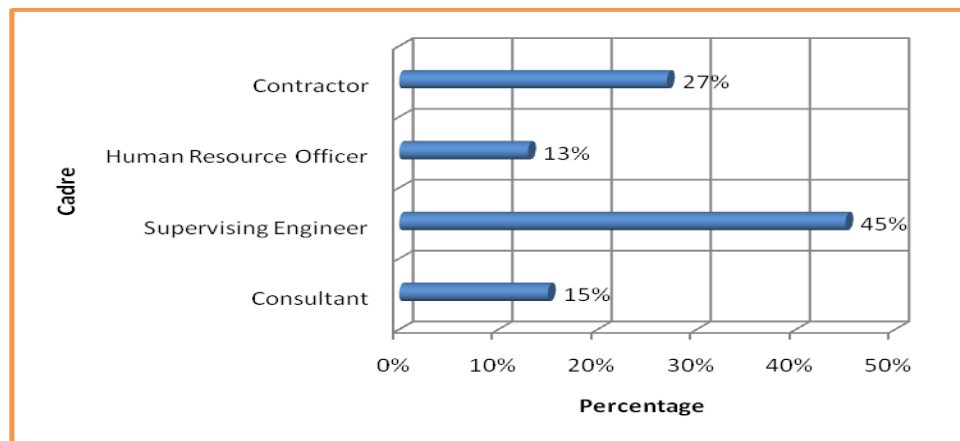


Figure 4.5: Cadre of Respondents

Source: Author, 2017

Table 4e and Figure 4.5 reveals the cadre of staff in the construction industry. From the figure, 15 percent of employees in the construction industry are consultants, 45 percent of the workers are supervising engineers, 13 percent of the people working in the construction industry are human resource officers and 27 percent are contractors.

4.2.5 Involvement in Recruitment

Table 4f: Involvement in Recruitment

Are you actively involved in recruiting construction workers in your firm?		
	Frequency	Percent
Always	12	8%
Very Often	59	40%
Sometimes	50	34%
Rarely	27	18%
Total	148	100.0

Source: Author, 2017

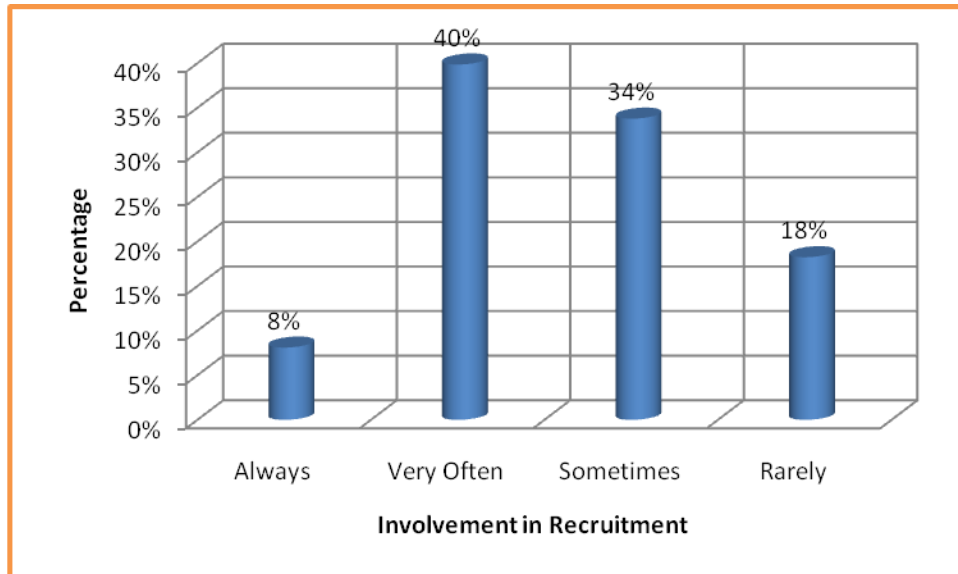


Figure 4.6: Experience and Level of Education of Respondents

Source: Author, 2017

Table 4f and Figure 4.6 reveal that 8 percent of construction companies are always involved in recruitment, 40 percent recruit very often, 34 percent sometimes do recruitment and 18 percent of construction companies rarely do recruitment.

4.3 Principal Component Analysis and Reliability

The construct measures of this research were at first purified by means of exploratory factor analysis (EFA). They were then tested for consistency analysis. Further, a series of tests was carried out on the raw measures to purify them and to ensure they were varied and could be relied on. The researcher then performed an exploratory factor analysis to obtain measure purification and polish the variables into the most effective number of factors. Then the researcher conducted a reliability analysis.

Each of the constructs was refined by utilizing principal component analysis on the initial items comprising each construct. Each principal component analysis extracted factors, and factor loadings greater than 0.5 were retained for each principal component extracted (Hair *et al.*, 2010). To assess the factorability of items, the researcher examined three indicators (i.e. Kaiser Meyer-Olin Measure of Sampling Adequacy, Barlett's Test of Sphericity and communalities). For every EFA, it was found that manifest variables have KMO Measures of Sampling Adequacy above the threshold of 0.6 (Kaiser, 1974), as well as p values for Barlett's test of Sphericity (Barlett, 1954) below 0.05. Communalities were also found well

above 0.5 suggesting satisfactory factorability for all items. When applying EFA, the results showed a clear factor structure with an acceptable level of cross loadings.

Table 4.1 Principal Component Analysis and Reliability

Construct	Kaiser Meyer Olin (KMO)	Bartlett's Test of Sphericity	p-value
Labour diversification and recruitment of skilled artisans	0.606	1050.117	0.000
Limited technical training and recruitment of skilled artisans	0.434514	1091.637	0.000
High wages and recruitment of skilled artisans	0.514	801.068	0.000

Source: Author, 2017

4.4 Labour Diversification and Recruitment of Skilled Artisans

The first objective of the study was to examine the influence of labour diversification in recruiting skilled artisans in Kenyan construction industry.

4.4.1 Descriptive of Labour Diversification

Tests for descriptive statistics were performed utilizing factual programming called SPSS. The results from descriptive analysis about for variables under labour diversification in the construction business in Kenya were given as far as the mean and standard deviation are concerned. The aggregate number of respondents dissected in each measure was 148. This was dictated by the quantity of legitimate finish surveys for each situation.

Table 4.2: Labour Diversification and Recruitment of Skilled Artisans

	N	Mean	Std. Deviation
The firm does not employ old workers as they are expensive	148	4.67	.472
Old workers do not adopt to workplace changes and new technology	148	4.73	.446
The firm prefers heterogeneous age group of employees other than a homogenous age group	148	4.41	.604
There is high gender diversity at the firm	148	3.62	.777
Ethnic diverse teams at the firm have led to more creativity and innovation	148	4.62	.643
Due to lack of adequate education in construction, many workers cannot get jobs at the firm	148	4.24	.844
Educated employees are more productive than the uneducated ones in the company	148	4.59	.593
Greater proportion of educated workers in the firm has	148	4.80	.403

translated to higher economic growth			
The management has a less suitable development space resulting into temporary disengagement	148	4.64	.808

Source: Author's field survey, 2017

The mean for labour diversification ranged from 3.62 to 4.80. The findings of the study mean that labour diversification significantly influences recruitment of skilled artisans of construction firms. Even though the study shows that respondents agreed that most of the variables of labour diversification influence recruitment of skilled artisans, they were neutral on the fourth variable that there is high gender diversity at the construction firms hence the lowest mean of 3.62.

The standard deviation for labour diversification and recruitment of skilled artisans ranged from 0.403 to 0.844. The highest was due to lack of adequate education in construction as many workers cannot get jobs at the firm. The lowest was due to the fact that a bigger quantity of educated workers in the firm has translated to higher economic growth. This means that labour diversification influences recruitment of skilled workers in construction firms.

Table 4.3 shows the loading for the measurement model. The coefficients ranged between 0.295 and 0.798, indicating that the variables are almost perfectly related to factor pattern and vibrant factor structure with a level of cross loadings that are acceptable.

Table 4.3: Pattern Matrix of Labour Diversification and Recruitment of Skilled Artisans

Communalities		
	Initial	Extraction
The firm does not employ old workers as they are expensive	1.000	.736
Old workers do not adopt to workplace changes and new technology	1.000	.688
The firm prefers heterogeneous age group of employees other than a homogenous age group	1.000	.695
There is high gender diversity at the firm	1.000	.744
Ethnic diverse teams at the firm have led to more creativity and innovation	1.000	.738
Lack of adequate education in construction many workers cannot get jobs at the firm	1.000	.765
Educated employees are more productive than the uneducated ones in the company	1.000	.295
Greater proportion of educated workers in the firm has translated to higher economic growth	1.000	.746

The management has a less suitable development space resulting into temporary disengagement	1.000	.798
Extraction Method: Principal Component Analysis.		

Source: Authors field survey, 2017

Table 4.4 Total Variance Explained for Recruitment of Skilled Artisans

Total Variance Explained						
Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.720	52.439	52.439	4.720	52.439	52.439
2	1.486	16.506	68.945	1.486	16.506	68.945
3	.935	10.394	79.340			
4	.686	7.618	86.957			
5	.495	5.497	92.454			
6	.280	3.111	95.566			
7	.192	2.131	97.696			
8	.176	1.960	99.656			
9	.031	.344	100.000			
Extraction Method: Principal Component Analysis.						

Source: Author's fields survey, 2017

Based on Kaiser's criterion, two (2) factors out of fourteen (9) factors were imputed. In this case, two (2) factors in the initial solution had Eigen values greater than 1.00 and together, they accounted for 68.945% of the variability in the original variables with one variable emerging dominant and accounted for 52.439% of the variance in the original variables data as indicated in table 4.4

4.4.2 Regression Analysis of Labour Diversification and Recruitment of Skilled Artisans

To determine the relationship between labour diversification and recruitment of skilled artisans regression was done between labour diversification as a predictor variable against the recruitment of skilled artisans in the construction of construction industry.

Table 4.5: Model Summary of Labour Diversification and Recruitment of Skilled Artisans

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.873 ^a	.763	.761	.200
a. Predictors: (Constant), Labour Diversification				

Source: Author, 2017

The R2 of the model was 0.763. This implies 76.3 percent of the varieties in the employment of skilled artisans is because of work diversification in the construction business. The 23.7 percent distinction is because of variables not anticipated in this model symbolized by the error term. Given this solid model, the investigation tried whether there is a solid experimental ground to infer that work enhancement essentially impacts employment of skilled artisans.

Table 4.6: ANNOVA of Labour Diversification and Recruitment of Skilled Artisans

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18.875	1	18.875	469.595	.000 ^b
	Residual	5.868	146	.040		
	Total	24.743	147			
a. Dependent Variable: Recruitment of skilled artisans						
b. Predictors: (Constant), Labour Diversification						

Source: Author, 2017

From ANNOVA in Table 4.6, there is a p-value of 0.000. The study concludes that there is a significant relationship between labour diversification and recruitment of skilled artisans in the construction industry. This implies that labour diversification has a significant influence in recruiting skilled artisans.

The standardized coefficient is 0.873 and p- value is 0.000. The examination utilized linear regression model to test the connection between labour diversification and recruitment of talented artisans in the construction business. The linear equation model is expressed as; $Y = \alpha_0 + \alpha_1 X_1 + \epsilon$: Where Y=Recruitment of Skilled Artisans, α = Constant value, X_1 = Labor Diversification and ϵ = error term

The following were the results of the model in Table 4.7,

Table 4.7: Coefficients Variation of Labour Diversification and Recruitment of Skilled Artisans

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.141	.188		.751	.454
	Labour Diversification	.907	.042	.873	21.670	.000
a. Dependent Variable: Recruitment of skilled artisans						

Source: Author, 2017

The study thus represents recruitment of skilled artisans as,

$$\text{Recruitment of artisans} = 0.141 + 0.873 (\text{labour diversification}) + \epsilon$$

It means that a unit change in labour diversification causes a change of 0.873 in recruiting skilled artisans.

4.5 Limited Technical Training and Recruitment of Skilled Artisans

The second objective of the study was to assess how limited technical training influences recruitment of skilled artisans Kenyan construction industry.

4.5.1 Descriptive of Limited Technical Trainings

The study embraced mean and standard deviation (S.D) as factual instruments that were utilized to rank the essentialness of the factors. The aggregate number of respondents investigated in each measure ran from 135 to 148. The means for limited technical training and recruitment of skilled artisans ranged from 3.42 to 4.76. This means that on average, limited technical trainings in institutions influences recruitment of skilled artisans in construction companies. This is shown with the most respondents agreeing on the opinions that limited technical trainings influences recruitment of skilled artisans.

Table 4.8: Limited Technical Training and Recruitment of Skilled Artisans

	N	Mean	Std. Deviation
The government has invested adequate resources for training in construction	148	4.76	.555
The firm invests in training their employees on technical skills as they go on with their job	148	4.71	.609
The firm is competitive as a result of employing skilled workers	148	4.11	.796
The company faces high employee turnover due to lack of stable labour force	148	4.37	.598
Skilled employees have enhanced capacities and greater opportunities at the firm	148	4.35	.824
Employees at the firm have good education in construction work	135	4.31	.918
There is great partnerships between the government , the firm and employees to anchor the world of learning to that of work	148	3.90	1.061
The employees' educational training is linked to the skills development and the world of work at the firm.	148	3.42	1.380
The industry investments and trade policies are well	148	3.43	1.031

coordinated with education and skills policies			
Construction workers lack information on the education, training and opportunities available to better themselves in construction work.	148	4.14	.800

Source: Author's field survey, 2017

The study also shows that the standard deviation for limited technical trainings and recruitment of skilled artisans ranged from 0.555 to 1.380. This means that there was high deviation among the opinions of the respondents about influence of limited technical trainings on recruitment of skilled artisans. The opinions were especially highly deviated on the statement that the employees' educational training is linked to the skills development and the world of work at the firm.

Table 4.9 shows the loading for the measurement model. The coefficients ranged between 0.534 and 0.884, indicating that the variables are almost perfectly related to factor pattern and vibrant factor structure with a level of cross loadings that are acceptable.

Table 4.9: Pattern Matrix for Limited Technical Training and Recruitment of Skilled Artisans

Communalities		
	Initial	Extraction
The government has invested adequate resources for training in construction	1.000	.650
The firm invests in training their employees on technical skills as they go on with their job	1.000	.812
The firm is competitive as a result of employing skilled workers	1.000	.771
The company faces high employee turnover due to lack of stable labour force	1.000	.753
Skilled employees have enhanced capacities and greater opportunities at the firm	1.000	.781
Employees at the firm have good education in construction work	1.000	.884
There is great partnerships between the government , the firm and employees to anchor the world of learning to that of work	1.000	.857
The employee's educational training is linked to the skills development and the world of work at the firm.	1.000	.682
The industry investments and trade policies are well coordinated with education and skills policies	1.000	.795
Construction workers lack information on the education, training and opportunities available to better themselves in construction work.	1.000	.534
Extraction Method: Principal Component Analysis.		

Source: Author, 2017

Table 4.10 Total Variance Explained for Limited Technical Training and Recruitment of Skilled Artisans

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.048	40.480	40.480	4.048	40.480	40.480
2	1.969	19.690	60.170	1.969	19.690	60.170
3	1.502	15.022	75.192	1.502	15.022	75.192
4	.928	9.275	84.467			
5	.539	5.393	89.860			
6	.467	4.674	94.534			
7	.274	2.739	97.272			
8	.170	1.701	98.973			
9	.082	.818	99.791			
10	.021	.209	100.000			

Extraction Method: Principal Component Analysis.

Source: Author, 2017

Based on Kaiser’s criterion, three (3) factors out of ten (10) factors were imputed. In this case, three (3) factors in the initial solution had Eigen values greater than 1.00 and together, they accounted for 75.192% of the variability in the original variables with one variable emerging dominant and accounted for 40.480% of the variance in the original variables data as indicated in table 4.10.

4.5.2 Regression Analysis of Limited Technical Training and Recruitment of Skilled Artisans

The study sought to statistically test whether limited technical training significantly influences recruitment of skilled artisans in construction firms. This was tested using the perceived limited technical training as a predictor variable against the recruitment of skilled artisans in construction industry.

Table 4.11: Model Summary of Limited Technical Trainings and Recruitment of Skilled Artisans

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.888 ^a	.789	.787	.189

a. Predictors: (Constant), Reduced Technical Training

Source: Author, 2017

The R^2 from this test is 0.789 meaning that 78.9 percent of the variation in recruitment of skilled artisans in the construction firms results from limited technical trainings in institutions. The remaining 21.1 percent is due to other factors not tested in this model.

Table 4.12: ANNOVA of Limited Technical Trainings and Recruitment of Skilled Artisans

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	19.515	1	19.515	545.017	.000 ^b
	Residual	5.228	146	.036		
	Total	24.743	147			
a. Dependent Variable: Recruitment of skilled artisans						
b. Predictors: (Constant), Reduced Technical Training						

Source: Author, 2017

The ANNOVA in Table 4.12 above has a p-value of 0.000. The study concludes that there is a significant relationship between limited technical trainings and recruitment of skilled artisans in the construction industry.

The study used linear regression model to test the relationship between limited technical trainings and recruitment of skilled artisans in the construction industry. Table 4.13 depicts the results of the model.

Table 4.13: Coefficients Variation of Limited Technical Training and Recruitment of Skilled Artisans

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.698	.151		4.624	.000
	Reduced Technical Training	.845	.036	.888	23.346	.000
a. Dependent Variable: Recruitment of skilled artisans						

Source: Author, 2017

The study thus represents recruitment of skilled artisans as,

$$\text{Recruitment of skilled artisans} = 0.698 + 0.888 (\text{limited technical training}) + \epsilon$$

It means that a unit change in limited technical trainings in institutions causes a change of 0.888 in recruitment of skilled artisans in construction industry.

4.6 High Wages and Recruitment of Skilled Artisans

The objective of the study was to examine the influence of high wages on recruitment of skilled artisans in Kenyan construction industry.

4.6.1 Descriptive Analysis of High Wages

Tests for descriptive statistics were performed utilizing the measurable programming SPSS. The outcomes of the analysis for variable of high wages were given in terms of the mean and standard deviation. The aggregate number of respondents investigated in each measure was 148.

Table 4.14: High Wages and Recruitment of Skilled Artisans

	N	Mean	Std. Deviation
High wages at the firm have led to increased productivity	148	3.88	1.049
High wages have helped the organization attract better quality job applicants and improved morale	148	4.58	.606
There is high retention rates of employees at the firm	148	4.17	.820
High wages at the firm have led to low turnover and yielded savings for the firm	148	3.59	1.088
High wages have led to increased quality of production and customer satisfaction	148	3.97	.820
High wages have led to low absenteeism and fewer disciplinary cases at the firm	148	4.00	.841
High wages have made the firm hire very few supervisors as the employees have developed a culture of hard work with minimal monitoring	148	3.60	1.074
The workers are constantly concerned about their income security at the firm	148	3.90	1.147

Source: Author, 2017

The mean for high wages ranged from 3.59 to 4.58. The findings of the study mean that high wages in construction industry influences the recruitment of skilled artisans. The study shows that respondents highly agreed that high wages influence recruitment of skilled artisans.

The high wages and recruitment of skilled artisans had standard deviation range from 0.606 to 1.147. This means that there is a great variation in respondents' opinions on whether high wages influence recruitment of skilled artisans.

Table 4.15 shows the loading for the measurement model. The coefficients ranged between 0.644 to 0.920, indicating that the variables are almost perfectly related to factor pattern and clear factor structure with an acceptable level of cross loadings.

Table 4.15 Pattern Matrix for High Wages and Recruitment of Skilled Artisans

Communalities		
	Initial	Extraction
High wages at the firm have led to increased productivity	1.000	.876
High wages have helped the organization attract better quality job applicants and improved morale	1.000	.738
There is high retention rates of employees at the firm	1.000	.811
High wages at the firm have led to low turnover and yielded savings for the firm	1.000	.692
High wages have led to increased quality of production and customer satisfaction	1.000	.814
High wages have led to low absenteeism and fewer disciplinary cases at the firm	1.000	.920
High wages have made the firm hire very few supervisors as the employees have developed a culture of hard work with minimal monitoring	1.000	.644
The workers are constantly concerned about their income security at the firm	1.000	.711
Extraction Method: Principal Component Analysis.		

Source: Author, 2017

Based on Kaiser's criterion, three (3) factors out of eight (8) factors were imputed. In this case, three (3) factors in the initial solution had Eigen values greater than 1.00 and together, they accounted for 77.573% of the variability in the original variables with one variable emerging dominant and accounted for 43.239% of the variance in the original variables data as indicted in table 4.16.

Table 4.16 Total Variance Explained for High Wages and Recruitment of Skilled Artisans

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	3.459	43.239	43.239	3.459	43.239
2	1.624	20.297	63.536	1.624	20.297	63.536
3	1.123	14.037	77.573	1.123	14.037	77.573
4	.858	10.727	88.300			
5	.407	5.092	93.392			
6	.325	4.063	97.456			

7	.173	2.166	99.621			
8	.030	.379	100.000			

Extraction Method: Principal Component Analysis.

Source: Author, 2017

4.6.2 Regression Analysis of High Wages and Recruitment of Skilled Artisans

Table 4.17 shows that the coefficient of determination for the relationship between high wages and recruitment of skilled artisans was 0.839 and this means that 83.9 percent of recruitment of skilled artisans in construction industry was explained by high wages. The remaining 16.1 percent was explained by other factors not considered in the model.

Table 4.17: Model Summary of High Wages and Recruitment of Skilled Artisans

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.916 ^a	.839	.838	.165

a. Predictors: (Constant), High Wages

Source: Author, 2017

Table 4.18 shows the overall model significance with a p-value of 0.000. The study concluded that high wages has a significant influence recruitment of skilled artisans in construction firms.

Table 4.18: Annova of High Wages and Recruitment of Skilled Artisans

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.761	1	20.761	761.105	.000 ^b
	Residual	3.982	146	.027		
	Total	24.743	147			

a. Dependent Variable: Recruitment of skilled artisans

b. Predictors: (Constant), High Wages

Source: Author, 2017

Table 4.19 shows the beta coefficients of high wages. The beta coefficient of high wages was positive meaning that a unit change in the application of high wages causes a positive change in the recruitment of skilled artisans.

Table 4.19: Coefficient of Variation of High Wages and Recruitment of Skilled Artisans

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.555	.097		16.033	.000

	High Wages	.669	.024	.916	27.588	.000
a. Dependent Variable: Recruitment of skilled artisans						

Source: Author, 2017

The relationship in the table was represented by the following equation:

$$\text{Recruitment of Skilled Artisans} = 1.555 + 0.916 (\text{high wages}) + \epsilon$$

The regression equation shown above indicates that a unit change in the execution of high wages in the construction industry causes an increase of 0.916 in recruitment of skilled artisans.

4.7 Chapter Summary

The study data was presented and analysed in this Chapter. The outcomes and discoveries depended on the information given out by the respondents from Kenyan construction industry. The Chapter analysis focused on the response rate, background information, labour diversification, limited technical training and high wages in influencing recruitment of skilled artisans. The next Chapter provides the summary, discussion, conclusions and recommendations of the study.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This Chapter presents the discussion, conclusions and recommendations of the study. The chapter demonstrates that the objectives of the study, which were stated in Chapter one, were achieved upon completion of the study. In the first part of the Chapter, a summary of the study is presented. The discussion and conclusion of the study are provided in parts two and three respectively. Thereafter, recommendations for improvements, emanating from the study, are suggested. Finally, opportunities for further research are outlined.

5.1 Summary of the Study

The purpose of the study was to investigate the challenges facing construction firms in recruiting skilled artisans in Kenya. This study aimed to establish the influence of labour diversification in recruiting skilled artisans, assess the influence of reduced technical training in institutions in recruiting skilled artisans, and examine the influence of high wages in recruiting skilled artisans in construction firms in Kenya.

The study adopted descriptive methodology in dissecting, translating, and displaying information. The descriptive research technique was the best for this investigation since it concentrated on the connections between challenges confronting construction firms in employing skilled artisans. The examination utilized questionnaires to get information from respondents. The examination concentrated on 1810 construction organization proprietors, human resources authorities, designers and site chiefs of development organizations in Kenya with NCA 7 and 8. Utilizing 10% proportionate, the examination embraced stratified random sampling method on the focused on populace to decide a sample size of 181 respondents. The study embraced expressive and inferential insights in information investigation and introduction. The investigation data was analyzed using Statistical Package for Social Sciences (SPSS) and Microsoft surpass desires programs. Tables and figure were utilized as a part of information introduction.

The study established how labour diversification influences recruitment of skilled artisans in construction firms. The study found that construction firms do not easily employ old workers

as they are expensive. The old workers also do not adopt to workplace changes and new technology. The study reveals that ethnic diverse teams at the construction firms led to more creativity and innovation. This led the firms to prefer heterogeneous age group of employees other than homogenous age group. In construction firms, educated employees are more productive than the uneducated ones hence many workers cannot get jobs at the firms due to lack of adequate education in construction. The study found that bigger quantity of educated workers in construction firms has translated to higher economic growth. The study established that management at construction firms has a less suitable development space resulting into temporary disengagement.

The study revealed how technical training affects recruiting skilled artisans in construction firms in Kenya. The study found that the government has invested adequate resources for training in construction hence construction firms invest in training their employees on technical skills as they go on with their job. There are great partnerships between the government, the firm and employees to anchor the world of learning to that of work. The study found that skilled employees have enhanced capacities and greater opportunities at the construction firms hence the employees' educational training is linked to the skills development and the world of work at the firm. The study revealed that construction workers lack information on the education, training and opportunities available to better themselves in construction work hence the companies face high employee turnover due to lack of stable labour force. The construction firms will be competitive as a result of employing skilled workers. Hence the construction industry investments and trade policies should be well coordinated with education and skills policies.

The study examined the effect of high wages on recruitment of skilled artisans in construction firms in Kenya. The study reveals that high wages have helped the organization attract better quality job applicants and improved morale. There is high retention rates of employees at the construction firms hence high wages at the firm have led to increased productivity. The study found that high wages have led to low absenteeism and fewer disciplinary cases at the firms. This has led to low turnover and yielded savings for the firm. High wages have led to increased quality of production and customer satisfaction hence construction firms are hiring very few supervisors as the employees have developed a culture of hard work with minimal monitoring.

5.2 Discussion of the study findings in the context of past studies within the research field

This section discusses the study findings and contextualizes them within the broader research field, to further assert their validity and consistency. The section does not introduce any new ideas, but includes the voices of other researchers. Multivocality in research sustains the dialogue within the study, through demonstrating the convergence of similar ideas.

5.2.1 Labour Diversification and Recruitment of Skilled Artisans

The study analyzed the effect of labour diversification on recruitment of skilled artisans in construction firms in Kenya. The study found that the construction firms do not employ old workers as they are expensive and that those workers do not adopt to workplace changes and new technology. The study supports the findings of McGregor & Gray (2011) who argue that construction companies are not well utilizing the aptitude of old personnel due to bogus postulations and stereotypes that they are more susceptible to health problems, can't get used to workplace changes, they are costly and can't easily adopt to new technology, they perform poorly. In comparison to their younger employee counterparts, it is believed that they are a poor return on training investment.

The study found that the construction firms prefer heterogeneous age group of employees other than a homogenous age group. Barton and Nickerson (2009) confirm that the groups of employees with more diversity in age were considerably less effective. This finding is constant with annotations by Leonard and Levine (2010) that retail stores with larger age diversity among its workers are less effective and less profitable. However, Ilmarinen (2005) revealed that there was no distinctive association between age of workers and work performance. It is viewed from numerous studies that older workers are as effective and as accomplished as their younger counterparts. The study confirms that a varied age group of workers would consequently be more effective and productive than a harmonized age group of employees.

The study showed that there is high gender diversity at the construction firms. The study confirms the findings of Wood (1987) who revealed that heterogeneous gender group of employees performed better than the homogeneous gender group of employees. Gupta (2013) showed that reasonable level of diversity in gender of employees enhances competitive

advantage whereas a bigger level of diversity in gender of workers reduces organizational performance. Richard, Barnett, Dwyer, Chadwick, and Chadwick (2009) in their study showed an upturned U-shaped association between management group gender heterogeneity and effectiveness, with more or less heterogeneous management groups showing signs of better performance than gender homogeneous management groups of employees. Frink et al (2003) established an overturned U-shaped correlation between composition of gender of employees and performance of an organization. Frank discovered that diversity in gender illustrated a positive effect in the service industry and a negative effect in the manufacturing sector. Thus, services industries may gain more advantage from diversity in gender than companies in the manufacturing sector. The study for that reason discloses that high diversity in gender has a larger positive impact on performance in the service sector than in the manufacturing sector.

From the study, it is well demonstrated that ethnic diverse teams at the firm have led to more creativity and innovation. The study contradicts the findings of Jackson et al. (2010) who established that diverse in ethnically divided teams execute poorly than teams from the same ethnic teams. Jehn and Bezrukova (2011) found that diversity and multiculturalism may possibly have a less positive effect on group performance than team performance. The findings of the study concur with the findings of Lee & Nathan (2011) who found that culturally diverse teams lead to more innovation and creativity as a result of complementarities and learning chances. Sander and Mirjam (2012) believe that a reasonable level of diversity in ethnic groups has no impact on the outcomes of the teams; market share, profit, and sales while a high level of ethnic diversity enhanced outcomes. The findings of the study do not support the findings of Ely (2014) who viewed no correlation between ethnic diversity and sales productivity, customer satisfaction and sales revenue.

The study found that educated employees are more productive than the uneducated ones in construction firms. Due to lack of adequate education in construction, many workers cannot get jobs at the firm. The study supports the findings of Tracy and David (2011) who argue that employers generally refuse recruiting persons whose know-how, training, or education is judged to be insufficient. According to the study conducted by Daniel (2009), an individual will be more effective depending on the level of their education. The more learned the personnel are the more effective the worker will be. The study revealed that a bigger

percentage of learned workers in different sectors and companies translate to higher economic growth.

5.2.2 Limited Technical Training and Recruitment of Skilled Artisans

The study found that for construction firms to recruit skilled artisans, the government has to invest adequate resources for training in construction. Ottaviano and Peri (2011) found that establishing solid bridges between vocational education, training and skills development, and the world of work makes it more likely that workers will learn the right skills. Yellen (2009) affirms that effective partnerships between governments, employers' and workers' organizations, and training institutions and providers are critical to anchor the world of learning in the world of work. On the other hand, McCausland (2008) argues that broad and continued access to training and skills development opens up the opportunities for and benefits of both initial and lifelong learning to all, enabling women and men of all ages, in both urban and rural areas, to fulfil their aspirations. Yellen (2009) revealed that dedicated policies and measures are required to facilitate access to training and skills development by individuals and groups hindered by various barriers, including poverty and low income, ethnic origin, disability and migrant status.

From the study, it is found that construction firms invest in training their employees on technical skills as they go on with their job. Ilmarinen (2005) asserts that initial training provides the core work skills, general knowledge, and industry based and professional competencies that facilitate the transition from education into the world of work. Lifelong learning maintains individuals' skills and competencies as work, technology and skill requirements change. In order to run effectively and efficiently, Bilau (2015) reveals that a considerable number of organizations devote huge amounts of time and money in specialized and practical training. Arthur et al, (2003) found that training is one of the most pervasive methods for enhancing the productivity of individuals and communicating organizational goals to new personnel. Farahbakhsh (2010) asserts that most pioneers and effective organizations and institutes have paid their attention to planning training courses in order to improve human resources more than before. The study found that the construction firms are competitive as a result of employing skilled workers.

From the study, it is confirmed that construction firms face high employee turnover due to lack of stable labour force. To support the study, Greer (2003) affirm that there is little doubt

that organizations will need to invest heavily in their human resources in order to be competitive during the twenty-first century. Greer found that to be competitive, organizations in many industries must have highly skilled, knowledgeable workers. Olaniyan et al, (2008) found that organizations must also have a relatively stable labour force since employee turnover works directly against obtaining the kind of coordination and organizational learning that leads to fast response and high-quality products and services.

The investigation uncovers that in development industry, gifted workers have improved limits and more noteworthy open doors at the firm. The investigation done by CEDEFOP (2007) affirms that abilities advancement improves the two individuals' abilities to work and their chances at work, offering more degree for inventiveness and fulfilment at work. Yellen (2009) declares that the future thriving of any nation depends at last on the quantity of people in business and how gainful they are grinding away. Accessible confirmation by Mas (2009) solidly sets up that a blend of good instruction with preparing that is of good quality and is pertinent to the work advertise; enables individuals to build up their full limits and to seize business and social openings; raises efficiency, both of specialists and of undertakings; adds to boosting future advancement and improvement.

5.2.3 High Wages and Recruitment of Skilled Artisans

The investigation affirms that high wages influences the enlistment of skilled artisans. The examination uncovers that high wages have helped the association pull in better quality employment candidates and enhanced assurance. The discoveries of this investigation bolster the discoveries of Yellen (2009) who attests that higher wages make the conditions for specialists to be more beneficial, indicating "lessened evading by workers because of a higher cost of employment misfortune; bring down turnover; a change in the normal nature of occupation candidates and enhanced confidence. Reich, et al. (2003) found that high-wage firms can some of the time balance the greater part of their higher wage costs through enhanced profitability and lower contracting and turnover cost. The investigation affirms that high wages at the firm have prompted low turnover and yielded reserve funds for development firms.

The investigation found that high wages have prompted expanded nature of generation and consumer loyalty. Fisher, et al. (2006) in their investigation found a positive connection between consumer loyalty and the finance level of partners and administrators in the store.

Higher wages are related with businesses having more information about the stock. The investigation by Reich et al. (2003) additionally found that half of managers detailed upgrades in client benefit following a wage ascend for low-wage labourers, and for sure, higher wages at the San Francisco airplane terminal prompted shorter air terminal lines. The examination uncovers that an expansion in the compensation of lower-level representatives with respect to administration expanded the nature of generation.

The examination found that high wages in development firms have prompted low non-appearance and less disciplinary cases at the firm. Zhang, et, al. (2013) affirm that that truancy was more outlandish when compensation were higher. Cappelli and Keith (1991) uncovered that in associations where pay was higher with respect to the nearby work advertise, less disciplinary activities were required. Reich et al. (2003) then again revealed a reduction in disciplinary issues following a wage rise. From the examination, it was affirmed that high wages have made the firm contract not very many managers as the representatives have built up a culture of diligent work with negligible checking. To help the discoveries, Bartlett (2007) found that lucrative firms have been found to make a culture of diligent work in which representatives screen their colleagues, diminishing the need to contract bosses.

The investigation uncovered that high wages at the firm have prompted expanded profitability at development organizations. Levine (2010) contends that business analysts have since a long time ago contended that increments in specialist pay can prompt changes in efficiency - in fact, that it can really be productive to pay laborers higher wages. The examination likewise found that at the development firms, there is high standard for dependability of workers at the firm. Reich et al (2003) proposed that higher wages draw in more top notch candidates for new employments are voluminous. The investigation affirms that the primary firm to offer higher wages will probably pull in and hold more beneficial labourers.

5.3 Conclusion

5.3.1 Labour Diversification and Recruitment of Skilled Artisans

The study concludes that construction firms in Kenya rarely employ old workers as they are expensive. The old workers also do not adapt to workplace changes and new technology. The firms prefer heterogeneous age group of employees other than a homogenous age group because heterogeneous age groups perform better than homogeneous age groups. The study

also concludes that gender diversity at the firms also enhances performance. Ethnic diverse teams at the firm have led to more creativity and innovation. The study further concludes that educated employees are more productive than the uneducated ones in these firms. Due to lack of adequate education in construction, many workers cannot get higher tier jobs at the firm. A bigger quantity of learned workers in the firms translates to higher productivity at the workplace.

5.3.2 Limited Technical Training and Recruitment of Skilled Artisans

The study concludes that the government has invested adequate resources for training in construction. This has made construction firms to invest in training their employees on technical skills as they go on with their job. There is great partnership between the government, the firms and employees to anchor the world of learning to that of work. The study concludes that skilled employees have enhanced capacities and greater opportunities at the firms hence the firms are competitive as a result of employing skilled workers. The study also concludes that the employees' educational training is linked to the skills development and the world of work at these firms hence the industry investments and trade policies are well coordinated with education and skills policies. However, construction workers lack information on the education, training and opportunities available to better themselves in construction work.

5.3.3 High Wages and Recruitment of Skilled Artisans

The study concludes that high wages have helped construction firms to attract better quality job applicants and improved morale. This has enabled high retention rates of employees at the construction firms hence the firms are experiencing low turnover. This yields savings for these firms. The study also concludes that high wages have made the firms to hire very few supervisors as the employees have developed a culture of hard work with minimal monitoring hence leading to increase quality of production and customer satisfaction. The workers are constantly concerned about their income security at the firm hence high wages has led to low absenteeism and fewer disciplinary cases at these firms.

5.4 Recommendations for Improvement

5.4.1 Labour diversification and Recruitment of Skilled Artisans

The study recommends that construction firms should minimize the employment of old workers and increase the employment of young workers as the young workers are productive and easy to learn new techniques than old workers. The firms should enhance ethnic diverse teams as they are more productive, creative and innovative. The study further recommends that construction firms should encourage their workforce to enhance their education as educated employees are more productive than the uneducated ones. Greater education will also help artisans who are not employed to secure employment more easily.

5.4.2 Limited Technical Training and Recruitment of Skilled Artisans

The study recommends that the government should invest adequate resources for training in construction industry. This will inspire construction firms to invest more in training their employees on technical skills as they continue with their jobs. The companies should enhance skills of the employees as skilled employees have enhanced capacities and greater opportunities at the firms. The firms will be more competitive as a result of employing skilled workers. There should be great partnerships between the government, the firms and employees to anchor the world of learning to that of work. The employees' educational training should be linked to the skills development and the world of work at the firm. The study recommends that the industry investments and trade policies, be well coordinated with education and skills policies.

5.4.3 High Wages and Recruitment of Skilled Artisans

The study recommends that construction firms should increase employee wages as this may lead to attract better quality job applicants and improved morale. Higher wages ensure high retention rates of employees at the firm. Higher wages also lead to low employee turnover and yields savings for the firms focus strategy because of enhanced quality of production and customer satisfaction. High wages enable construction firms to hire very few supervisors as the employees develop a culture of hard work with minimal monitoring leading to low absenteeism and fewer disciplinary cases at the firm, as mentioned previously.

5.5 Opportunities for Further Research

The study was conducted on challenges facing construction firms in Kenya with regard to recruitment of skilled artisans. The National Construction Authority (NCA) has embarked on certifying skills possessed by Kenyan construction worker. Further research should be conducted on these certified workers to indicate the extent to which NCA certification has improved their recruitment by Kenyan construction firms.

The Government of Kenya upgraded many middle level colleges to public universities. Previously, these colleges offered technical training to construction artisans. It is often alleged that expansion of university education in Kenya has deprived the Kenyan construction industry of the requisite artisanal expertise that emerged from institutions such as the Kenya Polytechnic (now Technical University of Kenya). Further research should be conducted to indicate the extent to which the expansion of university education has contributed to the lack of skilled artisans in Kenyan Construction industry.

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APPENDICES

APPENDIX 1: LETTER OF INTRODUCTION

Andrew Gitau,
Reg No. B53/75927/2014,
M.A. Construction Management,
University of Nairobi,
P.O. Box 53760-00200,
Nairobi, Kenya.

September 2016.

To whom it may concern;

**RE: RESEARCH DATA COLLECTION ON THE CHALLENGES FACING
CONSTRUCTION FIRMS IN RECRUITING SKILLED ARTISANS IN KENYA**

I am a student at University of Nairobi taking a Masters of Arts in Construction Management. As partial fulfillment of the degree, I am conducting a research on the challenges facing construction firms in recruiting skilled artisans in Kenya.

You have been selected as one of the respondents for this study. The results of this study will provide information to National Construction Authority (NCA) and the construction companies on the challenges companies face in recruiting skilled artisans in Kenya. This will help NCA come up with strategies of strengthening this sector so that companies can be able to find skilled artisans working in their companies.

I request your involvement in answering the questionnaire to the best of your knowledge. Kindly note that any information given through this questionnaire is confidential and only used for the purpose of this study. Your assistance and response is much appreciated.

Regards;

Andrew Gitau

Email: andrewgathekia@gmail.com

APPENDIX 2: QUESTIONNAIRE

SECTION A: GENERAL INFORMATION

1) Gender of Respondents

Male

Female

2) Period worked with the company?

1 – 3 Years () 3 – 6 years ()

6 – 9 years () 9 – 12 years ()

Over 12 years ()

3) Respondents' Position in the firm

Consultant

Contractor

Supervising Engineer

Site Supervisor

Human Resource Officer

4) What is your highest level of school completed?

Secondary level

Tertiary level (colleges, polytechnics)

University

Post Graduate

5) Are you actively involved in recruiting construction workers in your firm?

Always Very Often Sometimes Rarely Never

6) How has lack of skilled construction workers impacted on the quality of work at the company?

Excellent Above Average Average Below Average Very Poor

7) Based on your experience in the construction field, what is the experience of working with unskilled workers?

Excellent Above Average Average Below Average Very Poor

SECTION B: Influence of Labour Diversification in Recruiting Skilled Artisans in Construction Firms In Kenya

Kindly indicate the influence of labour diversification in recruiting skilled artisans in construction firms in Kenya. Please (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree, 2-Disagree, 3-Uncertain, 4-Agree, 5-Strongly Agree

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. The firm does not employ old workers as they are expensive	1	2	3	4	5
2. Old workers do not adopt to workplace changes and new technology	1	2	3	4	5
3. The firm prefers heterogeneous age group of employees other than a homogenous age group	1	2	3	4	5
4. There is high gender diversity at the firm	1	2	3	4	5
5. Ethnic diverse teams at the firm have led to more creativity and innovation	1	2	3	4	5
6. Lack of adequate education in construction many workers cannot get jobs at the firm	1	2	3	4	5
7. Educated employees are more productive than the uneducated ones in the company	1	2	3	4	5
8. Greater proportion of educated workers in the firm has translated to higher economic growth	1	2	3	4	5
9. The management has a less suitable development space resulting into temporary disengagement	1	2	3	4	5

SECTION C: Influence of Reduced Technical Training in Institutions in Recruiting Skilled Artisans in Constructions Firms in Kenya

Kindly indicate the influence of reduced technical training in institutions in recruiting skilled artisans in construction firms in Kenya Please (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree, 2-Disagree, 3-Uncertain, 4-Agree, 5-Strongly Agree

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. The government has invested adequate resources for training in construction	1	2	3	4	5
2. The firm invests in training their employees on technical skills as they go on with their job	1	2	3	4	5
3. The firm is competitive as a result of employing skilled workers	1	2	3	4	5
4. The company faces high employee turnover due to lack of stable labour force	1	2	3	4	5
5. Skilled employees have enhanced capacities and greater opportunities at the firm	1	2	3	4	5
6. Employees at the firm have good education in construction work	1	2	3	4	5
7. There is great partnerships between the government , the firm and employees to anchor the world of learning to that of work	1	2	3	4	5
8. The employees educational training is linked to the skills development and the world of work at the firm.	1	2	3	4	5
9. The industry investments and trade policies are well coordinated with education and skills policies	1	2	3	4	5
10. Construction workers lack information on the education , training and opportunities available to better themselves in construction work.	1	2	3	4	5

SECTION D: Influence of High Wages in Recruiting Skilled Artisans in Construction Firms In Kenya

Kindly indicate the influence of high wages in recruiting skilled artisans in construction firms in Kenya. Please (✓) tick appropriately on a scale of 1-5. 1-Strongly Disagree, 2-Disagree, 3-Uncertain, 4-Agree, 5-Strongly Agree

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. High wages at the firm have led to increased productivity	1	2	3	4	5
2. High wages have helped the organization attract better quality job applicants and improved morale	1	2	3	4	5
3. There is high retention rates of employees at the firm	1	2	3	4	5
4. High wages at the firm have led to low turnover and yielded savings for the firm	1	2	3	4	5
5. High wages have led to increased quality of production and customer satisfaction	1	2	3	4	5
6. High wages have led to low absenteeism and fewer disciplinary cases at the firm	1	2	3	4	5
7. High wages have made the firm hire very few supervisors as the employees have developed a culture of hard work with minimal monitoring	1	2	3	4	5
8. The workers are constantly concerned about their income security at the firm	1	2	3	4	5

THANK YOU