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Factors influencing the choice of subsector among women in the construction industry in Kenya: a case of Nairobi County

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Factors influencing the choice of subsector among women in the construction industry in Kenya. A case of Nairobi County.

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DECLARATION

I declare that this thesis is my original work and has not been presented and approved for the award of any degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously written or published by another author except where due reference is made in the thesis itself.

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ABSTRACT

Kenya's industrial sector is conspicuously male-dominated. The balance in the industry is further predicted to remain disparate with regard to gender as participation in technical courses, such as engineering, remains male dominated. In appreciation of the trend, it is necessary to assess the various factors that contribute to this status quo and in so doing, to identify the relationships between the various factors and the choice of participation in the sub-sectors of the industry. This paper focuses on the construction industry. The study assesses the role of education, social networks, work culture and personal traits in informing choice of career within the sub-sectors – road construction, builders works, bridge construction, railway construction and civil works. Respondents of the study were women within Nairobi county. A multinomial logistic regression analysis approach was employed to assess the odds ratios by the various factors of participation within the various sub-sectors of the industry. The influence of the four factors, with the exception of education, was found to best be in the selection of civil works as a preferred career path; education, served as a strong predictor of participation in railway construction. The findings therefore serve to shed light on possible biases by industry as deduced from female participants hence the findings may be useful in understanding the preference of sub-sector by women in the construction industry of Kenya.

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KEY WORDS AND DEFINITIONS

A.P.P: Affirmative Procurement Program

C.I.P: Contractor Incubation Program

E.C.D.P: Emerging Contractor Development Program

E.U : European Union

F.D.I: Foreign Direct Investment

U.K : United Kingdom

U.S : United States

SMEs: Small and Medium-Sized Enterprises

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The construction industry has two broad categories. The first category comprises of professionals and managers who plan, advice and organize on the specialist functions or activities that are involved in the execution of construction projects. The second category includes the construction trades. This includes the actual construction, finishing, installation, maintenance and repair of the internal structures of domestic and commercial projects (Kolade & Kehinde, 2013).

The industry is undoubtedly one of the largest and complex in most economies. It is thus, quite difficult to define and this is largely attributed to the amalgamation of several other sub-industries within it (Raiden, Dainty & Naele, 2009). Due to this, there is a general lack of consensus as to what the construction industry can be defined as. However, as Myers (2013) observes, the appropriate and precise definition of the construction industry is essential for understanding the industry, how it works and how it can be improved.

Various scholars have come up with definitions in a bid to conceptualize the construction industry. According to K'Akumu (2007) the construction industry is basically characterized by the economic activity of civil and building engineering work. London (2007) defines the construction industry as the one whose total product consists of the durable infrastructure and building projects. This definition that is based on the total product is fairly common and used in many countries by the national data collecting agencies in describing the statistics about the industry. This product-based approach is quite useful in differentiating the subsectors of the industry and has included the three broad categories namely: residential, which include the dwellings and houses; nonresidential such as social structures and commercial buildings such as shopping centers, healthcare, tourism and educational facilities and engineering works such as civil infrastructure which include roads, bridges and utilities.

The construction industry can also be defined as the sector of the economy that designs, plans, constructs, maintains, alters, repairs and demolishes buildings of all kinds (Ofori, 1990). The sector also engages in civil engineering works, electrical and mechanical engineering structures. The industry therefore includes enterprises, agencies and persons, private and public, involved in the physical construction works, maintenance and rehabilitation of physical structure.

The sector also includes all persons that provide all kinds of design, planning, managerial and supervisory services that are related to construction. The significant differences in the definitions of the industry are an indicator of its broad scope in terms of economic activities. This study proposed a broad definition of the industry as suggested by Ofori (1990). It takes into account most of the activities that the construction industry's players embark on. The construction industry is vital to any economy in terms of economic growth and employment opportunities. The industry employs workers as professionals and managers who are involved in planning, organizing and advising on the specialist activities. The workers are also involved in the directing and management of resources and activities of the construction operations. The other category includes construction trades who set up, construct, finish, repair and maintain the external structures of commercial, domestic civil, industrial and building constructions (Kolade & Kehinde, 2013).

The construction industry is further subdivided into four distinct subsectors. These subsectors include the commercial and industrial (builders works), the civil works, roads subsector and the railway subsector. For one, the commercial subsector is largely involved in the construction of buildings and includes the facilities and equipment that are physically attached to these buildings. The subsector is also involved in the construction of structures which are not included in the industrial, residential and road construction subsectors (Olusola, Olubola & Akintayo, 2012). Industrial subsector on the other hand, is involved in the construction of buildings and facilities that are used for economic activities that may involve the production of goods, transformation of raw material and the exploitation of mineral resources (Olusola, Olubola & Akintayo, 2012).

The civil and roads engineering subsector is involved in the construction of works that are for private or public use which include facilities such as natural gas pipelines, dams, roads, electricity lines and bridges. The residential subsector is majorly involved in the construction of buildings and facilities that make up the dwelling of people. These include houses such as mansions, flats, condominiums and bungalows.

1.1.1 Factors influencing the choice of subsectors that women venture into in the construction industry

Women are drawn into the construction industry to prove their worth as experts who cannot only compete with men but also find fulfilling careers in the sector.

Van der Merwe and Nieman (2003), highlight that the factors that motivate women to venture into male dominated industries are; the need for women to promote their independence, personal recognition, success and personal development. However, (Wilson, 2008) states that the reasons that explain why women venture into the various subsectors within the construction industry is the attainment of job satisfaction and passion in the work that they do. Women prefer having a greater financial independence as owners of businesses in the more traditional sectors such as the service and retail industries. Verwey (2007) also found that the love of construction and building is one of the most important factors that influence women to venture into various subsectors within the construction industry.

Access to education is a significant determinant of whether or not women gain entrance into the construction industry in the first place. Shanmugam et al.(2007) notes that the construction industry requires technical knowledge for the women to be able to specialize in any of its numerous dimensions. Therefore, the access to trainings is a significant determinant of the participation of women within different subsectors in the industry, especially given that the male dominance translates into very limited such opportunities for the women. Olusola, Olubola and Akintayo (2012) note that the since the construction industry is male dominated, women face barriers to entry into the construction industry earlier in their socialization and education and continues throughout their training and recruitment.

The social networks within the construction industry are structured in such a manner that benefits men more than women. The networks provide an uneven playing field that works to the disfavor of the female players in the sector. Kaewsri and Tongthong (2013) note that construction industry tends to hinder the professional development of women in a number of ways. For instance, it is difficult for women in this industry to assume leadership roles when they are largely relegated to secondary roles. Women in the industry lack stronger connections that can help the further develop their skills and competencies in the industry (Shanmugam et al., 2007).

The limited access to opportunities for women to advance their careers and enterprises in the industry is a significant indicator of the nature of the social networks in the construction industry. Adogbo, Ibrahim and Ibrahim (2015) observe that without opportunities for growth and advancement the women do not compete with their male counterparts on a level ground. Besides, the women social networks outside the industry is a significant inhibitor, especially given that they have some demanding family roles that they must play, which means that they have to split

their focus between the industry and their societal roles, unlike men who have the opportunity to focus without such like distractions, therefore, contributing more as compared to the women.

The work culture in the construction industry may be regarded as the social environment in which the women in the industry operate their enterprises. This social environment demands that women have to put in just as much input as their male counterparts irrespective of other responsibilities that they have to play at home and also irrespective of the weak connections that they enjoy in the industry and their limited academic and technical competencies. Work culture is also reflective of the domination of the industry by their male counterparts. The advancement of women careers in the industry is largely at the mercy of their male counterparts who decide the rules of the game in the industry and more so to their own favor (Rajkumar, Swaathi & Sivaranjani, 2016).

The work culture within the industry belittles the contribution of women to the industry and the working patterns in the construction industry also discourage women to venture into the industry. The long working hours demand that women spend more time at their work particularly at the start and completion of the projects. This therefore keeps women away from the domestic obligations and at times have to travel long distances away from home (Amaratunga et al., 2015). Ginige et al. (2007) note that as a result of the gender stereotypical belief characterized by "think-manager-think-male" most women are not willing to venture into subsectors within the construction industry. Smallwood (2013) agrees that leadership qualities such as commitment, acknowledgement, confidence, self-promotion and responsibility have a significant impact on the personal traits of the women in the construction industry and with proven competence the women in the construction industry can compete equally with their male counterparts.

This implies that in order to overcome the many odds in the industry, the women need to cultivate personal traits that will give them a competitive edge with their male counterparts. These attributes range from being assertive, taking initiative, self-promotion and even adopting masculinity traits Wangle (2009). Notably, these are the traits that have made their male counterparts competitive in the industry and in order for the women to be at par with them in terms of effectiveness and efficiency, they are required to develop these particular qualities.

1.1.2 Sub sectors of the Construction Industry in Kenya

The construction industry in Kenya is divided into four distinct subsectors as it is the case with other construction industries across the globe.

They include the commercial and institutional subsector, the civil engineering and roads subsector, industrial subsector and residential subsector. In regards to the commercial and institutional subsector, there is a marked increase in the office market within the commercial and institutional sub-sector. With the market for grade A offices increasing, new accommodation is being let a steady rate. Besides, the retail market has also grown with Nairobi continuing to be the home for the modern shopping malls such as Galleria Shopping Mall and Two Rivers in Runda (Ondieki, 2017).

Poor workmanship is one of the challenges experienced in the commercial subsector particularly with the construction of projects in the hospitality industry, that include the building and finishing of restaurants and hotel. This is characterized by leaking, peeling of paint, roof deterioration, cracks on the walls, internal staining and the growth of molds and fungus. In turn, poor workmanship is caused by inexperience and incompetent labor and the limited resources and time that is allocated for constructing the restaurant and hotels (Burer, 2016).

Secondly, the civil engineering and roads subsector accounts for one of the fastest growing subsector in the construction industry in Kenya given the government's priority to improve the infrastructure across the country. Notably, there is a huge deficit in the Kenya infrastructural network, which has called for the construction of roads, rails and ports that present a crucial case for the growth of the economy. Wafula (2017) notes that innovation and merit are not honored in this sub-sector and the gains that the contractors should be making are reaped by the corrupt contractors. Some of the current major civil engineering projects that are underway in the country include the standard gauge railway line, Lamu Port, the construction of resort cities in Kilifi, Lamu, Isiolo, Lokichoggio and Diani, the Konza City Park, Dongo Kundu free port and the Greenfield Terminal at the Jomo Kenyatta International Airport (Ndaiga, 2014).

Thirdly, the burgeoning population has brought with it the need for providing residential houses, especially for the growing middle class in Kenya. The demand for residential housing is on the rise, with statistics indicating that more than 200,000 new residential units should be built every year in order to keep pace with ever expanding population in Kenya. This has presented a major opportunity for private developers who have rushed to keep up with the demand within the residential subsector. In particular, there is a greater demand for residential houses in gated apartments and compounds as compared to the single stand-alone houses, with the modern trend

pointing towards developing some out-of-town integrated communities that target the middle class (Ondieki, 2017).

Capital is also a key challenge in the residential subsector for entrepreneurs. Based on 2014 Financial Stability report that was released by Central Bank of Kenya the entrepreneurs in the residential subsectors had about 34,800 loan accounts that totaled to Ksh.286 billion. Wafula (2017) points out that the professionals in this subsector have the tendency towards holding fast to their conservative perspectives and therefore prefer clients who have same points of views. This in turn impacts on their choices while they are determining the building materials, investment and research. This particular subsector has also faced challenges in regards to quality control, resulting into the collapse of residential buildings, which have claimed lives and property. The poor quality control has also been attributed to poor skills which has seen quack contractors and unskilled draughts men undertaking the construction projects.

Fourthly, the industrial subsector is another key area in the industry that women entrepreneurs could venture into. According to Ondieki (2017) the next decade will see to the need for replacing the existing industrial plants in response to the growth of the Kenyan economy. As the economy grows, the demand for power will also grow therefore, there will also be need for expanding power plants and the energy-related infrastructure in order to make Kenya to achieve energy sufficiency. There is a high dropout rate for women who join the subsector and then find it hard to achieve a work-life balance. They for instance, do not find flexible working hours that enable them to reconnect with their families, they lack the support from their families since their business involves frequent traveling and also have very few mentors and role models to look up to (Ondieki, 2017).

The women professionals such as consulting engineers in the subsector face harassment from the contractors. There are some contractors who want to take short cuts, whereas the civil engineering consultants work to ensure the quality of the work (Wafula, 2017). Such rogue contractors therefore harass the women consultants to discourage them from going to the site. The women professionals and entrepreneurs have to keep reasserting themselves as professionals in their fights against the negative perception by their male colleagues, which is compounded by the fact that there are very few women in the subsector (Ondieki, 2017).

1.1.3 Construction industry in Kenya

Kenya boasts of a well-developed construction industry. The businesses in the industry include the development of residential and commercial buildings, engineering structures such as bridges and roads and many other affiliated services. The construction industry in Kenya is a chief contributor to the Gross Domestic Product (GDP) and plays a significant role in the determination of economic growth. According to the Kenya National Bureau of Statistics (KNBS) the construction industry contributed 3.8% to the Kenyan GDP in 2008; 4.1% in 2009; 4.3% in 2010 and 4.1% in 2011 (Ndaiga, 2014).

The road construction projects in Kenya are largely funded by the government and/or donors, with most of them being poorly funded. Therefore, the support of these clients extend to the contractors as it ensures that the payment are delivered promptly and their timely approvals also ensures that the projects are completed according to schedule (Wafula, 2017). However, when the client support is insufficient the contractors have to contend with project costs overruns, arbitration costs, disputes, project abandonment and litigations. Besides, the irregular disbursement of funds translates into the stalling or delays of the construction projects (Mwangi, 2016). The construction companies in this subsector also have to contend with the numerous Chinese companies that are well-equipped and funded with demonstrable high quality output.

The Kenyan government has also launched a program through which contractors will use their funds in financing their construction operations on public construction projects, which they will then be refunded later upon the satisfactory completion of the construction works. Essentially, this annuity program requires that the contractors seek finances of the construction and maintenance of roads from financial institutions such as banks (Wafula, 2017). The government will then pay the bank when their supervision engineers issue the certificate of completion for roads that have been constructed. This is aimed at helping the contractors to overcome the problem of technical and resource shortages that plague the sector. It also helps to curtail corruption that translates into poor road maintenance and poor workmanship (Mbatia, 2014).

The construction industry is projected to expand even further as the population keeps expanding and investors rush to meet the increasing demands of affordable housing, which includes prefabricated low-cost houses. There is also extensive opportunities in the industry in terms of the manufacture and supply of construction material as well as the development, maintenance and rehabilitation of the transpire infrastructure. The non-residential construction is also

projected to grow in the coming decade in response to the increase in the demand for shopping malls and commercial complexes (Ndaiga, 2014).

In spite of this growth, there are few women ventures within the various subsectors in the construction industry in Kenya. There are many incentives such as quotas on government projects, exemplary return on investments and educational advances for business owners in this industry however, women continue to be underrepresented in the ownership of construction companies (National Roofing Partners, 2015). Women in Real Estate (WIRE) is an organization dedicated to providing a networking avenue for women in the private equity real estate business. WIRE was created to facilitate building of strong networks among female professionals in Kenya. WIRE is dedicated to advancing the achievements of women in real estate through networking and mentoring. Despite these efforts, the level of women representation in the construction industry remains low (Wangeci, 2016). The Construction Industry Training Board (2003) indicates that Women are under-represented in construction industry this is due to the fact that this sector is regarded traditionally as male dominated. Tyler (2016) states that the main reason why the industry has fewer women is not due to a lack of ambition, skill or intelligence but it is because women lack capital to start enterprises. Galloway (2016) however notes that the construction culture is rooted in a demanding focus on schedule and this poses a big challenge to the women in the construction industry. The inflexible working hours and inherent work-life balance issues associated with this culture is a real barrier for women. The present study sought to find out the factors that influence women in Kenya to venture into various sub sectors within the industry based on factors as access to education, social networks, work culture and personal traits.

1.2 Statement of the Problem

The construction is largely male dominated and this implies that men have got more chances of advancing their careers in the industry as compared to women. Women are disadvantaged in the extractive industries given their limited capacity and exclusion from the value chain and are therefore not able to fully take advantage of the opportunities presented in various subsectors within the construction industry. This is attributed to factors such as an absence of legal frameworks, programs and policies that are considerate to the needs and rights of women, limited access to the requisite resources and the improper power relations between the genders in the industry (Musisi, 2015).

There are various studies that have looked into the various issues facing the subsectors within the construction industry in Kenya. For instance, in the study to establish the determinant of project delays with the roads subsector in the Kenyan construction industry, Kimemia (2015) found out that experience of the contractor was a major factor in determing whether they qualified for road contracts. The study argued that the contractor's experience especially on women who venture into this subsector affected their estimates of the time that a road project would take to completion and also their adherance to the costs that it would require. The contractor's experience was also a significant indicator of their site management skills, their managerial and technical skills as well.

In her study, Nyambura (2015) established that the availability of human skills and technological competence was essential in ensuring the timely completion of the building projects within the commercial and institutional subsector in the construction industry in Kenya, particularly in the Ministry of Land, Housing and Urban Development. She pointed out that poor workmanship made it difficult for the worker to apply concepts of quality control and the limits of tolerance in the development of commercial buildings. In addition, Burer (2016) looked at the workmanship in the construction of the small and medium enterprises in the Central Business District in Nairobi. The study attributed this to factors such as unsuitable construction equipment, poor weather conditions, unclear roles for the sub-contractors and poor project management skills. Even though this study outlines a critical limitation in the commercial subsector it generally assumes the sector as being male dominated and does not specifically place the role and motivation of women to join the subsector.

In another study, Mwangi (2016) also highlights the importance of working capital in helping construction firms to run smoothly without experiencing any fiscal problem particularly in processing the payment for procuring the raw material and payment for liabilities such as salaries and wages without undue delays. The study established that skilled manpower in the road construction subsector in Kenya is largely inadequate. Therefore, sufficient flow of capital facilitates solvency for the construction firms through enabling continuous flow of their operations. This study however does not put focus on how other factors such as social networks, work culture and personal traits can influence the choice of venture into other subsectors in the industry especially by women in Kenya.

Njenga (2014) explored the factors that influence the effective and efficient delivery of road construction projects in Nairobi County in Kenya. The study established that most construction firms have adopted benchmarking as the tool for achieving partnership excellence in their construction projects. The benchmarking approach is regarded in the construction industry as essential in determining organizational strengths and weaknesses, the evaluation of performances, identification of the competitive advantage and pointing out the improvement priorities for each of the performance. Even though this study outlines the factors that influence the efficient delivery of road construction projects, it did not specifically outline the role of women participation in this sector.

Much as previous studies have looked at various issues in regards to the civil and road construction subsector and the commercial subsector in the construction indursty in Kenya,they are narrow in scope given that they have not covered the residential and industrial subsectors. Furthermore, the studies have not addressed any gender related issues adequately, particularly regarding women entrepreneurship in the sector. There is need for appreciating the elements of women entrepreneurship in the construction industry especially taking into account that this is largely a male-dominated industry. This study therefore, seeks to examine how factors such as access to education, social networks, work culture and personal traits influence the choice of women to join the distinctive subsectors in the industry.

1.3 Research Objectives

The main objective of the study was to evaluate the factors that influence the choice of subsectors that women venture into in the construction industry in Kenya.

1.3.1 Specific Research Objectives

The specific research objectives were:

i. To establish the influence of access to education on the choice of the subsectors that women venture into in the construction industry in Kenya.

ii. To examine the influence of social networks on the choice of the subsectors that women venture into the construction industry.

iii. To explore how work culture influences women entrepreneurs' choice of the subsectors that they venture into in the construction industry.

iv. To examine how personal traits influences women entrepreneurs' choice of the subsectors that they venture into in the construction industry.

1.4 Research Questions

The research questions were:

i) How does access to education influence women entrepreneurs' choice of the subsectors that they venture into in the construction industry by women in Kenya?

ii) How does social networks influence the choice of the subsectors that women venture in the construction industry?

iii) How does work culture influence the choice of the subsectors that women venture into in the construction industry?

iv) How do personal traits influence women entrepreneurs' choice of the subsectors that they venture in the construction industry?

1.5 Scope of the Study

This study focused on women who venture into the various subsectors within the construction industry in Kenya. The industry has about 256 construction companies in Kenya (Construction in Kenya- Business List of Construction companies, 2016) out which, 72 of those companies are owned by women (Public Procurement Oversight Authority construction SMEs, 2014). The study was conducted in Nairobi County targeting the 72 female owned construction companies in the county.

1.6 Significance of the Study

The study on the factors that influence the choice of subsectors that women venture into the construction industry is significant given the contribution of the industry to the Kenyan economy and the need to advance the representation of the female gender to all the sectors of the economy. The study is useful to the construction industry policy makers and stakeholders in coming up with measures that enhance the participation of women into the various subsectors in the industry. The recommendations of the study will provide insights to women who wish to venture into the industry on the pitfalls to avoid in order to succeed in the industry. The findings of this study will be useful to future researchers who will seek to further develop the scope of knowledge on women representation in the construction industry.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the review of literature regarding factors that influence the choice by women to venture into various subsectors within the construction industry across the world based on the study objectives. This chapter contains the theoretical framework which looked at the human capital theory, the feminist theory and the social role theory in an attempt to understand the position of women entrepreneurs in the male dominated construction industry. The conceptual framework explains the relationship between the independent variables and the dependent variable. The chapter explores gaps in past studies regarding the factors that influence the choice of subsectors that women venture within the construction industry.

2.2 Theoretical Framework

The study adopted three theories in the bid to understand the factors that influence the choice of subsectors that women in Kenya venture into the construction industry. The theories were the human capital theory, the social role theory and the feminism theory.

2.2.1 Human Capital Theory

Human capital can be defined as the skills, comprehension and capabilities of people that have the economic value to a firm (Fisher, Schoenfeldt & Shaw, 2003). On the other hand, human capital can also be regarded as the skills, knowledge and competencies that an individual embodies which facilitate the achievement of economic, social and personal well-being (Fugar, Ashiboe-Mensah & Adinyira, 2013). In the construction industry, human capital includes the technical, soft skills and management that are used in the operationalization of the various segments of the industry. These include skills such as engineering, architecture, surveying, plumbing, masonry, clerical duties and procurement.

Fugar et al. (2013) notes that the human capital is the most valuable asset of organizations. It is arguably the core capability of organizations and a significant variable in determining the competitiveness of organizations, their success and ultimate profitability in the current market place. The economic prosperity of the construction industry is closely related to its human capital due to the fact that the industry is labor intensive. Therefore, the effective delivery of the construction projects is determined by the quality of the personnel at the various levels such as

the craftsperson, masons, the supervisor, technical and professional levels. The expertise of these personnel is required from the beginning of the project through its design and implementation stages up to completion. It is therefore, critical for industry players to develop and retain quality human resource. However, the construction industry is reputed to have a much wide spread of lack of knowledge on good practice in the industry.

The human capital theory provides an examination of the "determinants of wealth through the accumulation of knowledge and skills." Gary Becker developed this theory in a bid to explain the interrelationship between human capital and economics in promoting economic growth (Baptista & Leitão, 2015; Wolfmeyer, 2013). The human capital theory emphasizes the added value that employees can contribute to an organization. The theory regards employees as assets and put emphasis on the importance of organizations to invest in its people in order to realize worthwhile returns (Wolfmeyer, 2013). The human capital theory was therefore instructive in this study in a bid to understand the disparities between the skills and productivity of women as entrepreneurs in the construction industry.

As a component of the human capital in the construction industry, this theory therefore equates women entrepreneurs as contributors to the development in the construction industry largely based on their competence in terms of skills. Even though they are a minority they nonetheless they can be regarded as critical contributors to the sector's growth and development. The human capacity theory provides a useful perspective for understanding the optimal levels for individual and social investment in education. The theory also helps to answer questions about the cost and benefits of investment in education (Darko & Löwe, 2016). In light of the disparities in skills and competence in the construction industry based on gender issues, the human relation theory suggest the development of capacity of the workers in the industry as a means of optimizing their effectiveness in their respective areas of work.

In spite of its importance, the human capital theory should not divert its focus on the other crucial elements of intellectual capital such as organizational and social capital which are required for embedding knowledge that is possessed by the human capital of an organization.

As Baptista and Leitão (2015) note, the focus on the organizational human capital has resulted into an unbalance emphasis on the acquisition of skills and competencies that ignore the approaches in which such knowledge is integrated into the complex web of social relationships within organizations. Wolfmeyer (2013) notes that the human capital theory faces some

significant limitations. For one, in regarding employees as assets, there is the tendency of making the assumption that they are just passive assets that can be bought and replaced as the employers want. Secondly, the idea that companies own their human assets as they do machines is an unacceptable principle which short-changes the employees by categorizing them at the physical assets that the company own such as building and equipment. Thirdly, there is no particular system of human asset accounting that has succeeded to produce a convincing method for determining the financial worth of the human capital. This demeans the intangible added value that employees can deliver to their organization.

The human capital theory is also limited in the sense that it assumes that the increase in education automatically translates into productivity at the workplace leading to higher individual wages. Statistical models of education and training have accounted for about 30 percent of the variance in the wages of individuals. This implies that the human capacity theory does not explain a significant proportion of wage variability (Wolfmeyer, 2013). As aforementioned this theory is applicable in the construction industry context where there is a variance in skills between men and women, where women have low skills levels as the macho culture in the industry obstructs them from furthering their knowledge and skills acquisition in the sector. They therefore end up becoming less productive as compared to their male counterparts.

In this study, the theory was helpful in understanding the domination of men over the women professionals in the industry based on factors such as education and work culture. In essence, the investment in the employees through training and development is an invaluable way for attracting and retaining the human capital and also getting maximum returns from such investment (Wolfmeyer, 2013). However, employers must take into account that employees particularly the knowledge workers are highly likely to perceive themselves as free agents that can choose where and how to invest in their skills and knowledge (Baptista & Leitão, 2015). In sum, the human capital theory was relevant for this study in understanding how the development of human capital amongst the women in the construction industry provides them an equal platform for not just competing with their male counterparts but also being profitable and productive.

2.2.2 Social Role Theory

The social role theory takes into account the historical divisions in labor between men and women. The theory assumes that women are well-suited to take up responsibilities at home whereas men on the other hand are well-suited for responsibilities outside the home (Newman & Newman, 2012). The result of the affiliated sexual differences in the social behavior brings about a divergence between the expectancies of women and men. These particular expectancies have been transmitted from one generation to another, influencing the social behaviors of each gender and also representing the sexual stereotypes. Due to this the behavior of women and men are largely governed by the stereotypes of their social roles (Ridgeway, 2013; Rudman & Glick, 2012).

This theory is helpful in understanding the work culture in the construction industry, where women play a second fiddle because of their inadequate skills and knowledge about the industry and their lack of physical muscles to undertake some of the labor-intensive tasks in the sector. For one, the social roles inculcated in men have made them to expect no woman to join the industry and to discourage the few that are already in the construction industry. Therefore, the men have raised the social conventions barring them from social networks and education opportunities, which they need to thrive in the industry as professional employees and owners of construction firms. Rudman and Glick (2012) note that in order to conform to the societal expectations women have developed traits that manifest agency and are therefore more inclined to attributes such as competency, assertiveness and independence. They also learn to become more aggressive, which aligns them with their more significant roles. On the other hand, Newman and Newman (2012) observe that women have developed attributes that depict expressive or communal behavior, which hinders them from becoming aggressive. These communal traits are reflected in women tendency towards friendliness and kindness.

There are two processes that underlie the connection between the expectancies and behavior. For one, the socialization presided over by teachers and parents encourages each gender to acquire the different skills or qualities that facilitate their social role (Ridgeway, 2013). Secondly, these gender roles highly likely determine the course of action that an individual may choose in a particular setting (Newman & Newman, 2012).

In the construction industry women have had to develop macho behavior in order to fit in. This macho behavior is characterized by demonstrable assertiveness, competence and independence. This theory is therefore, relevant in helping to understand the conformity strategies that women in the construction have to adopt in order to be considered as relevant, hence become competitive. Rudman and Glick (2012) argue that the social role theory implies that the gender differences are flexible since they are based on their immediate social roles of the individual. For instance, people hold various roles simultaneously which impact on their behavior. Leadership positions at the workplace may override gender roles and greatly reduce the gender differences. Newman and Newman (2012) acknowledge the tendency for managers to assume that women as caregivers at home, experience conflict of interest between their family life and work place duties. The managers further assume that women can therefore not align to the goals of the organization and are not as a result subject to promotion.

On the other hand, Ridgeway (2013) notes that the social role theory implies that an individual could question the competence of a woman in a particular position, for instance leadership at the workplace. This is because men are expected to occupy the leadership roles. Due to this it is broadly assumed that leadership demands for the manifestation of an assertive personality. It is therefore assumed that leadership roles are aligned to male temperament. However Newman and Newman (2012) contradicts this supposition by claiming that the gender differences in regards to power are fast eroding especially with women gaining access to positions that were typically associated to men. This is invariably changing the social role that they hold in the society.

The most significant implication of the social role theory is that the people that have violated the gender stereotypes are in most instances perceived as being unfavorable. This means that gender stereotypes comes across as prescriptive and also descriptive, outlining how both genders ought to behave. The women that portray traits associated with men are regarded as less appealing and both men and women are biased towards women who violate the social stereotypes. The women that violate the social role are highly likely to become targets of sexual harassment (Ridgeway, 2013; Rudman & Glick, 2012).

The social role theory also provides the framework for understanding the mechanisms for socialization and the patterns of adult life, which include continuity and change. The theory also appreciates the concept for thinking about how the changes in the society are related to the changes in the life of an individual (Newman & Newman, 2015).

However, the theory is limited in the sense that it may not be relevant to the culture in the modern world. A study on altruistic behavior that conducted by Monk-Turner et al. (2002) established that there is no significant differences between women and men. The study suggested that the social role theory is not as relevant as it was back in the 80s when it was formulated since the gender roles are not as pronounced today as they were 20 years ago. The study on the dynamics of the gender stereotypes by Diekman, Goodfriend & Goodwin, (2004) also affirms the lack of significance differences between men and women in the modern world. Besides, the theory also provides no clear explanations of how individuals learn their role expectations. It therefore misses in the developmental perspectives in regards of the process of role awareness and the internalization of the role related expectations. Besides, the theory requires more distinct testable mechanisms for explaining how role loss or role gain is related to self-concept and identity (Newman & Newman, 2015).

The social role theory is therefore quite significant in helping to understand the gender discrimination in the construction industry in Kenya. The women in this male-dominated industry encounter numerous challenges ranging from sexual abuse, restricted opportunities for career advancement through education and training and restricted promotions irrespective of their competence. Based on this theory, these challenges that women face in the industry are as result of the social roles that they have been assigned which make their participation least appreciated in the industry.

2.2.3 Feminist Theory

According to Lingard and Francis (2009) gender is a major theme in regards to work-life debate due to the fact that work models continue rewarding the workers for whom their work take the center-stage and are also willing their involvement in other domains of life in order to manage heavy workloads, meet tight deadlines and demanding production targets. Besides, career advancement processes and appraisal systems reinforce gender stereotypes through normalizing the ideas of an ideal worker as the one that is available to work for long hours as required in project-based roles.

The traditional feminist theory was based on the premise of equality arguing that the differences between men and women are socially constructed and normally used to advance the interests of men. The feminist theory is therefore significant in explaining the prevailing gender imbalance in

the construction industry. Being a male dominated industry most of the workforce and enterprises are owned and managed by men. Women have been pushed at the peripheral, even those who are equally qualified as their male counterparts. The theory therefore, hints to the fact that this marginalization is a deliberate socially constructed mechanism for advancing the interests of men in the industry.

Lingard and Francis (2009) further note that newer theories of feminism have acknowledged that the differences between men and women are irrevocably related to sex and reproductive functions. For instance, the notion that equality means women being equal to men, which normalizes the imposition of the norms attributed to men. Consequently, in the workplace the success of women is based on their ability to conform to the traditional masculine work models that were created in an era in which women did not take part in paid work. The women who take time out of their work for instance for maternity leave, experience a lot of difficulties when it comes to advancing their careers in the construction industry and they leave the industry quite a frustrated lot. More than other industries, the construction industry forces women to play to the rules that were made for men.

Sospeter et al (2014) indicate that the feminist theory acknowledges that the subordination, oppression and inequality that is subjected to women is unethical. Women deserve equal legal and political rights. The feminist theorists have raised issues such as the disparity between men and women in regards to earning and advancement at the workplace. This disparity is attributed to the disadvantages that women face due to family issues and the work requirements for flexible schedules. The theorists argue that the different treatment that women and men face explains the differences in their earnings. The deprivation argument which emanates for the feminist theorists posit that the societal views deprive women of critical means for career advancement such as education, access to capital, industry experience and networking relationships. The deprivation of such opportunities limits the entrepreneurial success of women.

The feminist theory is important to the study as it provides a clear framework for understanding the social positioning of women and calls for the reassessment of the inequity and the social structure.

The theory also questions the purpose and origin of the individual and their social and political power. Furthermore, the theory has enabled the slow and evolutionary advancement in the social, economic and political aspects of women which has in some contexts translated into policies that

have advanced the rights of women (Gundy & Kappeler, 2014).

Ozumba and Osumba (2012) note that the feminist theory can be used to explain the increase of the proportion of emerging women contractors in the construction industry in South Africa. The South African government has come up with interventions that have generally leveled the playing field for women in the construction industry. However, the intervention are not enough as the poor footprint of women in the industry is still a function of discrimination in employment and the lack of support structures for the female staff.

The feminist theory has been criticized for its understanding of its main components that have categorized gender divisions that have used men as the main reference point. While this has proved necessary in some particular instances, it is not so in others where it obstructs the level of understanding, explanation and application in the context of the lives of women (Gundy & Kappeler, 2014).

The feminist theory also comes in numerous forms. While this can be regarded as a benefit in some occasions, it has also resulted into scattered research and the lack of uniformity in terms of scientific understanding. The different tenets of the theory have resulted into confusion amongst the theorists, academicians and lay people. This therefore does not allow for the consistency of the required systematic review and meta-analysis of the theory (Gundy & Kappeler, 2014). The feminist theory is therefore relevant for this study as it provided insight on the disparity between men and women and the challenges that women encounter when they venture into a sector of the economy that is male-dominated.

2.3 Empirical Review

The empirical literature was structured according to the study objectives which include; the effect of education level, social networks, personal traits and work culture on the choice of subsectors that women venture into in the construction industry in Kenya.

2.3.1 Access to education and its influence on the choice of subsectors that women venture into in the construction industry

Education is a prerequisite for placing women at the same pedestal with men in the construction industry. Such technical education is acquired through training at the tertiary and university level and entrenched through apprenticeship programs. In most cases, women have faced a hard time accessing such programs that are meant to enhance their competence, a phenomenon that is not just a preserve of the construction industry.

Access to education is a key determinant of the participation of women in the construction industry not just as employees but as owners of firms in the industry as well. Olusola, Olubola and Akintayo (2012) note that the barriers to entry for women into the construction industry starts earlier in their socialization and education and continues throughout their training and recruitment. These barriers are further perpetuated by the industry which continues to reinforce the male-only image and entrench a culture that undervalues women.

Olusola et al. (2012) perspective agrees with that of Bagilhole, Dainty and Neale (2002) who noted that the mainstream courses and programs in the United States which are provided by training institutions have created a host of challenges for the women that intend to make entrance into the construction industry. The instructors in these institutions who are predominantly men have low confidence in the female student and doubt that they could become technically competent. Shanmugam et al. (2007) further noted that even though an increasing number of women have acquired the appropriate educational qualifications for the sector, there is still the perception that they are not suitably qualified for the senior managerial positions. This is because the sector has limited the access of women to the wide range of developmental activities and experiences that are required to build their credibility, which they need to advance in the industry.

It is important to note that the acquisition of the required education does not translate into career progression in all contexts. For instance, in Thailand higher education level does not seem to guarantee women advancement in the construction industry. Kaewsri and Tongthong (2013) note that in spite of the number of women with degrees in civil engineering increasing, there are still very few women engineers that are holding professional engineering licenses which is a prerequisite for getting promotion or starting up their own ventures. According to the data from the Thailand Council of Engineers regarding the licensing of professional engineering practice there were only 0.3 % of women charter engineers out of the total of 50,670 civil engineers that held licenses for professional engineering practice in Thailand in 2009. The data also indicated that the progression of women engineers from associate engineers to fellow engineers was at a rate of 4.4 % as compared to the rate of 15.3 % for men. This means that women civil engineers in Thailand have markedly fewer chances for advancing their careers as compared to their male counterparts.

The National Women Law Center (2013) indicates that most of the highest paying skills trade in the construction industry in the United States require a large up-front investment in terms of training. Women in the industry are disadvantaged in accessing the high-skill training programs as there are various roadblocks for completing the training programs after they have enrolled such as outright discrimination by some men who regard them as intruders. The report further notes that the small number of women in the construction industry greatly limits the access of women to mentorship and other such like support that would help them complete their apprenticeship programs and progress in their careers. The industry in US requires that one secure a job as an apprentice with the trades so that they can get on-site training. Women find it difficult to access these trainings due to discrimination especially because apprentices are normally hired by experienced tradesmen who are required to formally supervise them (National Women Law Center, 2013).

This unequal access to the mandatory apprenticeship programs has left many women apprentice without the chance to complete the necessary part of their career. Studies have shown that a high rate of women leave the apprenticeship programs as compared to that of men. The women cite challenges such as sexual harassment, the lack of childcare and generally a hostile working environment. In most instances these problems are as a result of conscious discriminatory behavior that is designed to discourage women from joining or remaining in the industry (National Women Law Center, 2013).

Moodley (2012) conducted a study on women in the South African construction industry which revealed a broad range of issues. One of its findings was that women are capable of building successful careers in the industry. However, most women contractors are not involved in the management functions that are required for effective operations of their construction businesses. Instead, the women are basically involved in planning and organizing of their company's resources and in directing the human resources.

According to Burer (2016) industrial stakeholders in the commercial subsector concur that insufficient skilled manpower is a great concern in determining the outcome of construction projects. There are those construction companies that have employed short-term unskilled workers whose workmanship translates into poor quality works. Auma (2014) notes that the training of staff has a significant influence on the performance of the construction projects. Even though construction project leaders are endowed with particular technical skills, they lack other

basic management skills that are required for dealing with the cultural, human and environmental aspects of the project.

In her study, Auma (2014) concluded that most of the contractors select the construction project leaders based on factors such as their level of education and experience. The training of the staff and the project leader's professional training has a significant influence on the performance of a project. Mitullah and Wachira (2003) argue that the concept of competence in the context of the construction industry must be understood bearing in mind three distinct components. These include the adoption and use of up-to-date technology to its full potential, which has become essential in achieving a competitive edge in the construction industry. Competence also encompasses past work experience which entail the tacit knowledge that is acquired from previously executed projects, which may lead to the avoidance of unnecessary mistakes. The third component of competence involves the training of the staff who need to be equipped with the necessary skills so that they can give a quality output.

In sum, women empowerment through education is a key factor in influencing women to venture into the construction industry in the various subsectors. With construction industry being such a male-dominated field there is more than education that guarantees women sucess in their careers. If anything, education gives women a head start and makes them become able to compete with their male counterparts not just as employees but as owners of firms in various subsectors of the industry as well.

2.3.2 Social networks and their influence on the choice of subsectors that women venture into in the construction industry

The social network in the construction industry involves the connection between the various professionals in the sector. These connections are essential in sharing technical and business information, ideas and knowledge. Women in the construction industry need social networks in order to partner with players in the sector and even find business opportunities. They also require social networks in order to upgrade their competence and further develop their careers. The social networks that exist within the industry are essential in helping the women to advance their competencies and competitiveness. However, the social networks that exist outside the sector such as children and spouses may serve as a hindrance to the advancement of the prospects of women not just as employees but as owners of firms in the industry as well.

In terms of social relations outside the workplace, women in the construction industry have found themselves torn between managing their domestic affairs and work affairs in such a manner that neither one affects the other. Kaewsri and Tongthong (2013) note that the goals of women in regards to their lives are split between their career and the people in their lives. As a result of this, there are three factors in the form of personal, organizational and societal influences that shape their work-life balance.

Adogbo, Ibrahim and Ibrahim (2015) also acknowledge that family responsibilities affect the ability of women to perform well in the construction industry. The women in the industry are confronted with the choice to either focus on their family responsibilities than their career development or vice versa. The experiences of these women have demonstrated that the best option available is finding a middle ground where they can both take care of their family obligation and the development of their career. These women are pressured to work long hours, which negatively impact on their family life. When the family responsibilities are more demanding the women end up experiencing low motivation at work.

Kaewsri and Tongthong (2013) argument could be contested in the case where the spouse or family of the women construction firm owner is the source of her motivation to achieve the best in her career and business pursuit. There are also some women who are not married and therefore do not have the middle ground that Adogbo et al. (2015) describes, where they have to choose between family obligations and career or business advancement. However, in most instances the social networks emanating from outside the construction industry in the form of family is a significant obstacle to the business and career growth of the women in the sector.

For instance, Lingard and Francis (2005) observed that the female engineers in Australia were more restricted with the work outside their homes and household chores as compared to their male counterparts. The women engineers were weighed down by their household responsibilities besides, the volatile working conditions in the construction industry demanded their fulltime labor and attention. Consequently, Lingard and Francis (2005) asserts that the women engineers scored lower as compared to their male counterpart in terms of turnover rates and the balance between work-life conflicts.

The social networks within the industry are also structured in such a manner that benefits men the most. Kaewsri and Tongthong (2013) argue that the male-dominated construction industry tends to hinder the professional development of women in a number of ways. For one, it is

increasingly difficult for women in this industry to assume leadership roles when they are largely relegated to secondary roles such as clerical work. Secondly, the male culture apparently belittles the contribution of women in the construction industry and thirdly, there are a number of rigid rules that have proved as effective hindrances to the career paths of women in this industry.

In terms of social networks within the industry, women lack stronger connections that can help the further develop their skills and competencies in the industry. For instance, Shanmugam et al. (2007) noted that in the United Kingdom women in the construction industry lacked access to informal networks which are essential for the acquisition of high-profile career development opportunities in the sector.

The report by National Women Law Center (2013) states that women in the construction industry in the United States face obstacles during their the pre-apprenticeship and the apprenticeship programs getting only a small share of participation in the programs. Whereas apprenticeship is the traditional path to opportunities in the skills trades in the construction industry, the entry into the program is largely dependent on the access to information about where, how and when to apply. The prospective entrant also needs to have information on the training and skills that are required for a particular occupation. The access to such information is in most instances tightly controlled by the construction workers that are mostly men who often exclude women characterizing the insular nature of the skills trades in the industry.

Therefore, the report by the National Women Law Center concurs with Shanmugam et al. (2007) that women require social connections within the construction industry to enable them acquire necessary skills for boasting their competence. These connections are however not easily accessible to them therefore denying them the opportunities for growth as employers and also owners of construction firms within the subsectors. The relationships that women have with men in the sector do not automatically yield positive results for them. Such social networks have presented some of the cultural barriers that women in the industry have to contend with. Adogbo, Ibrahim and Ibrahim (2015) note that the cultural barriers are entrenched in people's mind and requires significant reorientations for both men and women in order to create the acceptance that women too can play a significant role in the construction industry. These cultural barriers are reflected in the long-standing traditions of the construction sector, which has largely been regarded as male-domain, and women need therefore to seek employment in other careers.

Evidently, it is impossible to work in the construction industry without interacting with men and this has in some instances become a source of conflict between the women working in the industry and their spouses. The interaction is also fraught with tension. For instance, women who work in the industry as professionals have a hard time as they need to interact with men most of whom are not literate and cannot express themselves in English. Therefore, these cultural expectations have also limited the interaction of women. The women in the industry who highly value societal approval have a difficult time managing their professional work and the expectations of the society in a manner that they are not labeled as being "loose women" (Adogbo et al., 2015). They further note that the cultural issues are of two dimensions: there is the culture in the society and the culture in the construction industry. Societal culture influences the career paths of most women and the industry culture affect whether the women in it progress or quit altogether.

Another crucial missing link in the social networks within the industry is the absence of successful women who can serve as role models for the younger generations of women that are venturing into the sector. Adogbo et al. (2015) notes that the success of women in the construction industry is undoubtedly a motivation for more success by other women, particularly those that are entering the industry. Such mentoring is important in providing women with the self-confidence and skills sets that they need to pursue their career and advance their prospects. The women that have achieved success in the industry have had to rely on male mentors.

The social networks in the construction industry are essential for facilitating skills transfer whereby the experienced tradesmen gain skills and experience from the formal construction firms and then pass it over to the workers under them. Such skilled tradesmen are normally given supervisory roles and in that way they are able to pass the new technologies to the contractors or workers (Mitullah & Wachira, 2003). Kogi (2013) found in his study that the relationship between the client and contractor was a significant criterion in determining whether or not a contractor is selected to implement a particular project.

Apart from the transfer of skill through supervision, social networks in the commercial and residential construction subsectors facilitate training for new entrants into the subsectors. A significant percentage of the workers that operate in these subsectors have acquired their training through apprenticeship. The new entrants are taken in as apprentices who are then attached to the experienced tradesmen in specific areas of interest. The new entrants therefore, begin as

unskilled labour and over the duration of time, after working under close supervision of the skilled workmen, they expand their knowledge in specified work as they at the same time acquire requisite skills. Once they acquire the relevant skills, knowledge and experience they go ahead to take up some specific works on their own (Mitullah & Wachira, 2003).

It is no doubt that women in the construction industry require social connections to advance their careers, businesses and also be able to compete with their male counterparts. These social connections are crippled by factors such as the societal expectations about women who are largely regarded as unfit for the sector and the lack of role models to enhance connection amongst the women folk in the sector.

2.3.3 Work Culture and its influence on the choice of subsectors that women venture into in the construction industry

The work culture in the construction industry is largely meant to favor men as opposed to women. For instance, in the United Kingdom, as in many other cultures across the world the culture in the construction industry is male dominated (Rajkumar, Swaathi & Sivaranjani, 2016). Rajkumar, Swaathi and Sivaranjani (2016) note that women face numerous forms of discrimination in the male-dominated construction industry just like in other professions where they are regarded as playing a peripheral role as compared to that of their male counterparts.

For instance, their work environment is characterized by relationships that are normally full of arguments, crisis and conflict. This has led to the common practice of women's initial entry into the industry as technical specialists instead of taking leadership positions.

Kaewsri and Tongthong (2013) note that the most prevalent challenge characterizing male-dominated working environment involves sexual harassment. In the same vein, Radhlinah and Monika (2011) further point out that the resentment against women in the sector is manifested in either covert or overt discriminatory behavior that their male counterpart direct towards them. These discriminatory behavior ranges from direct gender harassment and bullying by their male colleagues. There are female leaders in the industry are also subjected to distrust and face an obstructionist attitude from the male workers. This makes their jobs increasingly difficult and causes some to leave the industry.

Rajkumar, Swaathi and Sivaranjani (2016) and Kaewsri and Tongthong (2013) concur that gender plays a crucial role in determining the work culture in the construction industry. This

notion is affirmed by Shanmugam et al. (2007) who also noted that macho culture in the construction industry is largely characterized by crisis, argument and conflict which result into a hostile working environment that is unfavorable to women. There are stereotypical barriers that are erected in the way of the women entering the sector particularly regarding to the nature of the women professionals and the nature of their profession. This has resulted into the trend whereby the women who eventually enter the sector majorly end up in the technical specialist positions rather than the general managerial positions.

Radhlinah and Monika (2011) argue that apart from acquiring the necessary technical skills women in the construction industry are required to develop the capacity to fit into the accepted behavior of their workplace, which can at times be quite problematic. A Swedish study on the psychological and physical working environment of construction workers revealed that women agreed that they had to cope with the physical part of the job and that they also had to develop psychological strength needed at the building site. The women working at the site acknowledged that they needed to be just as good as their male counterparts. They also acknowledged that they needed to fit into the accepted behavior of their workplace, which at times implied that they compromise their female identity.

In South Africa women in the construction industry are hardly taken seriously as professionals. These trends begin at an early stage in their career life while they are still girls pursuing technical subjects at schools. They are mostly taught by male lecturers and even at the workplace where men mentor them. Furthermore, women in construction industry in South Africa are paid less as compared to their male colleague. This is because they are undervalued and they are rarely considered fit for promotion (Smallwood, 2013).

Women entrepreneurs in the construction industry have few role models and this is due to the fact senior women managers are rare in most male-dominated industries. Besides, construction industry has largely failed to take into account some of the crucial issues that are associated with women obligations towards their jobs and family. Given that construction companies tend to regard family and work as completely distinct aspects, the women leaders often highlight the balancing of the multiple commitment as a significant barrier to the further development of their career. The women leaders who have families are faced with more difficulties in striking a balance between their work and family commitments. Additionally, the women leaders in the construction industry have also to contend with childcare problems and career breaks. The

society has placed the burden of bearing children on women and this is an additional responsibility to the career woman in the construction industry (Amaratunga et al., 2015).

Apart from the social working environment there is also the physical environment that affects the work culture in the construction industry. Radhlinah and Monika (2011) acknowledge that the workplace culture in the construction industry presents a significant challenge to the female working in the sector. For instance, the temporary sanitary facilities are normally unisex and do not guarantee any privacy apart from the fact that they are generally not maintained well. Women in the sector also complain of ill-fitting personal protective clothing and personal protective equipment, which are not to their sizes and may eventually compromise their personal health and safety. Due to the macho culture in the industry, Kaewsri and Tongthong (2013) note that women are confronted with two choices if they intend to make any progress in the male-dominated construction industry: they either have to act like their male counterparts or to lower their goals and take up secondary positions.

The working patterns in the construction industry are also another factor that influence the participation of women in the sector. The traditional long hours which in most instances overspill to the weekend and the nature of the projects in the sector demand that women spend more time at their work particularly at the start and completion of the contracts. In this way, women are kept away from the domestic obligations and at times have to travel long distances away from home. The temporary nature of the construction project demand that the construction sites have fewer facilities than can be in an office set up. However, the women that work in the head offices of the construction companies have quite different practices and better physical facilities within their working environment (Amaratunga et al., 2015).

The underrepresentation of women in the senior levels of the construction industry and the negative experiences that other women have encountered have discouraged younger women from entering the industry or to seek to climb up the ladder. The women in the industry acknowledge that they need to prove their capabilities through working even harder than their male counterparts in order to retain their positions. The negative attitude towards their promotions has made many women fail to pursue appropriate training to further develop the executive skills that are required for senior management (Amaratunga et al., 2015).

2.3.4 Personal traits and their influence on the choice of subsectors that women venture into in the Construction Industry

Ginige et al. (2007) notes that the gender stereotypical belief characterized by "think-manager-think-male" is found in almost all organization irrespective of sector, era or culture. This belief holds women that have feminine characteristics from moving up the rung in the career ladder. However, feminine characteristics bring diversity into organizations. Being male-dominated, the gender stereotypes in the construction industry are direct antecedents of the discrimination of women. If anything, the "norm characteristics of managers in construction are perceived as masculine." This restricts the women in the industry from opportunities such as further training and promotion.

Wangle (2009) concurs with Ginige et al. (2007) in claiming that the leadership trends in the construction industry is slowly shifting towards women leadership. This can be attributed to the gradual breaking down of the barriers and disadvantages that women have generally faced in the society. It is also attributed to the increment in the number of women in the labor force. The women in the industry have adapted to assertiveness, dominance and masculinity.They have also began to value job attributes such as challenge, prestige, leadership, power and freedom, making them more similar to their male counterparts. Wangle (2009) further notes that the leadership roles have greatly changed: for instance, the "role of the manager is no longer solely characterized as being male. Management is more driven by factors such as results rather than the old boy networks. Besides, competence is currently more rewarded than gender and this has leveled the playing field for the traditional male-dominated industries such as the construction sector.

In a study, Smallwood (2013) established that qualities such as commitment, acknowledgement, confidence, self-promotion and responsibility have a significant impact on the core competencies of the women in the construction industry. The women in this industry have demonstrated that they are ready to work harder so that they can succeed whenever they are given a chance to prove themselves. These women have done well in situations where they are required to manage different projects at a go. More particularly, the women in the managerial positions have come across as more demanding as compared to their male counterparts. These women have the confidence for pursuing and motivating themselves, well knowing that they can competently get the job done.

Amaratunga et al. (2015) propose that since the construction industry is renowned for its disruptive conflicts and breakdown in communication, women are well placed when it comes to communication skills and are well-developed in terms of their interpersonal skills, with a soft approach at handling people; their leadership skills and qualities can come in handy to resolve the problems that the industry faces. Therefore, for women to participate in the construction industry as professional employees or owners they need to demonstrate their competence both in terms of technical and leadership skills. As Smallwood (2013) notes, leadership qualities such as commitment, acknowledgement, confidence, self-promotion and responsibility have a significant impact on the core competencies of the women in the construction industry. With proven competence the women in the construction industry can compete with their male counterparts.

2.4 Gaps in the Existing Literature

There are numerous studies that have been conducted in regards to the participation of women as owners and/or managers in male-dominated industries in Kenya. For instance, Kamau (2012) investigated the factors that affect women career advancement in the banking industry in Kenya, a case study that was based on the branches of the Kenya Commercial Bank in Nairobi County. The study established that factors such as gender issues; age, diligence, tenure, reputation, skills and performance affected the advancement of women careers. Besides the study being conducted in the banking industry, it did not examine the factors such as education levels; social network, work culture and role models affect the career progression of women in the industry. The study also focused on women working in the banking sector and not entrepreneurs.

In another study, Njiru (2013) looked at the factors that affect career progression of women in the corporate sector. This was a case study based on the Standard Chartered Bank in Nairobi. The study established that the difficulty to balance work and family life resulted in high stress levels for women amongst other factors. The findings of these two studies are important in understanding the obstacles that women face in the corporate Kenya towards the advancement of their career. This study largely focused in the work culture in the corporate sector in Kenya, without specifically looking at the male-dominated industries in Kenya. The study also did not address the factors such as education levels, social network, competence and role models, which are the focus of the present study.

Kirai and Mukulu (2012) studied the perceived organizational barriers that affect the progression of women career in the civil service in Kenya. They established that organizational practices in

regards to recruiting, selection and promotion are the significant hurdles towards the advancement of women careers in the Kenyan civil service. Nchabira (2013) examined also the barriers that women face towards the progression of their careers in the civil service in Kenya. The study established that factors such as social cultural beliefs, gender stereotypes, individual characteristics and organizational structures played a significant role in influencing the progression of careers for women in the Kenyan civil service. These studies were based on women in the public sector, which are not necessarily male dominated. However, the study point out significant barriers that these women encounter such as gender stereotypes, organizational structures and organizational practices. While they are similar to those that women face in male dominated fields such as construction, the studies did not specifically looking into other factors such as social networks and role models.

Kyalo (2013) examined the factors that influenced the women entrepreneurs in Kenya to startup enterprises in male dominated sectors of the Kenyan economy. The study established that there were key social network and demographic factors that affected the starting up of enterprises by women in the male dominated sectors of the Kenyan economy. The study excluded the access to legal and financial assistance and the regulatory environment as key determinants of women startups in the male dominated industries in Kenya. Ragui et al. (2014) studied the demographic factors that and the social network influences on the startups by women in the male dominated industries in Kenya. These studies established that there was a significant statistics relation between social networks and the success of women startups in the male dominated industry. Both studies zeroed in on male dominated industries. They were however quite generalized as opposed to the present study, which focuses on the factors that influence the choice of subsectors that women venture into in the construction industry. Besides, the studies by Kyalo (2013) and Kyalo et al. (2014) majorly concentrated on social network and demographic factors excluding other factors such as role models and competence.

2.5 Conceptual Framework

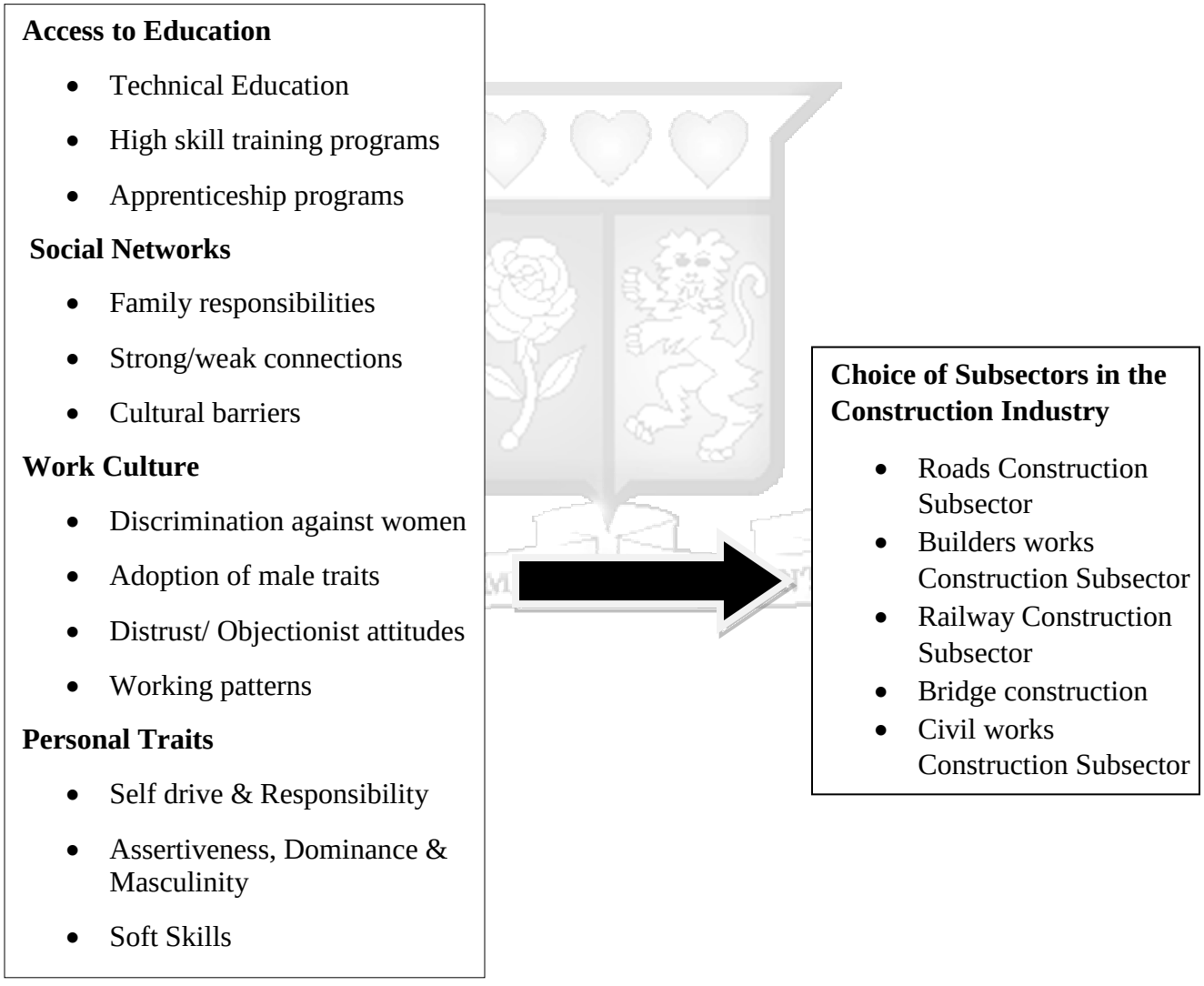
The conceptual framework explains the relationship between the independent variables and the dependent variable. The independent variables include; access to education, social networks, work culture and personal traits and the dependent variable was the choice of subsectors in construction industry.

Figure 2.1: Relationship between the factors influencing the choice of the subsector and the sub sectors in the construction industry

The figure below explains the relationship between the independent variables and the dependent variable. The independent variables were the factors influencing the choice of subsectors by women in the construction industry.

Figure 2.1 Conceptual framework

Independent Variables **Dependent Variable**



Source: Author (2018)

2.6 Operationalization of the variables

This subsection outlines how the researcher will measure the independent and dependent variables.

Table 2.1 Operationalization of variables

Variable	Constructs	Operational definition	Measurement Indicator	Source
Independent Variable: **Access to Education**	Technical education High-skill training programs Apprenticeship programs	Access to education is the degree to which women industry have acquired academic qualifications relevant to the construction industry.	A likert scale of five points was used to the measure constructs under the variable.	Kaewsri & Tongthong (2013), Olusola et al. (2012) and Moodley (2012).
Social networks	Family responsibilities Strong/ Weak connections Cultural barriers	The social connections at the disposal of the women in the construction industry, which are relevant for the progression of their careers with in various subsectors in the industry.	A likert scale of five points was used to measure constructs under the variable.	Adogbo et al. (2015), Lingard and Francis (2005).
Work culture	Discrimination against women Adoption of male traits in order to compete with male counterparts Distrust/Obstructionist attitudes from the male counterparts	This implies the social environment among the various subsectors within the construction industry.	A likert scale of five points was used to measure the constructs under the variable.	Rajkumar, Swaathi & Sivaranjani (2016), Radhlinah and Monika (2011), Smallwood (2013), Amaratunga et al.(2015)
Personal Traits	Self drive & Responsibility Assertiveness,	This implies Personal traits and their influence to venture into various subsectors	A likert scale of five points was used to measure the constructs	Amaratunga et al. (2015),

	Dominanance & Masculinity Adaptation of male qualities e.g. assertiveness, dominance and masculinity Soft skills for effective communication	within the construction industry.	under the variable.	Smallwood (2013), Wangle (2009).
Dependent Variable: Choice of Subsectors in the Construction Industry	Residential Construction Subsector Industrial Construction Subsector Commercial Construction Subsector Civil Construction Subsector	The choice to venture in the subsectors in construction industry.	A nominal scale was used to measure the constructs under the variable.	Amaratunga et al. (2015)

Source: Author (2018)

2.7 Chapter Summary

This chapter began by discussing relevant theories in this study. The human capital theory, social networks theory and the feminist theory. The chapter also included an empirical analysis where the education level, social networks, work culture and personal traits are discussed. The research gap drawn from differences in empirical results and conceptualization of variables was highlighted. Finally, the conceptual framework elaborated the relationship between the independent and dependent variable in the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design and the methodologies that were used in the study. The chapter began with the discussion of the research design, the target population, sample size and sampling procedure. The chapter also discussed the data collection instrument that was used in the study, the data collection procedures, ethical considerations and data analysis procedures.

3.2 Research Philosophy

This study adopted the interpretivism research philosophy. This philosophy advocates for the researcher to understand the differences between humans in their roles as social actors. The concept of social role is essential in this regard because it implies that people play their parts according to how they interpret their roles in the society (Creswell, 2014). This philosophy befitted the study since it sought to understand the factors that influenced women to venture into various subsectors within the construction industry.

3.3 Research Design

The research design is the structure upon which a study is organized. The research design is an important component of the methodological and analytical framework that is used to answer the research questions and to disapprove or approve a hypothesis (Kombo & Tromp, 2012). The descriptive research design was adopted for this study.

Descriptive research design describes the particular characteristics of a group of people, an event or a phenomenon. It is considered as one of the first steps in the process of understanding social problems (Denscombe, 2010). The research design is majorly determined by the purpose of the study and the research questions that the study seeks to answer (Kothari, 2011). The purpose of this study was to investigate the factors that influence women to venture into the various subsectors in the construction industry in Kenya. The descriptive research design was suitable for the study since the researcher was investigating the factors that influence the choice of women to venture into the various subsectors within the construction industry in regards to their education levels, social networks, work culture and personal traits.

3.4 Target Population

The population of a research study consists of the elements that researcher intends to investigate, evaluate and measure (Kombo & Tromp, 2012). Mugenda and Mugenda (2003) define the population as a group of individuals, objects or cases that have some common observable characteristics. Each study's population has characteristics that differentiate them from other populations. The population for this study included the 256 construction companies in Kenya (Construction in Kenya- Business List of Construction companies, 2016). On the other hand, the target population of a research study consisted of the specific group of objects of individuals that the researcher seeks to use its finding to generalize to the study's population (Mugenda & Mugenda, 2003). The target population of this study was made up of the women who have ventured into the various subsectors within the construction industry in Nairobi County.

3.5 Sampling Procedure and Sample Size

The sampling for this study was established through the purposive sampling method based on the listed contractors in Nairobi County according to the business list of the construction companies in Kenya (Construction in Kenya- Business List of Construction companies, 2016). Purposive sampling is also referred to as selective or judgmental sampling and involve the conscious selection of the research participants by the researcher. The major aim of purposive sampling is to include participants who are rich in information regarding the subject under study in order to acquire in-depth information (Kombo & Tromp, 2012). In order to obtain information on the factors that affect the choice of the sector in the construction industry for women entrepreneurs the researcher targeted the women-run enterprises listed in the 2016 Business List of Construction Companies; thereafter, making appointments with those who later accepted to take part in the study. Subsequently, the sample was made up of women who are owners of businesses of the 72 construction companies in Nairobi County (Public Procurement Oversight Authority construction SMEs, 2014). This method was relevant for this study given that the construction industry is largely male-dominated and the use of other sampling methods such as random sampling would not guarantee the inclusion of women respondents in the study.

3.6 Data Collection Instruments

Well-structured questionnaires were used to collect the primary data in this study. The questionnaire is one of the most frequently used as tool for data collection in social research.

Questionnaires are made of a series of items presented in a written format and in a fixed order with each respondents required to answer questions on every item (Kombo & Tromp, 2012). Questionnaires provide consistency of the questions, they are cost-effective and are easy to administer (Cooper & Schindler, 2008) therefore questionnaires were considered relevant for this study.

The questionnaires used in this study were made up of closed-ended questions, listing pre-determined options of responses. The researcher opted for close-ended because they are easy to administer, easy to analyze and they are also economical in terms of money and time (Mugenda & Mugenda, 2003). The questionnaires also used matrix questions, which had the Likert scales. The researcher adopted the matrix questions with Likert scales in order to minimize subjectivity and to enable the quantitative analysis of the data as Mugenda and Mugenda (2003) proposes.

A cover letter was attached to the questionnaire, clarifying the nature and objective of the study and reaffirming the confidentiality of the information to be provided. The respondents were given a week to fill up the questionnaires after which the researcher collected the questionnaires after making a follow-up call. An additional one week was provided to those respondents who requested for more time to fill up the questionnaires. Other respondents provided their emails through which the questionnaires were sent to them. Upon elapsing of this duration of this time, the researcher sent a new copy of the questionnaire and a follow up letter urging the respondents to complete them. Mugenda and Mugenda, (2003) argues that even though this follow up method is expensive, it is the most effective given that in most instances where questionnaires are not returned it is because they are misplaced.

3.7 Data Analysis

The main objective of the study was to establish the influence of education, social networks, work culture and personal traits on the selection of the sub-sector or involvement within the construction industry. Given the nominal nature of the dependent variable, a multinomial logistic regression analysis was performed to address the influence of each dependent variable (the factors) on the choice of sub-sector among women in the construction industry. The result of the analysis would serve to inform on the odds of selection of the various sub-sectors as a function of the influence of the independent variables – education, social networks, work culture, and personal traits. The analysis was performed using the analysis tool SPSS and the interpretation of the relationships done on the basis of the output odd's ratios (Exp B) as is the standard with

logistic regression (Starkweather & Moske, 2011). The median response for each category of factors was determined and used as the unit of evaluation for each of the responses in the dataset. The median was chosen over the traditionally used mean as the preferred measure of central tendency as it is suited for ordinal data (Jamieson, 2004).

3.8 Research Quality

Research quality was ascertained by ensuring its validity and reliability. Kombo and Tromp (2012) define reliability is the measure of the degree to which a research tool yields results that are consistent or the degree to which the data is consistent after repeated trial. The reliability of the questionnaire in this study was ascertained using the test-retest technique. Babbie (2010) regards the test-retest technique as involving the assessment of the reliability of the data through administering the same research instrument at least twice to the same groups of respondents. There should be a time lapse between the first and second test. The researcher selected an appropriate group of respondents and then administered the test to them. Keeping the questionnaire constant, the researcher again administered the tool to the same group of respondents after a period of three weeks. The researcher thereafter correlated the data generated from both score to ascertain if they were consistent. The results of data collected showed that there was consistency between the first and the second test.

Denscombe (2010) defines validity as meaningfulness and accuracy of the inferences based on the results of the study. In other terms, validity is the extent to which the results that are obtained from the data analysis actually represent the subject of the study. The validity of data is basically represented by the absence or presence of systematic error in the data. Through piloting the questionnaire the researcher was able to ascertain the validity of the data that was collected in this study.

3.7.1 Pilot Testing of Instruments

Upon the final development of the questionnaire there is need for trying it out in the field. This is referred to as pretesting the questionnaire. The pretesting should be done with the selected sample that is similar to the actual sample that the researcher intends to use in their study. However, the respondents in the actual sample should not be used in pretesting the questionnaire (Denscombe, 2010).

In this study, the researcher pretested five questionnaires. In pretesting the questionnaire, the researcher used the same procedure as the one that was applied in the actual data collection procedure. The pre-tested questionnaires were not part of the respondents that were included in this study. This, as Mugenda and Mugenda (2003) notes, will enable the researcher to make meaningful observations about the data collection tool. The researcher encouraged the respondents to give their comments and suggestions regarding the clarity of questions, instructions and their particular relevance.

3.9 Ethical Considerations

The ethical issues involved in this study included informed consent, anonymity and confidentiality. Every participant in a research study was well informed about the nature of the research study and how the researcher was going to use the information that they are providing. Informed consent should mean more than just appending a signature to some paperwork but rather give the participant the right to contribute to the study, retract the data that they will provide or withdraw from the study at any time of their choosing (Graton & Jones, 2010). On the other hand, anonymity ensures that the identity of the participants and the privacy of the information that they provide are protected. This was achieved through delinking the collected data, through un-identifying the data collection tool by excluding the names and phone numbers of the participants (Monette, Sullivan & DeJong, 2013).

The researcher debriefed the participants in this study on issues such as the nature of the study and anything that they would wish to know about the research study. The researcher assured the participants of their right to withdraw from the study at any time if they decided that they no longer wished that their data should be used for the study. In order to secure the anonymity of the respondents the researcher was required that the respondent do not provide any names or information that may disclose their identity. The researcher also coded the completed questionnaires instead of using names of the participants or their companies.

3.10 Chapter Summary

A discussion of the research philosophy, research design, data collection method, sampling procedure, pilot testing, research quality, data collection techniques, data analysis and ethical consideration was brought out in this chapter.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATIONS

4.1 Introduction

This chapter presents the results and findings of the study on the factors influencing women to venture into various subsectors within the construction industry in Kenya. The first section covered the demographic information of the respondents included in this study. The second section presented and discussed the data regarding the nature of women business start-ups in the various subsectors within the construction industry.

4.2 Descriptive statistics

The section below covered the findings based on the demographic information of the respondents in terms of age, number of years working in the industry, level of education and company co-ownership. It also provides a summary description of the data on the dependent and independent variables.

4.2.1 Demographic and profile descriptive

The study found out that most of the women in the construction industry 67.6% were aged between 25 to 30 years, while 5.4% were aged between 41 to 45 years. The findings of the study demonstrated that most of the women entrepreneurs in the construction industry were young, aged between 25 to 30 years as shown in Table 4.1 below.

The findings of the study as shown in Table 4.2 below, established that most of the women entrepreneurs 56.8% have worked in the construction industry for the duration of between 5 to 10 years while 2.7% have worked in the industry for a period of 16 to 20 years. The findings found that most of the women entrepreneurs 62.2% in the construction industry have degree level of education and 10.8% are at masters level of education.

The study's finding also showed that most of the companies in the construction industry 64.9% that are run by women entrepreneurs are co-owned whereas 24.3% of such companies are not co-owned. In most of the partnerships of the women enterprises 56.8% are made up of partnerships of both male and female and 29.7% of the partnerships are all-female partnerships.

About 63.9% of the women entrepreneurs in the construction industry are in building construction; 16.7% are both in the civil works and road construction whereas 2.8% are in railway construction.

Table 4.1 Demographic Profile

Descriptive statistics (Qualitative data):			
Variable\Statistic	Categories	Frequency per category	Rel. frequency per category (%)
Age of Respondents	25-30 Years	25	67.568
	31-35 Years	5	13.514
	36-40 Years	5	13.514
	41-45 Years	2	5.405
Number of Years Working in the Construction Industry	5-10 Years	21	56.757
	Less than 5 years	9	24.324
	11-15 Years	6	16.216
	16-20 Years	1	2.703
Level of Education	Undergraduate Degree	23	62.162
	Diploma	10	27.027
	Masters	4	10.811

Source: Survey data (2018)

Table 4.2: Firm Profile

Descriptive statistics (Qualitative data):			
Variable\Statistic		Frequency per category	Rel. frequency per category (%)
Company Co-Owned?	Yes	24	64.865
	No	9	24.324
	Invalid	4	10.811
Gender of Partnership	Undisclosed	21	56.757
	Female	11	29.73
	Male	5	13.514
Area of Specialization	Builders Works	23	62.162
	Road Construction	6	16.216
	Civil Works	6	16.216
	Invalid	1	2.703
	Railway construction	1	2.703

Source: Survey data (2018)

4.2.2 Variable descriptive analysis

Each variable was assessed through multiple questions. This section provides the frequency of and percentage responses per category for each of the responses (1 to 5 being strongly disagree and 5 strongly agree) and compares these with those from other sub-sectors and with the overall mean and standard deviation.

4.2.2.1 Education descriptive analysis

Four questions, each addressing a particular dimension, were used to assess this dimension. Respondents in the category “Civil works” generally provided the highest ratings for this category thereby indicating that they generally perceived education to be an important factor – lack thereof – in determining the prowess of women in the industry. The various responses and their relative frequency are depicted in table 4.3.

Table 4.3 Education responses

		EDUCATION							
		Technical Education	Percent	High Skill Training	Percent	Apprenticeship	Percent	Acquired Education	Percent
ROAD CONSTRUCTION	1	2	33%	3	50%	2	33%	3	50%
	2	4	67%	3	50%	3	50%	3	50%
	3	0	0%	0	0%	1	17%	0	0%
	4	0	0%	0	0%	0	0%	0	0%
	5	0	0%	0	0%	0	0%	0	0%
	Mean	1.67		1.50		1.83		1.50	
	SD	0.52		0.55		0.75		0.55	
	OVERALL MEAN	2.19		2.57		2.16		1.51	
	OVERALL SD	1.20		1.12		0.96		0.51	
BUILDERS WORKS	1	7	30%	4	17%	7	30%	10	43%
	2	10	43%	6	26%	10	43%	13	57%
	3	3	13%	5	22%	4	17%	0	0%
	4	1	4%	8	35%	2	9%	0	0%
	5	2	9%	0	0%	0	0%	0	0%
	Mean	2.17		2.74		2.04		1.57	
	SD	1.19		1.14		0.93		0.51	
	OVERALL MEAN	2.19		2.57		2.16		1.51	
	OVERALL SD	1.20		1.12		0.96		0.51	
RAILWAY	1	0	0%	0	0%	0	0%	0	0%
	2	1	100%	0	0%	0	0%	1	100%
	3	0	0%	1	100%	0	0%	0	0%
	4	0	0%	0	0%	1	100%	0	0%
	5	0	0%	0	0%	0	0%	0	0%
	OVERALL MEAN	2.19		2.57		2.16		1.51	
	OVERALL SD	1.20		1.12		0.96		0.51	
CIVIL WORKS	1	2	33%	0	0%	1	17%	4	67%
	2	2	33%	4	67%	2	33%	2	33%
	3	0	0%	0	0%	2	33%	0	0%
	4	2	33%	2	33%	1	17%	0	0%
	5	0	0%	0	0%	0	0%	0	0%
	Mean	2.71		2.86		2.57		1.29	
	SD	1.60		1.07		0.98		0.49	
	OVERALL MEAN	2.19		2.57		2.16		1.51	
	OVERALL SD	1.20		1.12		0.96		0.51	

Source: Survey data (2018)

4.2.2.2 Social networks descriptive analysis

Respondents in the category civil works generally indicated higher ratings than their counterparts in other sectors. This is depicted in table 4.4. The general inference, therefore, was that social networks were more important as a factor among individuals in the sub-sector. Respondents in the category "builders works" generally provided lower ratings for this category hence indicating that they generally did not view the dimension as a limiting one for women.

Table 4.4 Social Networks responses

	SOCIAL NETWORKS					
		Influence of Family Responsibility on Business Career	Percent	Lack of Connections Limit Further Skills Development for Women	Percent	Cultural Barriers Hinder Business Career Growth	Percent
ROAD CONSTRUCTION	1	2	40%	4	67%	1	17%
	2	3	60%	2	33%	5	83%
	3	0	0%	0	0%	0	0%
	4	0	0%	0	0%	0	0%
	5	0	0%	0	0%	0	0%
	Mean	1.83		2.00		1.83	
	SD	0.41		0.89		1.17	
	Overall Mean	2.27		2.51		2.38	
	Overall SD	1.17		1.07		1.16	
BUILDERS WORK	1	3	21%	17	74%	9	39%
	2	9	64%	6	26%	7	30%
	3	2	14%	0	0%	3	13%
	4	0	0%	0	0%	2	9%
	5	0	0%	0	0%	2	9%
	Mean	2.17		2.70		2.22	
	SD	1.30		1.15		1.04	
	Overall Mean	2.27		2.51		2.38	
	Overall SD	1.17		1.07		1.16	
RAILWAY	1	0	0%	0	0%	0	0%
	2	0	0%	1	100%	1	100%
	3	0	0%	0	0%	0	0%
	4	0	0%	0	0%	0	0%
	5	0	0%	0	0%	0	0%
	Overall Mean	2.27		2.51		2.38	
	Overall SD	1.17		1.07		1.16	
CIVIL WORKS	1	0	0%	2	33%	2	33%
	2	1	50%	4	67%	1	17%
	3	1	50%	0	0%	3	50%
	4	0	0%	0	0%	0	0%
	5	0	0%	0	0%	0	0%
	Mean	3.00		2.43		3.43	
	SD	1.00		0.98		1.13	
	Overall Mean	2.27		2.51		2.38	
	Overall SD	1.17		1.07		1.16	

Source: Survey data (2018)

4.2.2.3 Work culture descriptive analysis

Persons in road constructions generally indicated lower ratings on cultural factors as a limiting factor for women. It therefore was inferred that the factor played a role in informing the respondents participation in the industry. This was particularly noteworthy given that respondents in the other sectors indicated higher ratings – as informed from their means – for the dimension. The various ratings for each question are presented in table 4.5

Table 4.5 Work Culture descriptive responses

	WORK CULTURE								
		Distrust and objectification	Percent	Adopt to Male Traits	Percent	Working Pattern	Percent	Capacity to Fit	Percent
ROAD CONSTRUCTION	1	2	33%	3	50%	2	33%	1	17%
	2	2	33%	2	33%	4	67%	5	83%
	3	2	33%	0	0%	0	0%	0	0%
	4	1	1%	1	17%	0	0%	0	0%
	5	0	0%	0	0%	0	0%	0	0%
	Mean	1.83		2.33		1.67		2.17	
	SD	0.75		1.37		0.52		1.47	
	Overall Mean	2.30		2.14		2.35		2.43	
	Overall SD	1.18		1.00		0.86		1.34	
BUILDERS WORK	1	1	4%	6	26%	4	17%	12	52%
	2	13	57%	10	43%	12	52%	11	48%
	3	4	17%	3	13%	5	22%	0	0%
	4	2	9%	4	17%	2	9%	0	0%
	5	3	13%	0	0%	0	0%	0	0%
	Mean	2.39		2.00		2.48		2.57	
	SD	1.20		1.00		0.85		1.38	
	Overall Mean	2.30		2.14		2.35		2.43	
	Overall SD	1.18		1.00		0.86		1.34	
RAILWAY		0	0%	0	0%	0	0%	0	0%
		1	100%	1	100%	1	100%	1	100%
		0	0%	0	0%	0	0%	0	0%
		0	0%	0	0%	0	0%	0	0%
		0	0%	0	0%	0	0%	0	0%
	Overall Mean	2.30		2.14		2.35		2.43	
	Overall SD	1.18		1.00		0.86		1.34	
CIVIL WORKS	1	1	17%	0	0%	0	0%	4	67%
	2	3	50%	2	33%	3	50%	2	33%
	3	1	17%	2	33%	1	17%	0	0%
	4	1	17%	1	17%	2	33%	0	0%
	5	0	0%	0	0%	0	0%	0	0%
	Mean	2.43		2.29		2.71		2.29	
	SD	1.51		0.76		0.76		1.38	
	Overall Mean	2.30		2.14		2.35		2.43	
	Overall SD	1.18		1.00		0.86		1.34	

Source: Survey data (2018)

4.2.2.4 Personal traits descriptive analysis

As was the case with education, respondents in the category road works indicated higher ratings for the questions assessing the contribution of personal traits on career progression for women in the industry. The various ratings for the questions sub sector are presented in table 4.6.

Table 4.6 Personal traits descriptive

		PERSONAL TRAITS							
		Self-Drive and Responsibility	Percent	Assertiveness, Dominance, Masculinity	Percent	Soft Skills	Percent	Competency	Percent
ROAD CONSTRUCTION		2	33%	2	33%	2	33%	2	33%
		3	50%	2	33%	4	67%	3	50%
		1	17%	0	0%	0	0%	0	0%
		0	0%	2	33%	0	0%	0	0%
		0	0%	0	0%	0	0%	1	17%
	Mean	2.83		2.00		2.00		3.33	
	SD	1.17		0.63		1.10		2.94	
	Overall Mean	1.84		2.24		2.14		2.14	
	Overall SD	1.04		1.21		0.79		1.51	
BUILDERS WORK		5	22%	8	35%	3	13%	5	22%
		10	43%	10	43%	8	35%	10	43%
		4	17%	2	9%	10	43%	1	4%
		2	9%	3	13%	2	9%	4	17%
		2	9%	0	0%	0	0%	3	13%
	Mean	1.65		2.17		2.17		1.83	
	SD	1.03		1.37		0.72		0.94	
	Overall Mean	1.84		2.24		2.14		2.14	
	Overall SD	1.04		1.21		0.79		1.51	
RAILWAY		0	0%	0	0%	1	100%	0	0%
		1	100%	0	0%	0	0%	1	100%
		0	0%	1	100%	0	0%	0	0%
		0	0%	0	0%	0	0%	0	0%
		0	0%	0	0%	0	0%	0	0%
	Mean	1.65		2.17		2.17		1.83	
	SD	1.03		1.37		.072		0.94	
	Overall Mean	1.84		2.24		2.14		2.14	
	Overall SD	1.04		1.21		0.79		1.51	
CIVIL WORKS		2	33%	1	17%	0	0%	2	33%
		2	33%	2	33%	3	50%	2	17%
		0	0%	3	50%	2	33%	1	17%
		1	17%	0	0%	1	17%	2	33%
		1	17%	0	0%	0	0%	0	0%
	Mean	1.57		2.86		2.14		2.29	
	SD	0.53		0.90		0.90		1.11	
	Overall Mean	1.84		2.24		2.14		2.14	
	Overall SD	1.04		1.21		0.79		1.51	

Source: Survey data (2018)

4.3 Regression Analysis

4.3.1 Model Fitting Information

Multinomial logistic regression was conducted using the Chi-square test to assess the predictive value of the generated model against the actual observations viewed without a predictor model. The p-value associated with the chi-square value 19.782, output from the analysis tool, was 0.71 and was therefore higher than the cut-off value 0.05. The model fitting information therefore indicated that the generated odds ratios were to be viewed with the understanding of their statistically invalid inference as observed through the chi-square test. As deduced from the Pseudo R-square values, it emerged that according to the Nagelkerke value, the model accounted for 47.8 variance in the dependent variable – specialty selection. The Nagelkerke value is the most commonly cited Pseudo R-squared value in conducting multinomial logistic regression as it is assessed on a scale similar to that employed for the R-squared regression value (Nagelkerke, 1991). The model fitting information is shown in table 4.7 whereas tables 4.8 and 4.9 provide the Pseudo-R-squared and parameter estimates respectively.

Table 4.7 Model fitting information

Model Fitting Information				
Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	Df	Sig.
Intercept Only	64.867			
Final	45.085	19.782	12	.071

Source: Survey data (2018)

Table 4.8 Pseudo R-Square

Pseudo R-Square	
Cox and Snell	.414
Nagelkerke	.478
McFadden	.266

Source: Survey data (2018)

Table 4.9 Parameter estimates

Parameter Estimates									
Area of Specialization[a]		B	Std. Error	Wald	df	Sig.	Odds Ratio	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Road Construction	Intercept	-1.002	3.989	.063	1	.802			
	Education	-1.333	1.004	1.764	1	.184	.264	.037	1.886
	Work Culture	-.800	.845	.896	1	.344	.449	.086	2.355
	Personal Traits	3.011	2.009	2.247	1	.134	20.311	.396	1041.248
	Social Networks	-1.079	.961	1.260	1	.262	.340	.052	2.237
Railway Construction	Intercept	-6.979	7.941	.772	1	.379			
	Education	1.430	2.074	.476	1	.490	4.179	.072	243.472
	Work Culture	-.047	1.568	.001	1	.976	.954	.044	20.609
	Personal Traits	1.233	2.810	.192	1	.661	3.431	.014	845.758
	Social Networks	-.734	1.694	.188	1	.665	.480	.017	13.287
Civil Works	Intercept	-12.204	5.115	5.693	1	.017			
	Education	-.125	.908	.019	1	.891	.883	.149	5.238
	Work culture	.126	.709	.031	1	.859	1.134	.283	4.549
	Personal Traits	4.072	2.107	3.735	1	.053	58.674	.944	3647.132
	Social Networks	1.161	.683	2.887	1	.089	3.192	.837	12.174
a. The reference category is: 2 Builder's Works.									

Source: Survey data (2018)

4.3.2 The Relationship between access to education and the choice of the subsectors

The reference category of selection was set as builder's work; this is because this was the modal career line among the respondents. The odds ratio generated from the model indicated that the strongest influence of education, as a factor, was on the selection of railway construction (odds ratio 4.179) and the least influence on selection of road construction as a preferable career path (odds ratio 0.264). As depicted in table 4.5, the reference category of selection was set as builder's work; this is because this was the modal career line among the respondents. In assessing the contribution of education as a limiting factor in deciding on careers – with the category builder's works as the reference category (odds ratio 1) – it emerged that an increase in median rating of 1 in education, with the factors social networks, work culture, personal networks held constant, decreased the odds of selection of road construction by 0.736 (1-0.264); increased the odds of selecting railway construction by 3.179 (4.179 - 1); and decreased the odds of selection of civil works by 0.117 (1-0.883). There were no respondents in the category bridge construction hence the variable – education – could not be assessed as an influencer or career choice for this particular specialization. Education was therefore viewed as a strong predictor of selection of the specialty road construction and least reliable predictor of selection of the specialty road construction. It was however observed that none of the p-values generated for the odd's ratios were lower than 0.05 hence the predictions by odds ratio were not viewed as statistically valid at α=0.05.

4.3.3 The relationship between social networks and the choice of the subsectors

The strongest effect of social networks was on the selection of civil works as a preferred area of specialty. Results indicate that respondents were 3.193 times more likely to select a career in civil works than they were to select one in builders works in that all factors held constant, a median increase of one point would result in increase in the odds of selecting the sub-sector by a factor of 3.193. The reference category of selection was set as builder's work; this is because this was the modal career line among the respondents. In assessing the contribution of social networks as a hindering factor in deciding on careers – with the category builder's works as the reference category (odds ratio 1) – it emerged that an increase in median rating of 1 in social networks, with the factors social networks, work culture, personal networks held constant, decreased the odds of selection of road construction by 0.66 (1-0.34); decreased the odds of selecting railway construction by 0.52 (1 – 0.48); and increased the odds of selection of civil

works by 2.192 (3.192-1). There were no respondents in the category bridge construction hence the variable – social networks – could not be assessed as an influencer or career choice for this particular specialization. Social networks was therefore viewed as a strong predictor of selection of the specialty civil works and least reliable predictor of selection of the specialty road construction. It was however observed that none of the p-values generated for the odd's ratios were lower than 0.05 hence the predictions by odds ratio were not viewed as statistically valid at α=0.05.

4.3.4 The relationship between work culture and the choice of the subsectors

In comparing the influence of work culture on career selection, it emerged that the factor highest influence was in the selection of civil works as a preferred career destination. This is because in an increase in median rating of one, all other factors held constant, was deemed to result in respondents being more likely, by a factor of 1.134, to select this career path than one in builders works. In assessing the contribution of cultural influence as a hindering factor in deciding on careers – with the category builder's works as the reference category (odds ratio 1) – it emerged that an increase in median rating of 1 in cultural influence, with the factors education, work culture, and personal networks held constant, decreased the odds of selection of road construction by 0.551 (1-0.499); decreased the odds of selecting railway construction by 0.046 (1 – 0.954); and increased the odds of selection of civil works by 0.134 (1.134-1). There were no respondents in the category bridge construction hence the variable – cultural influence – could not be assessed as an influencer or career choice for this particular specialization. Cultural influence was therefore viewed as a strong predictor of selection of the specialty civil works and least reliable predictor of selection of the specialty road construction. It was however observed that none of the p-values generated for the odd's ratios were lower than 0.05 hence the predictions by odds ratio were not viewed as statistically valid at α=0.05.

4.3.5 The relationship between personal traits and the choice of the subsectors

An increase in one unit of the median assessing personal traits, with other factors held constant, was observed to result in an increase by a factor of 58.67 in the odds of respondents selecting civil works as their preferred career; this therefore indicates that the factor had the strongest influence on selection of civil works as a preferred career. The reference category of selection was set as builder's work; this is because this was the modal career line among the respondents. In assessing the contribution of personal traits as a hindering factor in deciding on careers – with

the category builder's works as the reference category (odds ratio 1) – it emerged that an increase in median rating of 1 in personal traits, with the education, social networks, and work culture held constant, increased the odds of selection of road construction by 19.311 (20.311 – 1); increased the odds of selecting railway construction by 2.431 (3.431 – 1); and increased the odds of selection of civil works by 57.674 (58.674 - 1). There were no respondents in the category bridge construction hence the variable – personal

traits – could not be assessed as an influencer or career choice for this particular specialization. Personal traits was therefore viewed as a strong predictor of selection of the specialty civil works and least reliable predictor of selection of the specialty builder's works. It was however observed that none of the p-values generated for the odd's ratios were lower than 0.05 hence the predictions by odds ratio were not viewed as statistically valid at α=0.05.

4.4 Chapter Summary

This chapter presented the analysis of the data in this study. This included the descriptive statistics of the demographic data, which consisted of the age of the respondents, the number of years working in the construction industry, the level of education of the respondents and the co-owned companies. The descriptive statistics was also presented, which outlined the gender of partnerships in the industry and the areas of specialization. From the descriptive statistics, it emerged that most respondents were of the age group 25 to 30 and that most had worked for five to 10 years. With regard to level of education, most respondents were degree holders. Most companies were co-owned and although the majority of respondents indicated that companies had both male and female partners, of the remainder, female partners were more than their male counterparts. Most respondents were in the builder's works category.

In assessing the odds of selection of the various specialties, it emerged that education was a relatively strong predictor of subscription to railway construction and the least reliable (by odds ratio) predictor of selection of road construction. Social networks were a relatively strong predictor of participation in civil works than any other specialty and the least predictive in assessing participation in the road construction sub-sector. Cultural influences were similarly relatively strong predictors of subscription to the civil works line as less reliable predictors of participation in road construction. Finally, personal traits were strong predictors of civil works (the strongest observed odds ratio) and least associated with prediction of subscription to the category builder's work.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study findings, conclusions, recommendations and the suggestions for further research regarding the factors influencing the choice of women to venture into various subsectors in the construction in Kenya. The data in the study has been synthesized based on the objectives of the study and the review of literature.

5.2 Discussion of the Findings

This section provides an expounding of the findings in light of the literature assessed in establishing the body of knowledge in the field as pertains to the topic of study.

5.2.1 The Demographic Analysis of the Construction Industry

The findings of the study established that most of the entrepreneurs 56.8% have worked in the construction industry for the duration of between 5 to 10 years while 2.7% have worked in the industry for a period of 16 to 20 years. This is reflective of the lack of models for women in the industry and concurs with Amaratunga et al. (2015) who argued that the underrepresentation of women in the senior levels of the construction industry has largely discouraged younger women from entering the industry in the various subsectors or to seek to climb up the ladder.

The findings indicate that most of the women entrepreneurs 62.2% in the construction industry are degree holders and 10.8% are Masters holders. These findings concur with Shanmugam et al. (2007) who noted that an increasing number of women have acquired the appropriate educational qualifications for the construction sector, even though there is still the perception that they are not suitably qualified for the senior managerial positions or ownership of firms in the construction industry.

The study's finding also showed that most of the companies in the construction industry 64.9% that are run by women entrepreneurs are co-owned whereas 24.3% of such companies are not co-owned. The co-ownership aspect of the women run construction companies in the industry demonstrates the value of social networks in enhancing the success of their ventures. Shanmugam et al. (2007) noted that such networks are essential for the acquisition of high-profile career development opportunities in the sector.

Most of the partnerships of the women ventures 56.8% are made up of partnerships of both male and female and 29.7% of the partnerships are all-female partnerships. The dominance of the male-female partnership points to the need by women entrepreneurs to inculcate male partners in their careers and ventures in order to achieve some measure of success. This concurred with Swaathi and Sivaranjani (2016) who noted that women face numerous forms of discrimination in the male-dominated construction industry and one of these is through partnering with the men in the industry. Adogbo et al. (2015) also noted that it is impossible to work in the construction industry without interacting with men. 63.9% of the women entrepreneurs in the construction industry are in industrial subsector of the construction industry; 16.7% are both in the civil works and the residential subsector whereas 2.8% are in commercial subsector of the industry (see Table 4.2). These findings demonstrate that most of the women entrepreneurs in the industries have focused their ventures in the industrial construction sub-sector.

5.2.2 The influence of access to education on the choice of subsectors

The findings of the study established that the access to education influenced the choice of venture in the subsectors of the construction industry in Kenya. It emerged that education was a relatively strong predictor of subscription to railway construction and the least reliable (by odds ratio) predictor of selection of road construction. The implication of this findings are that an increase in perception of education as a limiting factor results in an increased chance of selection of railway construction as the sub-sector of choice. This finding, viewed in light of Shanmugam et al. (2007) and Olusola, Olubola, and Akintayo (2012) who established that technical education is a crucial entry point for women in the construction industry – therefore suggests that the perceived difficult of entry into the construction industry results in selection of railway construction as a preferred option. The findings viewed in light of postulations by Kaewsri and Tongthong (2013) who established that in spite of the number of women with degrees in civil engineering increasing, few women engineers hold professional certificates thereby suggesting that the railway and construction industry requires less qualification for entry.

Notably, the acquisition of technical skills and apprenticeship programs provides women entrepreneurs with a competitive chance particularly in subsectors such as road and commercial subsectors. The technical nature of the industrial subsector requires that the women venturing into the subsector be equipped with the requisite technical knowledge that they require to set up plants and other industrial machinery (Wafula, 2017). There is also need for technical knowledge

in the development of residential house even though in this particular sector, such knowledge is not a barrier to entry as the broad scope of clientele tend to focus more on referrals and experience of a particular contractor rather than ascertain their technical knowhow before engaging them. In spite of that, technical knowledge is essential in this subsector to ensure the quality, particularly given the numerous cases of collapse of residential houses that have been attributed to poor workmanship.

5.2.3 The influence of social networks on the choice of the subsectors

The study established that social networks largely influenced the choice of ventures by the women entrepreneurs in the construction industry. Social networks were a relatively strong predictor of participation in civil works than any other specialty and the least predictive in assessing participation in the road construction sub-sector. Adogbo, Ibrahim and Ibrahim (2015) acknowledged that family responsibilities affect the performance of women in the construction industry. The women in the industry are confronted with the choice to either focus on their family responsibilities than their career development or vice versa. The experiences of these women have demonstrated that the best option available is finding a middle ground where they can both take care of their family obligation and the development of their career; the preference for civil works, as an area of specialty, therefore indicates that the field offers better grounds for a family-life balance. Shanmugam et al. (2007) established that access into informal networks is essential for the acquisition of high-profile career development opportunities in the sector; this finding therefore suggests that the civil works industry, as compared to the road construction sub-sector, requires less social networking capability. Social networks are also viewed as crucial for women venturing in the residential subsectors where most contracts are acquired from private developers through referrals; such referrals are essential for providing the women entrepreneurs with opportunities for exercising their expertise, expanding their portfolio and market reach in the industry (Ondieki, 2017). The intensity of social networking in the residential construction sector would therefore explain the preference for civil works as a subsector.

5.2.4 The Influence of Work Culture on the choice of the subsectors

This study found that the work culture in the construction industry influences the choice of venture for the women entrepreneurs into various subsectors. Cultural influences were similarly a relatively strong predictors of subscription to the civil works line as less reliable predictors of

participation in road construction. According to Rajkumar, Swaathi and Sivaranjani (2016) the work culture in the construction industry largely favours men given that the industry is male-dominated. Due to this the women face numerous forms of discrimination, whereby they play a peripheral role as compared to that of their male counterparts. The study, assessing this discrimination as part of the cultural factors that affect women, therefore suggests that an increase in perception of difficult in participation in the industry due to cultural factors would likely lead to subscription to the civil works sub-sector; this therefore suggests that the industry is less discriminatory to women as compared to the road construction sub-sector.

Wafula (2017) points out incidents where women consulting engineers in the subsector face harassment from the contractors, who take short cuts in the completion of projects, in order to fend them off. Kaewsri and Tongthong (2013) further posit that that women are confronted with the choice of acting like their male counterparts if they intend to make any progress in the male-dominated construction industry. In addition, the adoption of male traits is a component that is exhibited amongst the women venturing into the residential subsector of the construction industry. This is because the women are largely dealing with a clientele base that is made up of private developers are socially oriented to believe the construction is not a domain for women. The women venture, therefore, have to prove themselves through adopting male-like traits that will earn them confidence with the prospective and existing clients (Burer, 2016).

5.2.5 The influence of personal traits on the choice of the subsectors

The findings of this study established that the personal traits of the women in the construction industry influence their choice of venture into various subsectors in the construction industry. Personal traits were strong predictors of participation in civil works (the strongest observed odds ratio) and least associated with prediction of subscription to the category builder's work.

This is consistent with the view of Smallwood (2013) who established that qualities such as commitment, acknowledgement, confidence, self-promotion and responsibility have a significant impact on the core competencies of the women in the construction industry. More specifically, the qualities such as self-drive, assertiveness and determination are crucial for women venturing in the highly technical subsectors such as road and civil engineering subsector and the industrial subsector, which are dominated by highly educated and competent men. In these respective subsectors, education qualification and competence are not enough to give women business opportunities they have to gain their recognitions through persistent assertiveness and self-drive

(Burer, 2016). In light of the findings, therefore, it emerges that the civil works industry offers relatively better opportunities for women as compared to the builders works sub-sector.

5.3 Conclusions

The study concludes that most of the women entrepreneurs in the construction industry are youth aged between 25 and 30 years, most of them have a university degree and have worked in the industry for not more than 15 years. This implies that in the future, women entrants and women start-up entrepreneurs in the industry may have role models to look up to, which is one of the factors that is currently lacking in the industry. The co-ownership of the construction companies is reflective of the women entrepreneurs' dependence on the input of others to run successful ventures.

As deducted from the multinomial regression analysis, it emerged that perceptions of the factors social networking, cultural effects as limiting factors and personal traits as contributory to progress were strong predictors of subscription into the civil works sub-sector whereas education (as a limiting factor) was a strong predictor of participation in the railway construction industry.

5.4 Recommendations

The study was conducted in Nairobi county and the target population was limited to women ventures into the various subsectors within the construction industry however, based on the findings of the study the following recommendations were made:

The construction industry needs to acknowledge the benefits that come with the proper representation of women, which is bound to complement the male manpower in terms of competencies and resolution of conflicts within the industry. In recognizing the contribution of women in the industry, the stakeholders need to improve on the work culture, with a shift from male dominance towards embracing women professionals and business leaders.

In order to increase the number of women ventures within the industry, the industry stakeholders need to minimize all the barriers that impede women from acquiring the technical competencies that are required to make them professional and competent.

Future researches should examine factors influencing women to venture into the construction industry in different geographical settings in Kenya other than Nairobi County. Future studies may also explore alternative research designs such as triangulation; this involves collecting data from respondents using more than one research design.

An Investigation of age as a factor that determines the influence of women ventures, and technical competence that may give women entrepreneurs' competitiveness in the civil works and road construction subsectors of the industry should also be studied.

Given then that in general most respondents had a higher chance of participation in the civil works sub-sector with increased perception of social networks and cultural effects as limiting factors, and personal traits as supporting factors; however most respondents were in the builder works subsector; this therefore indicates that the civil works subsector may be less unfavorable to women but may, for example, provide less remuneration thereby having most respondents, despite inconveniences, venturing into higher paying jobs.

5.5 Limitations of the Study

Due to the domination of the industry by gender, the researcher experienced difficulty in locating the respondents for this study. Those that could be located were reluctant to provide information in the fear that the information could be used for purposes rather than academic purposes. The researcher had to use intermediaries to access the respondents that were eventually involved in the data collection.

The data collection tool used in the study was susceptible to bias. Since the researcher was in charge of developing the questionnaire and analyzing the data. The researcher checked this bias through liaising with the supervisor in checking the suitability of the research tool in collecting data for the study.

The convenience sampling method used, which was selected based on the difficulty in accessing the respondents was also susceptible to bias as the researcher was forced to work with the respondents that could only be accessed, sourced through intermediaries and who may have provided information that they deemed friendly to the researcher.

This study focused on factors that influence women entrepreneurs to venture in the construction industry based in Nairobi County. The findings of this study may not represent other counties.

The study further concentrated on the construction industry only therefore this may not apply to other forms of business in the different sectors of the economy in the county.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

20th March, 2017.

To whom it may concern.

RE: REQUEST FOR PARTICIPATION AS A RESPONDENT IN MY RESEARCH STUDY.

I am a Master of Commerce student at Strathmore University doing a study titled "**Factors influencing the choice of sub sectors that women to venture into in the construction industry in Kenya: A case of Nairobi County**." I am conducting this research in partial fulfillment of the requirement of my master's study. This is to request you to participate in my study as a respondent representing your company and seek your consent in this participation.

I kindly request you to spare some time and answer the questions to the best of your knowledge. Your identity will be treated with utmost confidentiality and any information provided on this questionnaire will be used for the purposes of this study only.

A full report of this study can be made available to you at your request. I look forward to your participation.

Thank you.

Munyoki Caroline Kasyoka.

APPENDIX II: QUESTIONNAIRE

APPENDIX II: QUESTIONNAIRE

Please tick (√) where appropriate or fill in the information in the space provided. Kindly try your best to respond to all items.

SECTION A: DEMOGRAPHIC INFORMATION

1. What is your age?

Below 25 years	[ ]	25- 30 years	[ ]
31-35 years	[ ]	36- 40 years	[ ]
41-45 years	[ ]	Above 45 years	[ ]

2. Number of years working in the construction industry?

Less than 5 years	[ ]	5-10 years	[ ]
11-15 years	[ ]	16-20 years	[ ]
Above 20 years	[ ]		

3. What is your level of education?

Diploma holder	[ ]	Degree holder	[ ]
Masters holder	[ ]	PhD Holder	[ ]

SECTION C: CONSTRUCTION COMPANIES PROFILE

4. Is the company co-owned?

Yes [ ] No[ ]

5. Area of specialization

_____

6.What is the gender of the partners of your construction company?

All Male [ ]

All Female [ ]

Both Male and Female [ ]

SECTION C: THE INFLUENCE ACCESS TO EDUCATION ON THE CHOICE OF SUBSECTORS THAT WOMEN VENTURE INTO IN THE CONSTRUCTION INDUSTRY

7. Kindly rate your level of agreement/disagreement with following statements relating to the effects of education level on the choice of ventures into various sub sectors by women in the construction industry. Use a scale of 1-5 where 1= strongly agree and 5=strongly disagree.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I believe that the lack of the required technical education serves as a barrier to entry to women in the industry					
I am of the view that women in the industry are disadvantaged in accessing the high-skill training programs					
I am of the view that the unequal access to the mandatory apprenticeship programs has left many women apprentice without					

the chance to advance their business careers					
I am of the view that the acquisition of the required education does not necessarily translate into business career progression in for women in the industry.					

SECTION D: THE INFLUENCE OF SOCIAL NETWORKS ON THE CHOICE OF WOMEN VENTURES INTO VARIOUS SUBSECTORS IN THE CONSTRUCTION INDUSTRY

8. Kindly rate your level of agreement/disagreement with following statements relating to the effects of social networks on the participation on the choice of ventures into various sub sectors by women in the construction industry. Use a scale of 1-5 where 1= strongly agree and 5=strongly disagree.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I believe that family responsibilities influence the women to venture in the construction industry.					
I am of the view that women who venture into the construction industry lack stronger connections with other players that they need to further develop their skills and					

competencies in the industry.					
I believe that social networks have present cultural barriers that women in the industry that hinder the growth of their business careers.					

SECTION E: THE INFLUENCE OF WORK CULTURE ON THE CHOICE OF WOMEN VENTURES INTO VARIOUS SUBSECTORS IN THE CONSTRUCTION INDUSTRY

9. Kindly rate your level of agreement/disagreement with following statements relating to the effects of work culture on the choice of ventures into various sub sectors by women in the construction industry. Use a scale of 1-5 where 1= strongly agree and 5=strongly disagree.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am of the opinion that the female entrepreneurs in the industry are subjected to distrust and face an obstructionist attitude from the male counterparts					
I think that women entrepreneurs in the construction industry have to adopt male traits in order to compete with their men counterparts					
I believe that the working patterns in the construction industry limits					

the participation of women entrepreneurs					
In my opinion, in order to succeed in the industry women entrepreneurs do not just need to acquire technical skills but are also required to develop the capacity to fit into the accepted behavior of their workplace					

SECTION F: THE INFLUENCE OF PERSONAL TRAITS ON THE CHOICE OF WOMEN VENTURES INTO VARIOUS SUBSECTORS IN THE CONSTRUCTION INDUSTRY

10. Kindly rate your level of agreement/disagreement with following statements relating to the effects of women competence on the choice of ventures into various sub sectors by women in the construction industry. Use a scale of 1-5 where 1= strongly agree and 5=strongly disagree.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am of the view that qualities such as self-drive and responsibility influence the core competencies of the women in the construction industry.					
I am of the view that qualities such as assertiveness,					

dominance, and masculinity significantly influence the core competencies of the women in the construction industry.					
I believe that women soft skills can help reduce the instances of conflicts and miscommunication that characterize the construction industry					
I am of the view that competence in the construction industry is currently more rewarded than gender and this has leveled the playing field for women					
I am of the view that business Operations based on Technical Skills Enhance Success in the Industry					
I am of the view that industry Connections Enhance Advancement in Training and Business Opportunities					
I am of the view that women Require Commitment, Confidence and Self-Promotion to Excel					

I am of the view that women Need to Develop Capacity to Overcome Sexist Barriers					

SECTION G: WOMEN VENTURES INTO SUBSECTORS IN THE CONSTRUCTION INDUSTRY

11. Please tick (√) where appropriate or fill the information in the space provided.

What is the area of specialization for your company in the industry?

Road Construction [ ] Builders works [ ]

Bridge Construction [ ] Railway construction [ ]

Civil Works [ ]

Other please specify _____

Thank you for taking part in this study.

APPENDIX III: RESEARCH BUDGET

Item Description	**Cost- KES**
Stationery &ICT Services	10,000
Travel costs, meals and per diem	10,000
Research Assistant for data collection	15,000
Contingency- airtime, internet bundles, etc.	10,000
Total	**45,000**