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Effect of regulations on growth of construction companies in Kiambu County Kenya

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EFFECT OF REGULATIONS ON GROWTH OF CONSTRUCTION COMPANIES IN KIAMBU COUNTY KENYA

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DECLARATION

I, the undersigned, declare that this proposal is my original work and has not been submitted for examination in any other institution.

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Approval

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

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ABSTRACT

The increase in demand for better housing, infrastructure development, and office facilities has mainly contributed to the boom in the construction industry in Kenya. This has led to unprecedented growth in urban development in Counties in proximity to the capital city. This development has, however, faced regulatory challenges owing to the shoddy craft and lack of compliance within some of the construction firms. This research sought to found the impact of regulations on the growth of construction firms in Kiambu County. The research specifically examined the effect of environmental laws, building regulations, and registration requirements on the growth of the firms. The research was anchored on the growth of firm theory and the public interest theory. The study adopted a positivist research philosophy with a cross-sectional descriptive survey being utilized. The focus of the study was the 162 firms registered within Kiambu County under category NCA1-NCA5. The study adopted a census survey of the 162 firms. The research relied on primary data that was collected using a structured questionnaire. The study pretested the questionnaire with 16 construction firms that were not involved in primary research. The collected research data was edited and coded into SPSS 25 for subsequent analysis. The study relied on quantitative data analysis techniques with descriptive and inferential analysis being adopted. The study findings were presented graphically using charts, bar graphs, and tables. The study was able to obtain a 77% response rate among the sampled construction firms. The findings of the study indicated that 18.2% of the variations in construction growth is determined by regulations. The study concludes that there is a positive association between building regulations, registration requirements, environmental laws, and the growth of construction firms. The study recommends that construction firms should actively review their regulations and ensure compliance to sustain their growth. The study further recommends that county governments should be given an active role in accrediting and regulating contractors.

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LIST OF ABBREVIATIONS AND ACRONYMS

GDP	Gross Domestic Product
GOK	Government of Kenya
KNBS	Kenya National Bureau of Statistics
NCA	National Construction Agency
NEMA	National Environment and Management Authority
PWC	Price Waterhouse Coopers
SME	Small and Medium Enterprises
WARMA	Water Resources Management Authority

OPERATIONS DEFINITION OF TERMS

Building regulations	Refers to all the activities done by NCA to ensure that all contractors undertake their duties in the construction industry to the satisfaction and according to all the set standards in the construction industry (Akanni, Oke, & Akpomiemie, 2015).
Environmental Law	This refers to the guidelines, by-laws, and practices geared towards the protection of environmental resources during the construction process (National Construction Authority, 2011).
Construction firms	These are defined as firms that undertake building and engineering works related to housing, roads, rail, ports and related physical infrastructure (National Construction Authority, 2011).
Growth of construction firms	This refers to the construction organization's ability to win construction contracts and is thus measured by the number and value of the contract awarded and completed (Njoroge, 2013).
Registration requirements	Refers to actions taken by NCA to ensure discipline, ethics, and compliance to policies and laws by contractors in the construction industry (Otido & Omwenga, 2019).

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Construction is a critical industry for all societies across the world. The construction industry performs a prime function in the improvement and success of the economic and social development objectives (Gacheru & Diang'a, 2015). Construction is among the largest businesses and contributes to approximately 10% of the Gross Domestic Product (GDP) in industrialized countries. Generally, the industry contributes to 11% of GDP in the majority of developing nations (National Construction Authority, 2011). According to Solomon and Barrack (2015), the building and construction business is unable to satisfy its client's time and again. This causes a significant issue and concern for the whole of the sector. Therefore, to overcome these failures among construction firms to meet the client's expectation, there is a need to implement fresh strategies and approaches to augment effectiveness and customer gratification.

Globally the construction industry faces regulatory challenges such as compliance with environmental guidelines and adherence to building practices that limit the industry performance (Dania, Larsen, & Yao, 2013). Africa has too much room for growth as it is the new business dawn, and this has stirred much interest from investors looking for new opportunities and room for business expansion (Oxford Business Group, 2016). Price Waterhouse Coopers (PwC) predicted that by the end of this decade, 13% of the world's economy was from construction. With such magnitude of the business, there is a need for there to be modern structures in place since most of the models that are currently used are the same models from centuries back (Arum, Osunsanmi, & Aigbavboa, 2019).

The building and construction sector are among the essential areas of the Kenyan economy. It is an essential contributor to GDP. With the aim of enhancing national, regional, international integration, and trade facilitation, the Kenyan government has continued to develop effective and efficient infrastructure. This development of infrastructure has also created sustainable economic growth. The industry registered a thriving growth rate of 13.6% in 2015 (Kenya National Bureau of Statistics, 2016). According to the Kenya National Bureau of Statistics, the Construction industry underwrote up to 4.8% to the Kenyan GDP and employs approximately over one million people.

Recent data suggest that there has been a tremendous increase in demand for housing in Kenya over the past ten years. However, construction organizations are yet to keep up with this demand (Moko & Olima, 2014). Besides, the increase in consumer affluence and ability to spend money has influenced many developers to build retail markets and shopping malls such as Garden City Mall on Thika superhighway and Two Rivers Mall located in Runda, Nairobi. This increases employability, and those employees require a place to live and, eventually, a need for housing (Oxford Business Group, 2018).

Conferring to an account issued by the National Construction Authority (2015), there are eight distinct categories of contractors. The report showed identified that the main classes of work undertaken by construction organizations were roads, water, buildings, electrical, and mechanical construction works. In total, the authority has registered 13,700 contractors, of which buildings works and road works account for the highest proportion at 43 percent and 34 percent, respectively. The report revealed that nearly 80 percent of the organizations were small and medium enterprises (SME), whereas large enterprises accounted for the rest. The report suggests that most construction organizations do not grow beyond their SME status.

1.1.1 Regulations in the Construction Sector

Building rules are lawful instruments that hope to ensure that the basic courses of action set out in the relevant sanctioning are finished (Testa, Iraldo, & Frey, 2011). In building, rule incorporates the enrolment of legally binding specialists, adventures, skilled advancement workers, building site chiefs, getting ready establishments, and courses of action relating to the variety and portion of the improvement request (Njoroge, 2013). Guideline of building development in Kenya is made via a legal power under the National Construction Authority (NCA), whose capacity is to set up and direct the development business and facilitate its turn of events (Gacheru & Diang'a, 2015).

The legal environment influencing construction organizations are increasingly becoming complicated, with significant implications on performance. It is difficult for construction organizations to operate without encountering various regulations affecting every aspect of the sector (Auma, 2014). There is always a myriad of regulations that construction organizations have to comply with, including regulations concerning the environment, professional codes of practice, wellbeing and security guidelines, licenses, assessment, and protection laws (Muiruri & Were, 2016).

Hlaing, Singh, Tiong, and Ehrlich (2008) argued that the turbulent economy in Singapore, coupled with continuous change in the corporate environment, exposed players in the construction industry to increased environmental regulations and new building guidelines. This motivated a need among construction project managers to develop an integrated approach to construction project management, necessitating a strategic planning approach that covered the entire scope of construction projects, from inception to occupancy. In Ghana, Boadua, Fianko, and Chileshe (2015) observed that lack of stringent regulations, compliance by construction firms, and lack of elaborate enforcement mechanisms presented a significant risk to the execution of the development division.

To enhance the management of the building and construction sector, the Government of Kenya (GoK) enacted legislation such as the Engineers Act (2011) and the National Construction Authority Act (2011) to ensure that legal compliance in the industry which went a long way towards supporting growth in the construction projects (Mbusi, 2016). The NCA is commanded to support normalization and enhancement of development strategies and resources, give, advance, audit and organize preparing programs for talented development laborers and building site bosses, authorize and register contractual workers and control their expert endeavours, certify and affirm gifted development laborers and building site chiefs, create and distribute implicit rules for the development business (Njoroge, 2013).

Broadly the regulations in the construction business focus on the environmental regulations, the construction regulations, and the registration requirements for construction firms. Globally, all countries strive to ensure that they ensure that cities and urban centres develop in an ecologically sustainable fashion since this increases the long-term. Emerging practices include waste re-use, recycling and harmonization of new construction development with neighbourhoods. Land use and zoning policies are crucial in determination of where and how construction projects develop. Failure to adhere to quality management policies among construction projects leads to defective products, structural failures which has, in the past led to loss of property and life. This is due to weak enforcement of policies, use of materials of poor quality, insufficient supervision levels and poor adoption of environmentally sustainable materials. The government aims to nationalize standards in the construction industry, promote mechanization and professionalism in the industry to improve sustainability levels. In addition, there are laws that have been established to ensure that individuals interacting in the country's construction industry have the necessary qualifications to ensure quality standards in the construction industry.

Panigrahi, Zainuddin, and Azizan (2014) observed that policy and regulatory frameworks had the ultimate consequence of creating a balance between a firm's general operations and compliance with policies formulated and implemented by the regulator towards promoting growth in the construction industry. Windapo (2017) examined the organization factors for the growth and sustainability of construction organizations in South Africa. Results showed that the size of founding members, regulatory requirements, compliance to environmental laws, their capabilities and their strategic choices, as well as the organization's adaptability and responsiveness to emerging challenges, were responsible for the organizations' sustainability and growth.

Wambugu (2013) concluded that insufficient supervision and inspection of work in construction projects led to rework in times of poor workmanship, and this caused the delay in assignment well-timed of entirety. This also ends at venture price overrun and may result to project abandonment. Insufficient site inspection is one of the elements recognized as causing undertaking delays in timely completion. Githenya and Ngugi (2014) on the enactment of housing schemes in Kenya and underscored the need to supervise contractors, especially on the competency of contractors. Gacheru and Diang' (2015) notes that corruption, inadequate refinement, absence of legitimate association of the NCA temporary worker preparing projects, and centralization of the NCA administrations limited the effectiveness of building regulations. Charagu (2013) argues that the use of sub-standard or faulty construction techniques and a lack of adherence to the building code and best practice standards contributed further to increased construction risk.

1.1.2 Growth of Construction Sector

Growth is the expansion of a business to maximize the investment of the shareholders while satisfying the needs of all the other stakeholders. In contrast, sustainability refers to the maintenance of the current industry position a business enjoys (Moloi, 2013). A constriction firm is a company created to manage and oversee the construction of properties, facilities, buildings and other developments such as roads, motorways, paths and other forms of infrastructure. Construction firms are categorized depending on the type of work that they engage in, from building construction, infrastructure construction and industrial construction. In the construction industry, growth is measured in terms of the level of quality and sustainability which refers to the environmental, economic, and societal impact that a project makes, therefore, before carrying out construction (Muiruri & Were, 2016). There is a need to

research what the sustainability concepts are and identify the relationship between the company and the industry to achieve sustainable construction works (Muchungu, 2012).

According to Xiao and Proverbs (2008), the overall performance of construction firms requires assessment in terms of its final products, quality, total cost, project time, and the sustainable development of construction firm's profitability and their competitiveness. Jarkas and Bitar (2012) maintained that for any good and successful project in construction, it must seriously seek after the proficient use of work, material, and gear and that for good improvement of work profitability there ought to be a significant and predictable worry for the individuals who are liable for the cost control of offices being constructed. According to Mullins (2005), growth in the construction firm relates to such factors as expanding productivity, improved assistance conveyance, or acquiring the best outcomes in the authoritative exercises. The researcher further describes the growth in building construction projects like the production of acceptable and quality projects. The accomplishment of construction projects or any other mission restrained in contradiction of presently recognized ethics of precision, wholeness, charge, and haste.

Baker and Reid (2005) identified two major categories of construction firm performance, these being efficiency and effectiveness measures. The former referred to good quality management and the ability to deliver construction projects within set standards. These included adherence to schedule, budget, specialized detail, well-being, benefit, and non-appearance of any legitimate cases and procedures. Adequacy measures, then again, allude to client fulfilment with the finished result of the venture. This study relied on the above efficiency and effectiveness measure to assess the growth of the construction firms within Kiambu County, Kenya.

The construction industry in Kenya is facing stiff competition from companies from abroad. These are especially Chinese companies that are offering construction products cheaply as compared to their counterparts in the industry (National Construction Authority, 2011). Local companies had to cut their costs to compete with the increasing number of foreign companies arriving in the country with cheaper and more sustainable building practices, this impacted the quality of their final work (Muchungu, 2012). There are new regulations introduced that affect the construction industry, which, under the national construction authority—adds the cost of operations for the companies, among existing costs. Therefore, companies need to strategize

their operations, to maintain their employees and cut down their costs to remain competitive in the industry, and to satisfy their clients as an end objective (Njoroge, 2013).

1.1.3 Construction Industry in Kenya

The construction business in Kenya is one of the key drivers of development in the Kenyan economy. In fact, Kenya's vision 2030 has distinguished foundation improvement as one of the key empowering agents that will drive this nation to turn into an overall serious and well-off nation with high satisfaction of life by 2030. According to the Economic Survey of 2013, the business represents around 7 percent of the nation's national salary. It retains around 1 million individuals with an anticipated yearly compensation bill of Sh 3.2 Billion. Development is a basic part of the fulfilment of Kenya's maintainable monetary development and improvement. The business has, along these lines kept on making important commitments aimed at transforming the country into a territorial business center point. Numerous open and private foundation ventures essential for the drawn-out advancement of Kenya are being developed, in this way, prodding the development of Kenya's economy (National Construction Authority , 2015).

Before devolution, assignments identifying with the ID, arranging, and execution of development projects extends inside Kiambu County, with all companies in line to uphold these rules. This methodology uncovered the development segment to divided governmental issues, which employed a critical impact on the development business, which brought about the flawed nature of the development works (Charagu, 2013). Ndume (2015) conducted an investigation on the job of the administrative system on the presentation of building development ventures in Kiambu. The study found out that the regulators who included NCA, NEMA, and the county government of Kiambu had a regulatory regime in place and that they had a set of principles for all the experts associated with development projects. However, they identified that the compliance levels remain unclear. Kiambu county is considered one of the fastest-growing counties in the country, with a population of at least 2.4 million people (KNBS, 2020). This large population requires a lot of construction work to handle their homes, offices, and other facilities. The county is thus considered the ideal site for this research.

1.2 Statement of the Problem

The complexity of the legal framework governing the construction of buildings in Kenya is exemplified by the multiplicity of laws about riparian land and the subjectivity in the

enforcement of road reserve by-laws in Kenya (Gacheru & Diang'a, 2015). Projections by the KNBS estimate the population growth in Kenya at 4.2 percent per annum, with the actual population estimated to rise to 50 million by the year 2020. Based on these projections, the annual demand for housing units was pegged at 206,000 units, which, matched against a current annual supply of 50,000 units, created a deficit of 156,000 units per year. This created a boom in the building business which led to an upsurge in the rate of buildings cropping up within residential and semi-urban areas; however, most of these housing units and office spaces resulted in poor workmanship and lack of compliance to the laid out guidelines by regulatory bodies such as NCA, NEMA and Water Resources Management Authority - WARMA (Kenya National Bureau of Statistic, 2016).

This has resulted in a wave of mass demolition of buildings that were constructed within riparian lands, road reserves, had failed to adhere to building regulations and standards, and exhibited overall poor workmanship, which presents clear health, environmental, and safety hazard (Abukuse, 2019; Gacheru & Diang'a, 2015). This presents the main challenge to the growth of the construction industry. Despite numerous regulatory policies being in place, their robustness in effectively managing the construction industry has been wanting (Gichamba & Kithinji, 2019). It is from this background that this study sought to examine the influence of the documented policies towards the growth in the construction industry.

Arum, Osunsanmi, and Aigbavboa (2019) examined challenges to occupational health safety. It noted that there are poor awareness, inadequate staffing, and a lack of compliance with regulations within the Nigerian construction industry. Onkangi, Nyakondo, Mwangi, Ondari, and Wachira (2018) notes that there is poor adoption of environmental management systems and adherence to waste regulations in the construction projects in Kenya. Gacheru and Diang' a (2015) examined the regulation of construction firms in Kenya and indicated that poor sharpening, absence of legitimate association, defilement, and absence of preparing projects and centralization of administrations limited implementation of the NCA mandate. The above studies indicate there is ineffectiveness in the implementation of regulations in the construction industry; however, there is a limited examination of how these various regulations influence the growth of construction firms in Kiambu County, Kenya. This will be important in determining the most impactful policies and will be key in assessing the policies which need to be improved to improve the quality of output in the construction industry.

1.3 Objectives of the Study

The main goal of this examination is to research the influence of regulations on the growth of construction industry in Kiambu County Kenya

1.3.1 Specific Objectives

i. To establish the effect of environmental laws on the growth of construction industry in Kiambu County Kenya
ii. To determine the effect of building regulations on the growth of construction industry in Kiambu County Kenya
iii. To examine the effect of registration requirements on the growth of construction industry in Kiambu County Kenya

1.4 Research Questions

i. What is the effect of environmental laws on the growth of construction industry in Kiambu County, Kenya?
ii. What is the effect of building regulations on the growth of construction industry in Kiambu County, Kenya?
iii. What is the effect of registration requirements on the growth of construction industry in Kiambu County, Kenya?

1.5 Scope of the Study

The contextual scope of the research was focused on the examination of how several regulations impact the growth of construction firms. This study was further limited geographically to an examination of the development of construction business firms in Kiambu County. With the recent expansion in the construction industry within the County most construction firms have faced challenges in completing their projects. This is visible in the increase in number of stagnated projects, delays in completion and failure in completion of the business. The theoretical research scope focussed on the public management theory and the growth of the firm theory. The study adopted an explanatory quantitative research design with a mixed -research methodology being utilized. The unit of analysis of this study was the construction firms registered by the NCA and operating within Kiambu County Government. The time scope of the study was limited to one week at the beginning or end of the month when NCA conducts visits to the construction companies in 2020.

1.6 Significance of the Study

The study results will be of practical solutions to policymakers in designing guidelines and policies to ensure and protect shareholders' interests within the construction industry. The study will help identify gaps in the regulations and how best policymakers can foster their development in the construction industry. The results of the research will further help in enhancing the available empirical evidence available and thus act as future reference material.

With the increasing demand for housing and office space within the country, this study is expected to be critical to several stakeholders. This study is anticipated to help in identifying the regulatory gaps in the implementation of the NCA mandate within the construction study. This study will further be essential to the management of construction firms in identifying the various regulations in place and how they have influenced the growth of construction firms.

This study will further enhance the empirical body of knowledge and act as reference material for future research work on the growth of construction industry firms in Kenya. The research will enable future academicians in their review of the growth of the construction industry as well as highlight how the growth and public interest theory informed studies on regulation and growth of construction firms.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This research chapter focused on the study related literature. The study particularly focussed on the theoretical literature, a review of the empirical literature as well as the summary of literature and research gaps. The chapter further contained the conceptual framework and the operationalization of this study variables.

2.2 Theoretical Review

The theoretical review is defined to clarify, foresee, to challenge and expand existing information inside the restrictions of basic jumping suppositions (Kothari, 2007). The study was grounded on the growth of the firm theory and the public interest theory.

2.2.1 Growth of the Firm Theory

The proponent of growth of Firm Theory was developed by Penrose (1959), who advanced a concept on how a firm can grow, bearing in mind its efficiency and profitability. Penrose (1959) advances that firms can grow through effective management, production, and diversification. Penrose further advanced that firms can grow through having comparative resources, developing capabilities, and competitive edge that would give them an advantage when they operate (Pagano & Schivardi, 2003). This theory was used to analyze the growth of construction industry firms.

Firms can create economic value from effective policies and innovations that benefit the shareholders. It has been noted that although the resources commanded by a firm may be key to improving the level and quality of production, not all companies with huge reserves perform at the optimum level. There are many underlying factors which determine the performance of construction firms. Strategic organizational development is a product of understanding how efficient utilization of firm resources and capabilities impact firm operations. The number of resources that a firm command is not directly correlated with the profit it makes but for purposes of increasing productive opportunities (Penrose, 1959). The existence of firm resources affords a firm with options on the strategic choices to make to enhance firm productivity resulting in improved performances thus growth and expansion. These resources may be financial, tangible or intangible resources and managers are tasked with accelerating the production process by combining several factors of production with a view of economic

value creation for prosperity and continuity, more especially in large firms (Obigbemi, Iyoha, & Ojeka, 2015).

This is what leads to the growth of a firm compared to others in a competitive environment catalyst by the availability of management meant to do the conversion of raw materials into value (Penrose, 1959). Firms should be managed using the knowledge base, which the managers should possess based on training and experience. This shaped the profitability direction of the firms by removing inefficiencies, which make firms lose competitiveness (Panigrahi, Zainuddin, & Azizan, 2014). This theory was integral in examining how various construction firms rely on their management capacity, and adherence to regulations that can affect the development of construction companies.

2.2.2 Public Interest Theory

This theory was propounded and tested by Becker (1986), who conducted a study on Public Interest Theory. The theory recommends that administration guideline is a reaction to open requests for the legislature to amend circumstances of market disappointment through blemished rivalry, showcase disequilibria, missing markets (brought about by covered up or awry data, high exchange costs, externalities, open products) or market results that are unwanted for social reasons (Hertog, 2000).

According to this hypothesis, the guideline of firms or other monetary on-screen characters adds to the advancement of the open intrigue. This open intrigue can additionally be depicted as the ideal allotment of scant assets for individual and aggregate merchandise and ventures in the public eye (Hertog, 2000). In a broad spectrum and more so too developed nations, the allotment of scant assets is, to a huge degree, composed of the market system. In principle, it can even be shown that, in specific situations, the assignment of assets utilizing the market system is ideal (Dania, Larsen, & Yao, 2013).

Project performance can be measured in terms of safety, quality, cost, schedule and shareholder satisfaction and Nguyen and Watanabe, (2017) pinion that successful projects must have encountered minimal conflicts, disputes and safety issues. Immense public interest is embedded in the housing construction industry, and the government has established some fully-fledged departments and specialized agencies to monitor, regulate, and supervise the industry (Otido & Omwenga, 2019). Public interest theory is said to assume that the regulatory regime serves to achieve economic efficiency based on three suppositions: the pervasiveness of market disappointment, the suspicion of a 'generous controller' or a productive political procedure, and

the decision of effective administrative organizations (Hertog, 2000). Pressure from the public has increased the rate of monitoring ongoing within the construction industry with policies being implemented to ensure that construction sites adhere to waste management practices, reduce noise, water and air pollution. Additionally, re-use of water resources is also emphasized impacting the overall performance of construction firms. Regulations enacted due to the public interest are aimed to ensure the existence of a healthy ecosystem and psychological well-being of the public. This theory underlined the regulations and how they impact the growth of construction firms within the country.

2.3 Empirical Review

This section was instrumental in the review of previous empirical research papers with a focus on the various knowledge, contextual, and empirical gaps that the current research sought to solve.

2.3.1 Environmental Laws and Growth of Construction Sector

Zutshi and Creed (2015) conducted a global audit of ecological activities in the development part. The study adopted a meta-analysis of the literature of various environmental initiatives adopted globally. The findings indicate that adherence to environmental management guidelines was key to the sustainability of building schemes. The research further indicates that life-cycle analysis and stakeholder involvement through initiation to completion of construction projects is integral to sector wide-sustainability. This study focuses on the manageability of the activities, while the current study examines the growth of Kenyan construction projects.

In Pakistan, Cunningham (2014) found that raising the minimum standards of construction planning, safety, and protection of the environment leads to the development of better projects even though it is costly. Yuan, Ren, and Chen (2017) sought to determine in the event that natural guideline impacts the planned improvement of the economy and condition in China's assembling industry. The study adopted a panel data of 28 sub-sectors in China between 2003-2013. The study indicates that environmental regulation has been key to improving the eco-efficiency within the manufacturing business. The study further indicates that environmental regulation has resulted in better technical innovation and environmental performance among the majority of the manufacturing sub-sector firms. This study was focused on the manufacturing industry, while this study examined the growth of the construction industry in Kenya.

Akanni, Oke, and Akpomiemie (2015) studied the effect of ecological factors on building venture execution in Delta State, Nigeria. The investigation relied on structured questionnaires and targeted government and private developers within the Delta state. The study employed mean score and Spearman correlation in the analysis. The study indicates that adherence to legal requirements and the socio-cultural factors affected the project performance. The study further indicates that economic, financial, and political factors impacted undertaking completion in Nigeria. The research fails to examine the specific environmental laws that are critical to the development of the building sector. This research aims to solve this knowledge gap. In Nigeria, Dania, Larsen, and Yao (2013) reported that the government had not implemented regulation on waste management in construction industries hence the contractors were more focused on other objectives of their projects such as time, cost, quality of project rather than the associated environmental impacts from construction industries. Most of the employees in construction industries lack waste management skills since the companies did not have policies for the management of waste.

In Kenya, the laws regulating construction firms demands for cooperation between contractors, clients, authorities and suppliers to determine the level of safety and efficiency of waste management and storage facilities (Kioko, 2017). Waste management practices are a result of rampant environmental degradation and their adoption comes with the sole purpose of reducing negative impacts to the environment. Additionally, these practices have been noted to reduce the overall costs of construction projects. Ndumia (2015) examined the impact of the administrative structure on the presentation of building development extends in Nairobi County, Kenya. The examination embraced a spellbinding exploration plan and concentrated on amount assessors, authorized draftsmen, and building contractual workers registered in Nairobi County. The results indicate that the implementation of environmental policies and mitigation measures employed by NEMA negatively influences the construction projects. Findings further indicate that onsite inspection, solid waste management, and guidelines for the conservation of natural resources are vital to project performance. The study indicates that publishing of code of conduct, as well as constructive and active engagement with construction firms, is vital to the growth in the industry. According to Njoroge (2013), compliance with environmental regulations and bureaucracies involved influence the time and cost of completing projects. To advance the exhibition of development ventures, construction firms need to put into consideration environmental regulations from the arranging period of the task

to the completion stage. The above studies focus on project performance, while current research examines the growth of firms operating in the construction business.

Gichamba and Kithinji (2019) studied the influence of environmental regulations in the execution of development extends in Nairobi County, Kenya. The investigation utilized a correlation research design focusing on the 824 registered construction firms in Nairobi County. The examination depended on essential and auxiliary exploration information. The discoveries of the examination indicate that water regulations, waste management regulation, and noise and vibration regulations significantly affected the exhibition of construction projects. The study further indicates there is an insignificant effect of physical planning regulations on the project performance. The study was limited to construction firms in Nairobi County, while current research analyses the growth of construction firms in Kiambu County.

2.3.2 Building Regulations and Growth of Construction Sector

In a study on the factors determining quality assurance within the construction industry in China, Liu, Zhao, and Li (2016) maintained that the overarching variable was the contractors' unethical behavior. The results indicated that cost-cutting pressures, insufficient sanctions by the government, and lack of a common code of conduct were the leading drivers of unethical behavior. The study only focused on unethical conduct in the development business in China. In contrast, this research examines the growth of the building industry in Kenya.

Ruya, Chitumu, and Jatau (2017), while examining the effectiveness of building development control in Nigeria, demonstrated a significant correlation between construction standards and established regulations. In this case, the construction standards, aided in improving the quality within the established building construction regulations. Consequently, construction regulations were positively considered to be among the key drivers of an effective standard for quality assurance within the Nigerian building construction business. The research suggested that the government should consistently undertake strict enforcement to ensure total adherence to the set regulations as a strategy for promoting quality assurance. The study focused on the effectiveness of regulations in the Nigerian sector. In contrast, the current study examines the growth of the Kenyan construction industry.

Otid and Omwenga (2019) examined the key determinants of quality assurance within the building construction industry in Kenya. The study recommended for stringent enforcement by NCA concerning the regulation of building development and that further research needs to be undertaken to investigate the emerging relationship between contractors' proficiency and

quality of building constructions that are being undertaken by them. The study, however, fails to examine how environmental laws and registration requirements influence the growth of construction industry firms.

According to NCA (2015), the availability of products of inferior quality in the market and unwillingness or failure to comply with minimum standards for materials used in the construction sector has led to massive loss among the proprietors as well as the loss of lives of the citizens. Mitigating some of these risks related to steel products and quality in the industry, need to have a careful analysis and strong regulations by KEBS in the construction industry to prevent importation and manufacture of low quality and unstandardized steel products (Gacheru & Diang'a, 2015).

Omollo (2019) conducted an empirical analysis of the hindrances to the viable guideline of the structure development industry. The study population was the 84 registered construction firms in Kisii county, and structured research data was used in the research. The results of the research show that ineffective regulation in the industry was occasioned by the failure to obtain statutory approvals and laxity in the supervision of construction projects by the National Construction Authority. The study also shows that inadequate sectoral coordination, lack of surveillance, and limited sensitization of stakeholders led to poor implementation of building regulations. The study, however, fails to examine how regulations influence the growth of the construction industry.

Abukuse (2019) did a study on the factors influencing the performance of building construction companies in Kilifi County, Kenya. The study adopted a descriptive research design focusing on 58 construction firms. The analysis of the results indicates that the contractor's compliance with government policies and regulations significantly influenced the performance of construction companies. The study indicates that standardization in construction practices and the introduction of sustainable buildings is key to improved building performance within the firms. The study, however, fails to examine how environmental regulations and registration requirements influence the growth of construction firms.

2.3.3 Registration Requirements and Growth of Construction Sector

Mohd-Rahim, Nurshuhada, Sumiani, and Rafikullah (2016) in a study that delved on the determinants of the sustainable construction industry in Malaysia. In their view, the sustainability of quality assurance within the construction industry is largely influenced by the availability of skilled and competent labor on the account that by its very nature, the industry

is labour-intensive since it relies heavily on human capital. Owing to its significance, the industry needs to guarantee the availability of adequate and competent labor in every project. The investigation centers around quality affirmation inside the development business. Interestingly, the current examination analyses the development of the development business in Kenya.

Oyewobi, et. al, (2013) analyzed the impacts of business situations on corporate procedures and the execution of development associations. The study adopted a meta-study analysis of the construction firms in the United Kingdom. The research indicates that business licensing requirements, the registration requirements, availability of skilled manpower, and the prevailing business environment significantly imported the construction firm's performance. The study, however, does not focus on how regulations influence the construction firm's growth, which is the focus of this research.

Muhwezi, Acai, and Otim (2014) conducted an evaluation of the variables causing delays in building development extends in Uganda. The examination received an overview research design with structured interviews being applied in the data collection process. Results indicate that the financial indiscipline of the contractors, inadequate experience, design errors, poor site supervision, and registration processes led to interruptions in construction projects. The research also indicates that high licensing costs and corruption in accessing building permits significantly affect project performance. The study is only limited to registration requirements. In contrast, this study examined both environmental and building regulations in the construction firms.

Ogundipe (2017) examined the wellbeing practices and laborers' presentation on building locales in Lagos State, Nigeria. The examination used an organized survey in the information assortment. It relied on a mix of descriptive and correlation analysis approaches. The findings indicate that having safety equipment, supervision of construction sites, training of skilled manpower, and communication between site engineers and site inspectors was key to improved worker performance. The study further indicates that in-house safety training was key to improved construction industry performance. The research focuses on worker performance, while current research analyzed the growth of construction firms.

Kirui and Maina (2018) examined the impact of enhancement rehearses on the operational presentation of the development business in Uasin Gishu County, Kenya. The examination adopted a descriptive research design and focused on 64 contractors within the County. The

investigation built up that improvement rehearses increment the operational exhibition of the development business. The study indicates that meeting licensing requirements, having knowledgeable contractors, and effective construction management positively improved the operational performance of construction firms. Gacheru and Diang' (2015) indicate that poor authorization of guidelines, absence of sufficient sharpening, and poor demeanor of contractual workers towards the NCA limited enforcement of registration requirements within construction firms in Kenya. The study, however, fails to analyze the impact of guidelines on the presentation of construction firms.

These studies all agree that there are significant registration requirements, and they affect the development business. All the studies analyzed agree that the presence of skilled labour increases the performance of the construction industry. Mohd-Rahim, Nurshuhada, Sumiani, and Rafikullah (2016) considered skilled labour only as a factor influencing the exhibition of the development industry as compared to other studies that considered a lot more factors. All these studies did not, however, comprehensively establish how regulations affect the performance of construction firms.

2.4 Summary of Literature and Research Gaps

The study reviewed several studies focusing on the variables of the research. It noted various research gaps that motivated this study. A summary of the literature gaps is shown in the table below:

Table 2.1 Research Gaps

Author	Title	Findings	Research Gap
Akanni, Oke, and Akpomiemie (2015)	Impact of environmental factors on building project performance	The study indicates that adherence to legal requirements and the socio-cultural factors affected the project performance	The study failed to examine the specific environmental laws that are critical to the growth of the construction sector
Kirui and Maina (2018)	Effect of optimization practices on the operational performance of the	The study indicates that meeting licensing requirements, and effective	The study, however, failed to examine the effect of environmental and building regulations

	construction industry in Uasin Gishu County	construction management improved operational performance	on the performance of construction firms
Omollo (2019)	An empirical analysis of the barriers to the effective regulation of the building construction industry	The study shows that inadequate sectoral coordination, lack of surveillance and limited sensitization of stakeholders led to poor implementation of building regulations	The study, however, failed to examine how regulations influence the growth of the construction industry
Ruya, Chitumu, and Jatau (2017)	Effectiveness of building development control in Nigeria	Regulations were positively related to the effective standard for quality assurance within the Nigerian building construction industry	The study focused on the effectiveness of regulations in the Nigerian sector while the current study examined the growth of Kenyan construction industry
Zutshi and Creed (2015)	International review of environmental initiatives in the construction sector	The findings indicate that adherence to environmental management guidelines was key to the sustainability of construction projects	This study focused on the sustainability of the projects while the current study examined the growth of Kenyan construction projects

Source: Researcher (2020)

2.5 Conceptual Framework

A conceptual framework is a diagrammatic portrayal of the connection between the factors in the investigation. It is a guessed model distinguishing the ideas under investigation and their

connections (Cooper & Schindler, 2014). The below conceptual framework hypothesized the relationship between regulations and the growth of construction firms in Kiambu County.

Independent Variables **Dependent Variable**

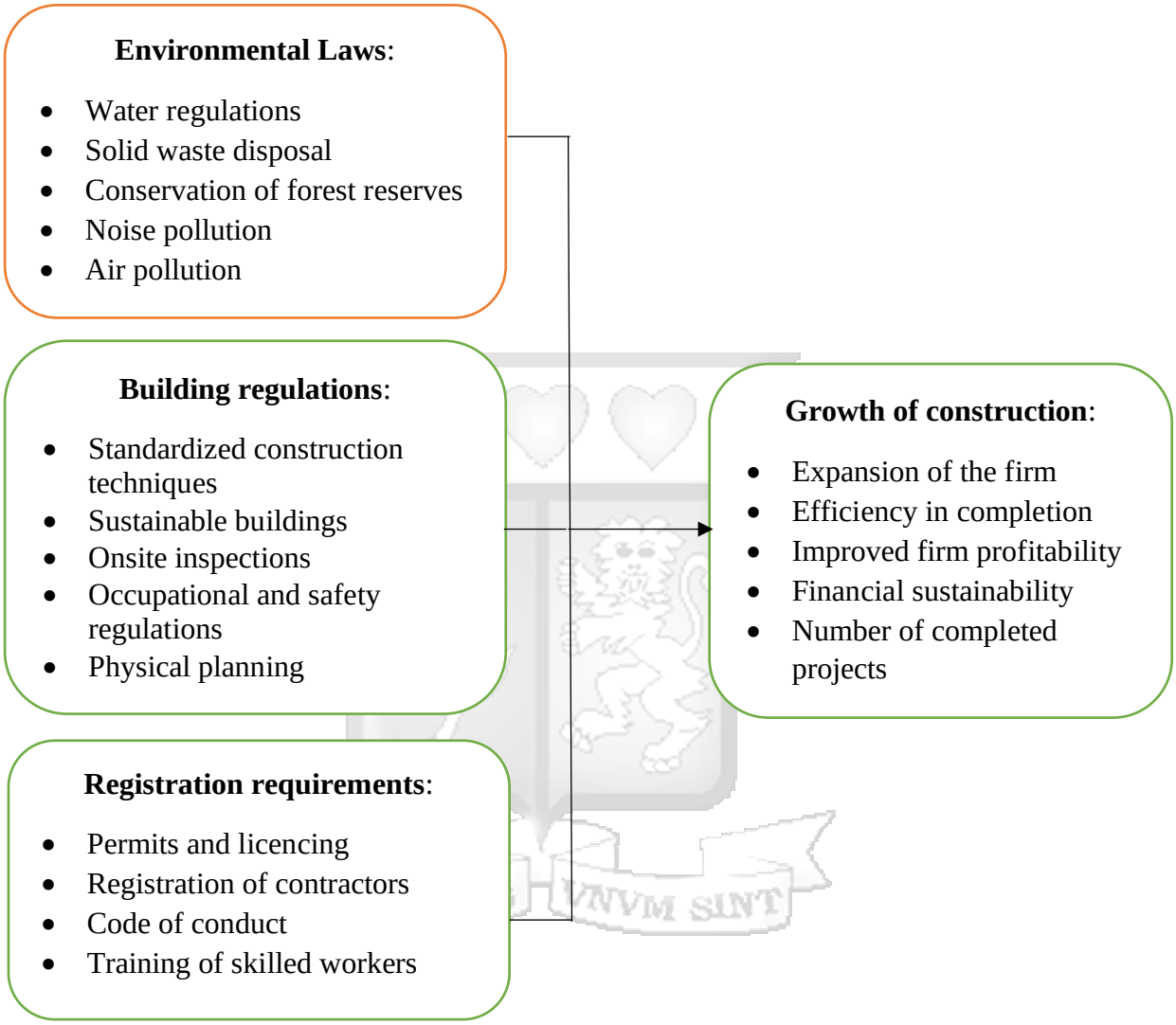

Figure 2.1 Conceptual Framework

Source: Researcher (2020)

The above conceptual framework focused on the association between regulations and the growth of construction firms in Kiambu County. The regulations were conceptualized in terms of environmental regulations, building regulations, and registration requirements. The operationalization of the study variables is shown below.

Table 2.2 Operationalization of Research Variables

Variable	Constructs	Measurement	Data Collection Tool	Data Analysis
Environmental laws	• Water regulations • Solid waste disposal • Conservation of forest reserves • Noise pollution • Air pollution	Ordinal scale	Structured questionnaire	Descriptive statistics Correlation tests Regression tests
Building regulations	• Standardized construction techniques • Sustainable buildings • Onsite inspections • Occupational and safety regulations • Physical planning	Ordinal scale	Structured questionnaire	Descriptive statistics Correlation tests Regression tests
Registration requirements	• Permits and licensing • Registration of contractors • Code of conduct • Training of skilled workers	Ordinal scale	Structured questionnaire	Descriptive statistics Correlation tests Regression tests
Growth of firms	• Expansion of the firm	Ordinal scale	Structured questionnaire	Descriptive statistics

	• Efficiency in completion • Improved firm profitability • Financial sustainability • Number of completed projects	Correlation tests Regression tests

Source: Author (2020)

2.6 Chapter Summary

This chapter consisted of a review of both theoretical and empirical literature. The review of the study literature indicated that the integration of various regulations is critical to construction firms. The theoretical review of the regulations indicates that the environmental laws, building regulations, and registration requirements are essential in directing growth within the construction industry. The study relied on the public interest theory and growth of the firm theory in examining the factors influencing growth within the construction industry in Kenya. The study further reviewed several studies that have helped identify the various empirical gaps and methodological gaps that were utilized towards solving the research problem. Based on the work of the literature reviewed, the conceptual framework and operationalization of the variables are also presented.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This research chapter focused on the blueprint that was utilized in guiding and solving the research problem. The chapter comprised of the research philosophy, the design, population of the study, and the sampling design. This chapter further contained the data collection instruments, procedures as well as the data analysis and presentation techniques.

3.2 Research Philosophy

According to Galliers (1991), a research philosophy can be said to be a conviction about how information about a wonder ought to be accumulated, investigated, and utilized. This investigation embraced a positivist exploration theory. Positivism is related to a self-comprehension of logical action in which sociology is free of the truth it portrays(Riley, 2007). The positivist worldview declares that genuine occasions can be watched observationally and clarified with a sensible examination (Kaboub, 2008). This philosophy was key in guiding this research study that was based on a quantitative approach in determining the association between regulations and the growth of construction industry firms.

3.2.1 Research Design

As indicated by Creswell (2014), an exploration configuration is plans and strategies for research that range the choices from expansive suspicions to point by point techniques for information assortment and investigation. A descriptive research design presents a quantitative or numeric account of trends, attitudes or opinions of a population by studying a sample of that population. This research design was ideal for this study because it describes data and characteristics about the population or phenomenon under study. The descriptive research design was key in this study as it will guide in the selection of quantitative instruments in the data collection and analysis. Further, descriptive research allows for statistical analysis to be conducted, estimating the association between research variables.(Saunders, Thornhill, & Lewis, 2007).

3.3 Target Population and Sampling Design

Cooper and Schindler (2014) portray the populace as the complete assortment of components about which we wish to make deductions. As per Johnson and Turner (2003), a testing configuration is a strategy or system the scientist would embrace in choosing things for the example.

3.3.1 Target Population

Saunders, Lewis, and Thornhill (2012) define the target population as a set of all individuals that are relevant to a particular study. The unit of analysis was the construction firms registered by the National Construction Authority (*Category I, II, and III*) within Kiambu County. According to NCA Directory (2018), there are 167 registered firms and operating within the county. The unit of observation was the Managing Directors of the 167 firms.

3.3.2 Sampling Design and Sample Size

The sample for the study was identified by using a purposive sampling technique in selecting construction firms in Category I, II, and III as registered by the National Construction Authority in Kiambu County. According to Kothari (2007), purposive sampling adds credibility to the sample when the potential purposeful sample is large. The study adopted a census survey of the 167 firms operating within Kiambu County. The study targeted one senior staff from each of the 167 constructions firms.

3.4 Data Collection Instruments

The data collection method can be defined as the systematic process used by the researcher to collect either primary or secondary data for a study (Saunders, Lewis, & Thornhill, 2012). The importance of data in research cannot be overemphasized (Kothari, 2007). The study relied on primary research data. The research questions were constructed in line with the variables of the study. Amongst them include questionnaires that can be structured and unstructured. Structured questionnaires were used to collect primary data from the sampled respondents to capture the various variables of the study. The questionnaire was designed in line with the variables of the research incorporating all the operationalized research constructs. The researcher adopted a questionnaire tool with a five-level Likert scale from; neither agree nor disagree, strongly disagree, disagree, agree, and strongly agree. Questionnaires were considered because they are an effective method of collecting data on samples and can easily be analyzed (Creswell & Creswell, 2017).

3.5 Data Collection Procedures

The questionnaire was self-administered to ensure respondents respond to questions and where possible, obtain much more information, encourage response, and ensure full and accurate data from respondents (Kothari, 2007). The study ensured the research participants were informed of their free will to participate in the research as well as the right to withdraw from participation at any point during the study.

3.6 Research Quality

To test for the internal consistency and the robustness and completeness of the research instrument, the study conducted a pilot test with 10% of the study participants. A pilot test is a trial test designed to check logistics (reliability and validity of particular results) and collect information before conducting a large study aimed at improving the latter's quality and efficiency. This allowed for both reliability and validity tests to be conducted.

3.6.1 Reliability Tests

Reliability alludes to the degree to which an estimating instrument contains variable blunders that show up irregularity from perception during any one estimation endeavor, or that doesn't shift each time a given unit is estimated by a similar instrument (Yaghmale, 2009). On the off chance that the consequences of an investigation can be imitated under a comparative strategy, at that point, the exploration instrument is viewed as solid (Walliman, 2011). The examination depended on the Cronbach to evaluate the inward consistency of the investigation instrument. The exploration chose all the builds with a Cronbach alpha of above 0.7

Table 3.1 Reliability Results

Variable	Cronbach's Alpha	N of Items
Growth of construction firms	.835	5
Environmental laws	.740	7
Building regulations	.854	6
Registration requirements	.850	5

The findings of the pilot study indicate that all the study variables had a Cronbach score of above 0.7 thus were deemed appropriate for the research study. The Cronbach scores were as follows; growth of construction firms (.835), environmental laws (.740), building regulations (.854), and registration requirements (.850).

3.6.2 Validity Tests

A validity test is important since it determines if the examination instrument genuinely quantifies what it was expected to gauge (Walliman, 2011). The examination depended on content legitimacy to evaluate the legitimacy of the investigation instrument. Content legitimacy alludes to the extent that the instrument covers the substance that it should gauge.

It additionally alludes to the sufficiency of the inspecting of the substance that ought to be estimated (Yaghmale, 2009). Content validity was estimated by approaching individuals of subject matter experts (SMEs) and supervisors to review the questionnaire items. This was evidenced by the signed letter by the supervisor in Appendix 1.

3.7 Data Analysis and Presentation

Data analysis is the process of evaluating data logically and analytically using each component of the data at hand (Cooper & Schindler, 2014). The study relied on the Statistical Package for Social Sciences (SPSS) to conduct quantitative data analysis. Data analysis was done using descriptive statistics, including mean, standard deviation, frequency distribution, percentage distribution and also inferential techniques, including correlation and regression analysis used. The research utilized the below regression model to determine the relationship between the research variables using ordinary least square regression analysis.

$$\mathbf{Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e}$$

Where:

Y = growth of construction firms

{βi; i=1, 2, 3} = The coefficients for the various independent variables

X_1 = environmental laws

X_2 = building regulations

X_3 = registration requirements

e = error term

These study variables were operationalized as shown in Table 2.2. The study further undertook tests of linear regression assumptions in examining the statistical fit of the regression model. The study adopted collinearity tests, heteroscedasticity tests, and normality tests.

3.8 Ethical Considerations

This study ensured that research guidelines are observed in the conduct of this study. The research ensured that ethical review committee approval is sought from the Strathmore Business School before undertaking the study. The study further applied for a research permit is sought from the National Commission for Science Technology and Innovation. The study also ensured that all the responses obtained are treated with the utmost confidentiality, and the

review of the same was conducted for academic purposes only. The study also ensured that the respondent's participation was voluntary.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the findings drawn from the analysis of research data. The chapter consists of the demographic information, the descriptive summary, the tests for linear regression assumptions, the correlation tests, and the regression analysis.

4.2 Background Information

The study sought to collect research data from all the 167 construction firms drawn from Kiambu County. The study obtained 70% (N=117) responses from the sample respondents, with only 30% (N=50) participants not taking part in the study. Cooper and Schindler (2014) suggested that a response rate of above 60% is good for statistical analysis. Based on this, the study deemed the responses obtained adequate for the quantitative analysis to be conducted.

4.2.1 Age of Respondents

The study aimed at determining the age distribution of the respondents drawn from the construction firms, and the results is shown below.

Table 4.1 Results on Age of Respondents

	Frequency	Percent
31-34 years	23	19.7
35-40 years	36	30.8
41-44 years	40	34.2
45-50 years	9	7.7
Over 50 years	9	7.7
Total	117	100.0

Findings above indicate that most of the participants 34% (N=40) were aged between 41-44 years, 31% (N=36) were between age 35-40 years, while only 7% of the participants were between age 45-50 years and over 50 years respectively.

4.2.2 Gender of Respondents

The research reviewed the participant's gender distribution, and the responses indicate that 57% (N=67) were male participants. In comparison, only 43% (N=50) of the participants were female workers within the firms sampled.

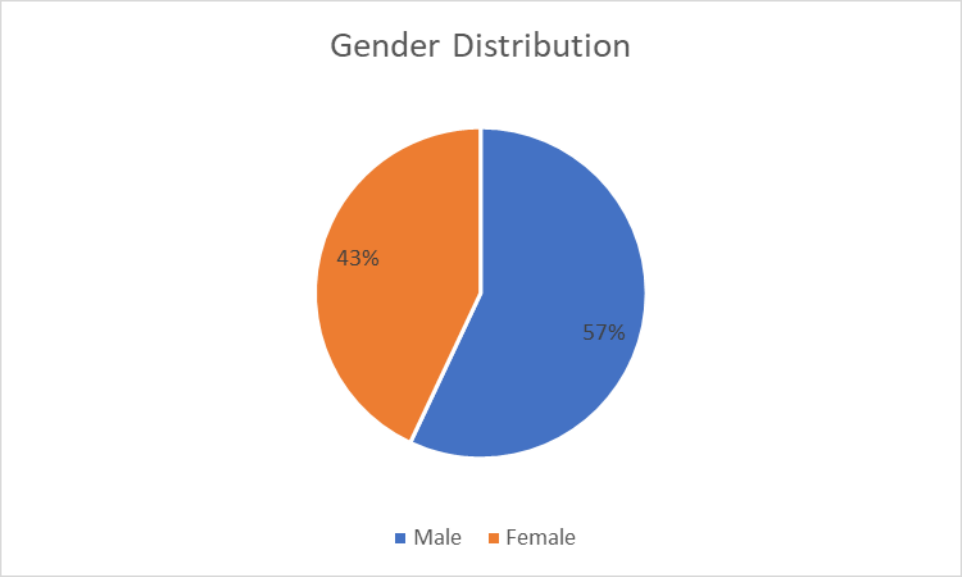

Figure 4.1 Respondents Gender

4.2.3 Working Experience

The research examined the length of work experience among the participants of the study, and the results are shown in the table below.

Table 4.2 Results on Work Experience

	Frequency	Percent
Less than one year	11	9.4
1-5 years	45	38.5
6-10 years	39	33.3
Over ten years	22	18.8
Total	117	100.0

The results of the study show that 38% of the respondents had worked for 1-5 years, 33% of the participants had worked for 6-10 years, while only 9% of the participants had worked for less than one year within the construction industry.

4.2.4 Education Qualification

The study reviewed the education attainment among the participants drawn from the construction industry, and the results are presented in the table below.

Table 4.3 Results on Education Qualification

	Frequency	Percent
Diploma level	51	43.6

	University Degree	53	45.3
	Post Graduate	13	11.1
	Total	117	100.0

The results above show that most of the respondents, 45% (N=53) had attained degree level certification, 44% (N=51) had attained a diploma level education. In contrast, only 11% of the study population had a postgraduate degree qualification.

4.2.5 Category of Job

The study sought to determine the job category/description among the various participants who took part in the study, and findings are presented below.

Table 4.4 Respondents Job Category

		Frequency	Percent
	Permanent Employee	57	48.7
	Contract Employee	60	51.3
	Total	117	100.0

The findings of the study show that the majority of the participants, 51% (N=60), were contract employees in the construction industry, while only 49% (N=57) of the respondents were permanent employees within the industry.

4.3 Descriptive Results

The study aimed to examine the participant's perception of the environmental laws, building regulations, registration requirements, and the growth of the construction industry. The study drew research data using a Likert scale questionnaire, and the summary of the results was presented using means, standard deviation, and variances.

4.3.1 Environmental Laws in the Construction Industry

The first independent variable examined the participant's perception of the various environmental laws put in place within the construction industry, and the results are presented in Table 4.5. The key for interpretation is as follows; NDA- neither agree nor disagree, SDA- strongly disagree, DA- disagree, A- agree, SA- strongly agree.

Table 4.5 Environmental Laws Descriptive Results

Statement	NAD	SDA	DA	A	SA	Mean	Std. Deviation
The firm ensures there is strict adherence to the waste regulations put in place by WARMA	3.4%	2.6%	16.2%	57.3%	20.5%	3.8889	.87865
The organization has put in place guidelines to ensure conformity to solid waste disposal requirements	7.7%	4.3%	12%	51.3%	24.8%	3.8120	1.09805
The organization has put in place mechanisms to protect and enhance conservation of forest reserves	6.8%	4.3%	20.5%	41.9%	26.5%	3.7692	1.10160
The firm regularly reviews its practices in line with the noise pollution regulations in place	8.5%	6.0%	17.1%	45.3%	23.1%	3.6838	1.14958
Use of environmentally friendly raw materials in the construction of houses has been on the rise	5.1%	3.4%	15.4%	47%	29.1%	3.9145	1.02194
Environmental sound management of waste involves taking practical steps to ensure that waste is managed in a manner which will protect human health	7.7%	2.6%	21.4%	49.6%	18.8%	3.6923	1.05423

Findings indicate 57.3% of the participants agreed that the firm ensures there is strict adherence to the waste regulations put in place by WARMA. Regarding the organization has put in place guidelines to ensure conformity to solid waste disposal requirements, there was agreement among 51.3% of the respondents while 7.7% neither agreed nor disagreed. In concern to the

organization putting in place mechanisms to protect and enhance conservation of forest reserves, there was agreement among 41.9% of participants, with 26.5% of the participants strongly agreeing. The results show 47% of the respondents agreed, and 29.1% strongly agreed that the firms had witnessed a rise in the usage of environmentally friendly raw materials in the construction of houses. The study also notes agreement among 49.6% of the respondents that there is environmentally sound management of waste involving taking practical steps to ensure that waste is managed in a manner which will protect human health.

4.3.2 Building Regulations in the Construction Industry

The study's second variable reviewed the adherence to the building regulations in the construction industry, and the results are shown below. The key for interpretation is as follows; NDA- neither agree nor disagree, SDA- strongly disagree, DA- disagree, A- agree, SA- strongly agree.

Table 4.6 Building Regulations Descriptive Results

Statement	**NAD**	**SDA**	**DA**	**A**	**SA**	Mean	Std. Deviation
The firm has put in place guidelines to guide the implementation of sustainable building technologies	5.1%	0%	21.4%	63.2%	10.3%	3.7350	.84479
The firm constantly reviews the occupational and safety regulations adopted in the construction sector	4.3%	1.7%	21.4%	45.3%	27.4%	3.8974	.96833
The organization ensure there is strict adherence to the standardized construction practices in the industry	6.8%	1.7%	16.2%	35.9%	39.3%	3.9915	1.11800
The organization allows of safety and onsite inspections to be conducted by the regulatory body	8.5%	1.7%	12.8%	47%	29.9%	3.8803	1.12313

The organization ensures there is compliance to physical planning requirements	6.8%	0%	6.8%	55.6%	30.8%	4.0342	.99941
The firm ensures effective mitigation measures for significant negative impacts of building construction projects are adopted	7.7%	2.6%	12.8%	59%	17.9%	3.7692	1.02876
There is effective standardization of construction techniques & materials within the firm	6.8%	.9%	15.4%	52.1%	24.8%	3.8718	1.02165

Findings indicate 63.2% of the participants agreed that the firm has put in place guidelines to guide the implementation of sustainable building technologies. Regarding the firm constantly reviews the occupational and safety regulations adopted in the construction sector, there was agreement among the 45.3% respondents, 27.4% strong agreement, and 21.4% disagreement. The study also notes that 39.3% of the respondents strongly agreed that the organization ensures there is strict adherence to the standardized construction practices in the industry. Findings also show 47% of respondents agreed that the organization allows for safety and onsite inspections to be conducted by the regulatory body. Results of the study show agreement among 55.6% and 30.8% strong agreement among respondents that the organization ensures there is compliance to physical planning requirements. The study further shows agreement (59%) that the firm ensures effective mitigation measures for significant negative impacts of building construction projects are adopted.

4.3.3 Registration Requirements in the Construction Industry

The third study variables examine the registration requirements in the construction industry, and the findings are shown in the table below. The key for interpretation is as follows; NDA- neither agree nor disagree, SDA- strongly disagree, DA- disagree, A- agree, SA- strongly agree.

Table 4.7 Registration Requirements Descriptive Results

Statement	**NAD**	**SDA**	**DA**	**A**	**SA**	Mean	Std. Deviation

The firm has ensured all permits have been acquired within the construction sites	3.4%	1.7%	15.4%	63.2%	16.2%	3.8718	.82565
The firm has ensured that all the licensing requirements have been met	4.3%	.9%	16.2%	49.6%	29.1%	3.9829	.93756
The firm ensures that all contractors considered within the firm have met registration requirements	6%	0%	15.4%	47%	31.6%	3.9829	1.00844
The firm has ensured that the regulator code of conduct is adhered to	6.8%	0.9%	16.2%	40.2%	35.9%	3.9744	1.08645
The firm has retained trained and registered workers within its operations	9.4%	0.9%	11.1%	51.3%	27.4%	3.8632	1.12116

The research also showed 63.2% of the participants were in agreement that the firm has ensured all permits have been acquired within the construction sites. The findings indicate 49.6% of the respondents were in agreement that the firm has ensured that all the licensing requirements have been met. Regarding the firm ensures that all contractors considered within the firm have met registration requirements, there was agreement among 47% participants, 15.4% disagreement, and 6% of the respondents neither agreed nor disagreed. The results show agreement that the firm has ensured that the regulator code of conduct is adhered to as indicated by 40.2% agreement and 35.9% strong agreement. The study showed 51.3% of responses were in agreement that the firm had retained trained and registered workers within its operations.

4.3.4 Growth in the Construction Industry

The dependent variable of the study examined the growth levels within the construction industry in Kiambu County, and the results are presented in the table below. The key for interpretation is as follows; NDA- neither agree nor disagree, SDA- strongly disagree, DA- disagree, A- agree, SA- strongly agree.

Table 4.8 Growth in Construction Industry Results

Statement	NAD	SDA	DA	A	SA	Mean	Std. Deviation
Construction stock has been increasing over a period of time	6.8%	3.4%	16.2%	62.4%	11.1%	3.6752	.96337
There has been an increase in the number of housing units developed annually	2.6%	10.3%	17.1%	53.8%	16.2%	3.7094	.94741
There has been an expansion within the construction industry	7.7%	5.1%	14.5%	47.9%	24.8%	3.7692	1.11714
There is an improvement in the efficiency of firms within the construction industry	2.6%	4.3%	14.5%	46.2%	32.5%	4.0171	.93756
There is an improvement in the sustainability of construction projects within the County	4.3%	4.3%	17.1%	44.4%	29.9%	3.9145	1.01347
The cost has been reduced due to the adoption of regulatory frameworks	8.5%	5.1%	14.5%	44.4%	27.4%	3.7692	1.16252

Regarding the construction stock has been increasing over some time, there was agreement among 62.4% of the respondents, while 3.4% of the respondents strongly disagreed. The study also showed 53.8% of the respondents were in agreement that there had been an increase in the number of housing units developed annually. Regarding the firm has witnessed an expansion within the construction industry, there was agreement among 47.9%, 24.8% strong agreement, and 14.5% disagreement among the respondents. The findings show an agreement among 46.2%, strong agreement (32.5%) that there is an improvement in the efficiency of firms within the construction industry. The study results show a 44.4% agreement that there is an improvement in the sustainability of construction projects within the County.

4.4 Correlation Results

The study analyzed the type of association between the independent and dependent variables with the Pearson correlation being adopted in the research.

Table 4.9 Correlation Results

		Environmental Laws	Building Regulations	Registration Requirements	Growth of Construction
Environmental Laws	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	117			
Building Regulations	Pearson Correlation	.234*	1		
	Sig. (2-tailed)	.011			
	N	117	117		
Registration Requirements	Pearson Correlation	.060	.323**	1	
	Sig. (2-tailed)	.517	.000		
	N	117	117	117	
Growth of Construction	Pearson Correlation	.206*	.193*	.384**	1
	Sig. (2-tailed)	.026	.037	.000	
	N	117	117	117	117

*. Correlation is significant at the 0.05 level (2-tailed).

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

The first study objective sought to establish the effect of environmental laws on the growth of construction firms. The findings indicate that there is a positive and significant effect of environmental laws on the growth of construction firms (*P=.206, Sig =.026*). Similarly, Zutshi and Creed's (2015) study showed that adherence to environmental guidelines supports better sustainability in construction projects. The research further sought to tests the effect of building regulations on the growth of construction firms in Kiambu County. The results show that there is a positive and significant effect of building regulations on the growth of construction firms (*P=.193, Sig =.037*). Ruya, Chitumu, and Jatau (2017) research revealed that adherence to construction standards and regulations was a key driver for construction industry growth. The third objective examined the effect of registration requirements on the growth of construction firms. The findings indicate that there is a positive and significant effect of registration

requirements on the construction firm's growth (*P=.384, Sig =.000*). Oyewobi, Windapo, Cattell, and Rotimi (2013), in a study in the construction industry, found out that registration, licensing requirements, and skilled manpower were key to the firm's performance.

4.5 Regression Analysis

The research sought to determine the relationship between regulations and the growth of the construction sector. The variables used in this study were operationalized as shown in Table 2.2 The study adopted the ordinary least square regression analysis, and the findings are presented in the table below.

Table 4.10 Regression Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.427[a]	.182	.160	3.18180

a. Predictors: (Constant), Registration Requirements, Environmental Laws, Building Regulations

The results above show a coefficient of determination ($R^2=.182$), which indicates that 18.2% of the changes in the growth of the construction industry are determined by regulations (registration requirements, environmental laws, building regulations).

Table 4.11 ANOVA Summary

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	254.532	3	84.844	8.381	.000[b]
	Residual	1143.998	113	10.124		
	Total	1398.530	116			

a. Dependent Variable: Growth Construction

b. Predictors: (Constant), Registration Requirements, Environmental Laws, Building Regulations

The ANOVA test was done at a 95% level of significance (α=0.05), critical value f= 1.96. The results above show that regulations have a positive and significant relationship with the growth of construction firms (F-value = 8.381, Sig = .000<.05).

Table 4.12 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.610	3.180		2.708	.008
	Environmental Laws	.173	.086	.176	2.012	.047
	Building Regulations	.037	.097	.035	.382	.003
	Registration Requirements	.473	.118	.362	4.024	.000

a. Dependent Variable: Growth Construction

The resulting regression equation becomes;

$$\mathbf{Y = 8.160 + .173X_1 + .037X_2 + .473X_3}$$

The results above indicate a **β0 = 8.160,** which is statistically significant since the sig=.008<.05. The findings indicate that environmental laws have a coefficient **β1= .173,** sig=.047<.05, which indicates that a unit change in environmental laws results in a .173 change in the growth of construction firms. The results further show that building regulations **β2= .037,** sig=.003<.05, which affirms that a unit change in the building regulation is anticipated to yield a .037 change in the growth of construction firms. The findings further indicate that registration requirements **β3= .473,** sig=.000<.05 have a statistically positive effect, which will result in a .473 change in the growth of construction firms in Kiambu County.

4.6 Tests for Linear Regression Assumptions

To conduct a regression analysis, the research data is expected not to violate the main linear regression assumptions. The research applied collinearity tests, heteroscedasticity tests, and normality tests.

4.6.1 Collinearity Tests

The study utilized Variance Inflation Factor coefficients to determine if the independent variables are severely correlated with each other (Saunders, Lewis, & Thornhill, 2014). The collinearity statistics are presented in the table below.

Table 4.13 Collinearity Statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Environmental Laws	.945	1.058
	Building Regulations	.850	1.177
	Registration Requirements	.895	1.117

a. Dependent Variable: Growth of Construction

If the VIF value is above 10, then this indicates that the research constructs suffer from multicollinearity problems. The results of the collinearity tests indicate that environmental laws (VIF =1.058), building regulations (VIF= 1.177), and registration requirements (VIF=1.117), thus showing no collinearity problems among the independent study variables.

4.6.2 Normality Tests

In testing for normality, the researcher intended to assess whether the distribution was normal. In cases of data sets that have less than 2000 elements, the Shapiro-Wilk test is adopted.

Table 4.14 Normality Statistics

	Shapiro-Wilk		
	Statistic	Df	Sig.
Environmental Laws	.966	117	.065
Building Regulations	.951	117	.080
Registration Requirements	.967	117	.055
Growth of Construction	.970	117	.069

a. Lilliefors Significance Correction

The test states that for normally distributed data, the sig. The value should be 0.05 or greater. From the results in Table 4.11 above, the significance value for all the predictor variables was above 0.05 hence indicating not normality problems in the data.

4.6.3 Heteroscedasticity Tests

Heteroscedasticity is a problem because, in linear regression, it is assumed that all the residuals are drawn from a population that has a constant variance. The study adopted Test-Glejser tests.

Table 4.15 Heteroscedasticity Statistics

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1749.563	3	583.188	2.397	.072b
	Residual	27494.169	113	243.311		
	Total	29243.732	116			

a. Dependent Variable: squares

b. Predictors: (Constant), Registration Requirements, Environmental Laws, Building Regulations

As a rule of thumb, if the *Sig.>.05,* then there is no heteroscedasticity. From the resulting test, the output coefficient's significance value obtained was Sig =.072>.05 indicating there is no heteroscedasticity problem in the study.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter was key in the presentation of the summary of the study, the discussion of the results, and the conclusions to be drawn from the study. The chapter further presented the recommendations of the study and the suggestions for further research.

5.2 Discussion

5.2.1 Environmental Laws

The first variable examined the environmental laws within the construction industry. The study results indicate that firms within the county have ensured there are strict adherence to the waste regulations and waste disposal requirements (77.8%). Zutshi and Creed (2015) also contend that adherence to environmental management laws is key to promoting growth within the construction sector. Cunningham (2014) similarly posits that raising environmental standards and protection is key to project development in construction firms. Participants further acknowledged that the organization has been able to put in place guidelines for protecting conservation and reserve areas (76.1%).

The study further shows agreement among respondents that their firms review noise pollution regulations and ensure environmentally friendly materials are utilized in the construction process (68.4%). Ndumia (2015) notes that ensuring compliance with environmental regulations and conversation guidelines is critical to construction project performance. The research further shows that firms have put in place steps to ensure the human population is protected from any negative effects culminating from the construction process (68.4%). The findings indicated that there is a positive and significant effect of environmental laws on the growth of construction firms (*P=.206, Sig =.026*). Yuan, Ren, and Chen (2017) also affirm that environmental regulation is critical to improving firm efficiencies. The results are also in line with Gichamba and Kithinji (2019). They indicated that environmental regulations had a significant effect on the performance of construction projects.

The findings indicated that there is a weak positive and significant effect of environmental laws on the growth of the construction industry. The findings also indicate that a unit change in the environmental laws will lead to a .173 change in the growth of the construction industry. This was supported by Cunningham (2014) who found that raising the minimum standards of

construction planning, safety, and protection of the environment leads to the development of better projects.

5.2.2 Building Regulations

The study's second variable examined adherence to building regulations in the construction industry. The findings indicate that firms have formulated guidelines to support the execution of sustainable building (73.5%). The results further show agreement that the firms regularly review occupational and safety regulations as well as ensure adherence to standardized construction practices (72.8%). Ruya, Chitumu, and Jatau (2017) posit that the key to the performance of the building industry is abiding by construction standards, established regulations, and affirming to standardized quality assurance. Otid and Omwenga (2019) contend that enforcement of NCA regulations is key to improving building development.

The research further indicates that the firms adhere to the requirements for site inspection and comply with physical planning requirements in the industry (74.6%). The study findings also affirm that the construction firms have ensured mitigation measures have been implemented in the firm, and there is adherence to standardization in construction techniques and materials used (76.9%). Gacheru and Diang'a (2015) revealed that standardization in materials and regulations in the industry is key to promoting industry growth in Kenya. The results showed a positive and significant effect of building regulations on the growth of construction firms (*P=.193, Sig =.037*). The results are in agreement with Omollo (2019), who found out that effective regulation is key to fostering the development of the construction industry.

The findings indicated that there is a weak positive and significant effect of building regulations on the growth of the construction industry. The findings also indicate that a unit change in the building regulations will lead to a .037 change in the growth of the construction industry. This was in line with Abukuse (2019) who also revealed that standardization in practices and compliance with policies and regulations is key to the performance of construction firms.

5.2.3 Registration Requirements

The third variable of the study reviewed the registration requirements in the construction industry, and results show that most of the firms have ensured that all permits having been acquired in their sites (79.4%). Muhwezi, Acai, and Otim (2014) notes that meeting registration requirements and adherence to operational requirements is essential to achieving business performance in the construction industry. The findings further show that firms have ensured that licensing requirements are followed, and all partnering contractors are duly registered by the authority. Oyewobi, Windapo, Cattell, and Rotimi's (2013) study results also indicate that

meeting the licensing and registration requirements is key to the performance of construction firms.

The participants also indicated agreement that the firm has ensured adherence to the code of conduct and ensures that staff within the firm are trained and registered in line with the regulator (76.1%). Ogundipe's (2017) study also revealed that ensuring safety practices are implemented within construction sites supports better performance among workers in the industry.

The findings showed a positive and significant effect of registration requirements on the construction firm's growth (P=.384, Sig =.000). The findings also indicate that a unit change in the registration regulations will lead to a .473 change in the growth of the construction industry. This was in line with a study by Kirui and Maina (2018) who also contend that licensing requirement and enforcement of regulations is a critical driver of operational performance of construction firms.

5.3 Summary and Conclusion

The complexities in the regulations facing the construction industry have resulted in skewed growth in the construction industry in Kenya. However, in the recent past, most urban areas have witnessed an increase in demand for office space and residential places, which has resulted in a boom in the construction industry in Kenya. The growth in the industry has, however, not been examined against the regulations in place in the industry. This study sought to establish the effect of the regulations on the growth of the construction industry. The research specifically sought to identify the effect of environmental laws, building regulations, and registration requirements on the growth of the industry.

The study was grounded on the growth of the firm theory, which explicitly indicates that the main interest of any firm is to maximize the returns to the owners of the business. The study findings agree with the theory since respondents indicated that the constructions firms have been increasing profits and reducing costs to promote their growth in the industry. The public interest theory, on the other hand, informed the need for regulations to be put in place to balance the externalities arising from the production process. The study findings stressed the need for laws and regulations for the industry to exhibit growth. This is line with the public interest theory which also informed the need for regulations.

The review of the literature was vital in identifying the gaps that informed this study. The study adopted a positivist research philosophy with a cross-sectional design utilized in examining the

study problem. The study obtained a 70% response rate from the sample respondents. The findings of the study indicate that regulations account for 18.2% of changes in the growth of the construction industry.

The study concludes that regulations are pivotal in ensuring growth in the construction industry. The study revealed that registration requirements, environmental laws, and building regulations have a positive effect on the growth of construction firms. The research concludes that construction firms should ensure there maintain adherence levels to environmental regulations and put in place to ensure a reduction in noise pollution, utilization of environmentally friendly materials, and utilization of protective gear at their sites. The study further concludes that construction firms should routinely review their occupational and safety regulations and ensure adherence to building requirements and material usage. The research also concludes that construction firms should ensure that they adhere to the code of conduct, meet registration requirements and licensing requirements as this will be critical to the growth of the firms.

5.4 Recommendations

5.4.1 Environmental laws

Given the challenges in the regulation of the construction industry, the study recommends that county governments should form committees with members of the construction firms, environmentalists and the regulator that can help in reviewing adherence to environmental laws and regulations in the industry to ensure firms have been complying with all the environmental laws and guidelines and ensure better industry performance.

5.4.2 Building Regulations

The study recommends that construction firms should ensure that before the commencement of their operation, they should actively review all regulations and ensure they have applied and complied with all the relevant statutory regulations. Further, the regulatory body should review the enforcement measures in place to ensure that errant developers are prosecuted for avoiding damaging the reputation of other construction firms. This can be achieved by expanding the regulator mandate to allow for the ability to penalize and prosecute firms not adhering to regulations.

The study also recommends that construction associations should be encouraged among smaller construction firms to ensure they can actively support each other in coming up with common guidelines to ensure compliance with regulations.

5.4.3 Registration Requirements

To support the construction industry, the study recommends that the National Construction Authority should streamline its operations by mandating some of their roles to the county governments such as accreditation of contractors and review of regulations in tandem with the operating environments.

5.5 Suggestions for Further Studies

The study was limited to a single county and only considered large construction firms. A similar study should be undertaken across the whole country to review how various regulations, political, and business environment affect the performance of construction firms in Kenya.

5.6 Limitations of the Study

The study experienced the following limitations;

i. Respondents were unwilling to participate in the research due to fear of their business anonymity not being upheld.
ii. Some firms were uncomfortable providing accurate information for fear of exposing that their companies do not follow laws and regulations. This was mitigated by producing a letter from the University which indicated that the research was purely for academic purposes.

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APPENDICES

Appendix I: Questionnaire

This questionnaire consists of two parts; kindly answer all the questions by ticking in the appropriate box provided. Please do not write your name anywhere on the form. Your views were treated with utmost confidentiality, purely for academic purposes only.

SECTION A: GENERAL INFORMATION

1. What is your age bracket? (Tick as appropriate)

31 - 34 years	[ ]	35 – 40 years	[ ]
41 – 44 years	[ ]	45 – 50 years	[ ]
Over 50 years	[ ]		

2. What is your gender? (Tick as applicable)

Male	[ ]
Female	[ ]

3. What is your total working experience in the company? (Tick as applicable)

Less than 1 year	[ ]	6-10 years	[ ]
1-5 years	[ ]	Over 10 years	[ ]

4. What is your education qualification? (Tick as applicable)

Secondary	[ ]	Diploma level	[ ]
University Degree	[ ]	Postgraduate	[ ]

5. What is your current job category? (Tick as applicable)

Permanent Employee	[ ]
Contract Employee	[ ]

6. What documented policies are you aware of within the construction industry? (Tick as applicable)

Environmental laws	[ ]
Building regulations	[ ]

Registration requirements [ ]

PART B: INFLUENCE OF DOCUMENT REGULATIONS ON THE GROWTH OF THE CONSTRUCTION INDUSTRY IN KIAMBU COUNTY KENYA

Please indicate in the table with a tick (√) your level of agreement based on the below scale:

5= strongly Agree 4= Agree 3= Disagree 2= Strongly Disagree 1= Neither Agree nor Disagree

No	Environmental laws	1	2	3	4	5
7.	The firm ensures there is strict adherence to the waster regulations put in place by WARMA					
8.	The organization has put in place guidelines to ensure conformity to solid waste disposal requirements					
9.	The organization has put in place mechanisms to protect and enhance conservation of forest reserves					
10.	The firm regularly reviews its practices in line with the noise pollution regulations in place					
11.	Use of environmentally friendly raw materials in construction of houses has been on the rise					
12.	Environmental sound management of waste involves taking practical steps to ensure that waste is managed in a manner which will protect human health					

Please indicate in the table with a tick (√) your level of agreement based on the below scale:

5= strongly Agree 4= Agree 3= Disagree 2= Strongly Disagree 1= Neither Agree nor Disagree

No	Building regulations	1	2	3	4	5

13.	The firm has put in place guidelines to guide the implementation of sustainable building technologies					
14.	The firm constantly reviews the occupational and safety regulations adopted in the construction sector					
15.	The organization ensure there is strict adherence to the standardized construction practices in the industry					
16.	The organization allows of safety and onsite inspections to be conducted by the regulatory body					
17.	The organization ensures there is compliance to physical planning requirements					
18.	The firm ensures effective mitigation measures for significant negative impacts of building construction projects are adopted					
19.	There is effective standardization of construction techniques & materials within the firm					

Please indicate in the table with a tick (√) your level of agreement based on the below scale:

5= strongly Agree 4= Agree 3= Disagree 2= Strongly Disagree 1= Neither Agree nor Disagree

No	**Registration requirements**	**1**	**2**	**3**	**4**	**5**
20.	The firm has ensured all permits have been acquired within the construction sites					
21.	The firm has ensured that all the licencing requirements have been met					

22.	The firm ensures that all contractors considered within the firm have met registration requirements					
23.	The firm has ensured that the regulator code of conduct is adhered to					
24.	The firm has retained trained and registered workers within its operations					

Please indicate in the table with a tick (√) your level of agreement based on the below scale:

5= strongly Agree 4= Agree 3= Disagree 2= Strongly Disagree 1= Neither Agree nor Disagree

No	**Growth of construction industry**	**1**	**2**	**3**	**4**	**5**
25.	Construction stock has been increasing over a period of time					
26.	There has been an increase in the number of housing units developed annually					
27.	There has been an expansion within the construction industry					
28.	There is an improvement in the efficiency of firms within the construction industry					
29.	There is an improvement in the sustainability of construction projects within the County					
30.	Cost have been reduced due to adoption of regulatory frameworks					

Thank for your time in participating in this study.

Appendix II: Ethical Review Committee

Strathmore UNIVERSITY

14th April 2020

Mr Wathua, Charles
kigwe.charles@strathmore.edu

Dear Mr Wathua,

RE: Effect of Regulations on The Growth of The Construction Industry in Kiambu County Kenya

This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is **SU-IERC0742/20.** The approval period is **14th April 2020 to 13th April 2021.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

for Dr Virginia Gichuru,
Secretary; SU-IERC

STRATHMORE UNIVERSITY INSTITUTIONAL ETHICS REVIEW COMMITTEE (SU-IERC)
14 APR 2020
TEL: +254 (0)703 034 000
P. O. Box 59857 - 00200
NAIROBI - KENYA

Cc: Prof Fred Were,
Chairperson; SU-IERC

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email info@strathmore.edu www.strathmore.edu

Appendix III: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **856552**

Date of Issue: **23/March/2020**

RESEARCH LICENSE

This is to Certify that Mr.. charles wathua kigwe of Strathmore University, has been licensed to conduct research in Kiambu on the topic: INFLUENCE OF DOCUMENTED REGULATIONS ON THE GROWTH OF THE CONSTRUCTION INDUSTRY IN KIAMBU COUNTY KENYA for the period ending : 23/March/2021.

License No: **NACOSTI/P/20/4414**

856552

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix IV: List of Construction Firms in Kiambu County

8046/B/0314	Sim Building Contractors Ltd	NCA2
5947/B/0115	Mupewa Building Contractors Ltd	NCA2
2670/R/0314	Frenja General Contractors Ltd	NCA3
52784/B/0919	Ruwam Contractors Limited	NCA4
48095/B/0219	Floharson Suppliers and Building Contractors Limited	NCA4
54055/B/1119	Emanjam General Contractors Limited	NCA5
38087/B/0919	Mugite Contractors Limited	NCA4
54656/R/1219	Limute Contractors Ltd	NCA5
53802/B/1119	Span Building Contractors Limited	NCA5
51739/B/0819	Empire Prime Contractors	NCA5
45059/B/1018	Frema General Contractors Limited	NCA4
3830/B/0214	Jimrose Building Contractors Limited	NCA4
22953/B/0316	Spencol Contractors Ltd	NCA4
19417/B/0815	Gibki Contractors Limited	NCA5
7308/B/0214	Remotech Building Contractors Ltd	NCA5
991/B/0314	Bosco General Contractors Ltd	NCA3
40126/B/0418	Alkan Consult Ltd	NCA4
1010/B/0214	Brandon Link Contractors Ltd	NCA5
39510/B/0318	Good Luck Logistics Limited	NCA4
21671/B/1215	Kanjuiri General Contractors and Supplies Limited	NCA5
35987/R/1217	Kardence Engineering limited	NCA5
40430/B/0414	Kimson Property Care limited	NCA5
39900/B/0418	Lamuria	NCA5
36721/E/0118	Openrays Limited	NCA4
40101/B/0418	Offshoot Suppliers and Contractors Limited	NCA5
38784/R/0318	Njuwagika Investment Company Limited	NCA5
41752/B/0618	Pekimuga Enterprises Limited	NCA5

36645/B/0118	Reinex Construction Company Limited	NCA4
11316/B/0418	Roacon Jimbiri Limited	NCA5
41601/B/0618	Rockmasters Builders Limited	NCA4
36882/R/0118	Southridge Investments Limited	NCA4
37038/B/0118	Supertech Solutions limited	NCA5
20875/B/1015	Tm Civil Engineering Limited	NCA4
22343/W/0518	China Qingjian International Group (K) Limited	NCA1
10149/E/0314	Pamoliza Kenya Ltd	NCA4
10497/B/0614	Elika Engineering Ltd	NCA5
1081/B/0214	Buffalo Construction	NCA5
11032/B/0714	Vinrock Limited	NCA5
11231/B/0814	Njuca Consolidated Company Ltd	NCA1
11316/B/0418	Roacon Jimbiri Limited	NCA5
11585/E/0814	Wet Wood 2004 Electrical Services	NCA1
12246/R/0914	Flokam General Merchants Ltd	NCA2
12317/R/0914	Jajastan Services Limited	NCA5
12330/B/0914	Keymann Ventures Ltd	NCA5
13092/B/1014	Mabel Energy Products Limited	NCA5
13274/B/1014	Kenvah Limited	NCA4
13314/B/0116	Archistra Construction Co. Ltd	NCA4
15261/E/0115	Gimchar Limited	NCA4
15716/B/1215	Silver Swat Investment Limited	NCA4
1572/E/0314	Consumers Link Electrical Services	NCA5

15791/B/0215	Damika Building	NCA5
17062/B/0415	Atcost Structures Company Limited	NCA4
17119/B/0415	Yellow House Limited	NCA1
17306/B/0515	Lochness Limited	NCA4
17486/B/0116	Liberty Group E.A Limited	NCA3
17524/M/0515	Seven Fourteen Limited	NCA2
1808/R/0214	Decimal Creations Limited	NCA5
18501/B/0715	Bajrang Construction Limited	NCA1
19292/B/0815	Terrain Services (Kenya) Limited	NCA1
21347/B/1115	Buildmart Solution Limited	NCA2
20054/B/0915	Bluewater Wells Limited	NCA5
20327/B/0915	Kings General Suppliers Limited	NCA5
22746/R/0216	Flyfit Enterprises Limited	NCA5
27166/B/0916	Machu Construction Ltd	NCA5
23529/B/0416	Soljam Investments Limited	NCA5
23546/B/0416	Bayleton International Limited	NCA4
2362/B/0314	Ernie Campbell	NCA2
23722/B/0516	Jomaki Enterprises Limited	NCA3
24548/B/0716	Blue Rivet Limited	NCA5
246/E/0314	Baraka Diesel	NCA5
24730/B/0319	Hermak Enterprises Limited	NCA4

24887/B/0716	Profile Way Limited	NCA4
2491/R/0214	Famos Engineering Ltd	NCA5
2544/B/0214	Festa Works Ltd	NCA5
2616/B/0215	Fourth Dimension Engineering Ltd	NCA5
27666/B/1016	Horrizon kenya Construction Co. Limited	NCA4
27817/B/1016	Winstar Builders Company Limited	NCA3
2946/R/0214	Gladmart Company Limited	NCA5
2952/E/0314	Glare Technology	NCA4
29823/B/0217	Warr Acres Developers	NCA5
29936/E/0217	Cathmore Enterprises Limited	NCA5
30104/R/0317	Millistar Investment Company Limited	NCA5
3072/B/0815	Gridiron Holdings Limited	NCA4
34026/B/1017	Limtec Company Limited	NCA4
33435/B/0917	West Mill Concrete And Construction Company Limited.	NCA5
34014/B/1017	Fingerprint Capital Investment Limited.	NCA5
3443/B/0214	Ikiyu Enterprises Limited	NCA4
34820/R/1117	Mustard Seed Company Ltd	NCA5
34934/B/1117	Danta Civil	NCA4
35075/R/1117	Big Thermal Limited	NCA4
36645/B/0118	Reinex Construction Company Limited	NCA4

35963/R/1217	Habim Company Limited	NCA5
51739/B/0819	Empire Prime Contractors	NCA5
37038/B/0118	Supertech Solutions Ltd	NCA5
36990/R/0118	Marklineltd	NCA4
38087/B/0919	Mugite Contractors Limited	NCA4
44408/B/0918	Shirque Enterprises	NCA3
394/B/0214	Annihi Creations Enterprises Limited	NCA4
3997/B/0214	Jossie Construction Ltd	NCA4
40404/B/0414	Kabiria Enterprises	NCA5
41316/B/0618	Nutrigo International Limited	NCA5
41752/B/0618	Pekimuga Enterprises Limited	NCA5
41971/B/0718	Whitewash Africa Limited	NCA5
42196/R/0718	Trikape Traders Limited	NCA4
42504/W/0718	Riocraft Construction Ltd	NCA5
427/B/0416	Aquametric Construction Company Limited	NCA4
42790/E/0818	Clearview Suppliers Limited.	NCA5
42953/B/0818	Cemsure International Construction Limited	NCA4
4321/B/1014	Kawangu Ventures Limited	NCA2
4366/B/0314	Kenafric Builders Ltd	NCA3
44002/E/0918	Johrizy Enterprises	NCA5
44681/B/1018	Benmoore Civils Limited.	NCA4

45001/B/1018	Acton	NCA5
4519/E/0314	Kihara Electricals Ltd	NCA4
45544/B/1118	Lotusmart Enterprise Kenya Limited	NCA5
46425/E/1118	Samvic Engineering Works	NCA5
47723/B/0219	Morosa Construction Company Limited.	NCA4
49880/B/0719	Gedi	NCA4
48669/B/0819	Cemex Construction Limited.	NCA4
48676/B/0319	Synergize Construction Limited.	NCA2
50308/R/0619	Mark	NCA4
50319/B/0619	Ace Electricals	NCA5
51341/B/0819	Nguriunditu Movers Limited	NCA5
52105/B/0919	Stangee Company Limited	NCA5
52299/B/0919	Unity West Limited	NCA4
52660/B/0919	Sane Solutions Limited	NCA4
5294/B/0716	Marc Construction Works Limited	NCA5
53121/B/1019	Spyder Quality Traders Limited	NCA5
5316/W/0214	Marikita Investments Limited	NCA5
5318/B/0314	Marimo Construction Ltd	NCA1
5320/R/0214	Marines Well Services Ltd	NCA5
53726/R/1119	Sollina Agencies Limited	NCA5
5968/B/0314	Mustard Seed Company Ltd	NCA3

54055/B/1119	Emanjam General Contractors Limited	NCA5
54153/E/1119	East Energy Limited	NCA1
54160/R/1119	B	NCA5
54161/R/1119	Paralinks Enterprises Limited	NCA5
54656/R/1219	Limute Contractors Ltd	NCA5
54958/E/0120	Samurai Supplies Limited	NCA5
54967/B/0120	Eric Diman Engineering Limited	NCA5
55070/B/0120	Equinox East Africa Energy Limited	NCA5
55090/B/0120	Askomint Limited	NCA4
55133/B/0120	Gratom Babz Services Limited	NCA5
55907/R/0220	Steve Gates Supplies Limited.	NCA5
56198/B/0320	Stapples Enterprises Limited	NCA5
56299/B/0320	London Bells Limited	NCA4
56311/B/0320	Saipex Apex Limited	NCA5
5751/B/0214	Modtech Builders Ltd	NCA5
5916/B/0314	Multicon Enterpises Limited	NCA3
5947/B/0115	Mustard Seed Company Ltd	NCA2
6360/B/0214	Njewat Construction Company Limited	NCA5
6486/E/0314	Nyancha Electrical Contractors	NCA4
7094/B/0314	Punjab Engineering Works Ltd	NCA3
7745/R/0214	Sanga Works Ltd	NCA5

775/B/0214	Benisa Ltd	NCA2
83/F/B/001/0819	China Quanzhou Construction Group Co., Limited	NCA1
8890/B/0314	Trax Kenya Limited	NCA1
9298/M/1014	Warerico Trading	NCA5
9340/B/0214	Waynta Builders (K) Ld	NCA5
9422/B/0214	Wide (K) Ltd	NCA4
9410/M/0314	Westview Plumbers	NCA1
991/B/0314	Bosco General Contractors Ltd	NCA3