Project Initiation Process, Monitoring and Evaluation Team Capacity, Compliance with Legal Framework and Building Projects Success: The Case of Building Projects in Roysambu Constituency, Nairobi County, Kenya

By

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DECLARATION

I declare that this research project is my original work and has not been submitted for a degree in any other university or college for examination or academic purposes.

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DEDICATION

I dedicate this thesis to my wife; Grace Wairimu Githinji and Son, Gerald Kihuga Githinji for their prayers, encouragement, patience and support extended to me all through while working on this program.

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ABBREVIATIONS & ACRONYMS

BI:	Building Industry
BORAQS:	Board of registration of Architects & Quantity Surveyors.
CSFs:	Critical success factors
DOI:	Diffusion on Innovation
EBK:	Engineers Board of Kenya
EIA:	Environmental Impact Assessment
GDP:	Gross Domestic Product
IPD:	Integrated Project Delivery
KM:	Knowledge Management
KPIs:	Key performance indicators
NBCF:	National Building Code of Finland
NCA:	National Construction Authority
NCCG:	Nairobi City County Government
NDMU:	National disaster management unit
NEMA:	National Environment Management Authority
PMBOK:	Project Management Book of Knowledge
PPOA:	Public Procurement Oversight Authority
PS:	Project success
PERT:	Program Evaluation and Review Technique
PSC:	Project success criteria
UK:	United Kingdom
WARMA:	Water Resource Management Authority

ABSTRACT

This study was on Project initiation process, monitoring and evaluation team capacity, and compliance with legal framework on building projects success: the case of buildings projects in Roysambu Constituency, Nairobi, Kenya. Roysambu Constituency is comprised of five wards, namely; Githurai, Kahawa West, Zimmerman, Roysambu and Kahawa.There have been in the recent past several problems of instances of building project failures in Roysambu Constituency. The study was grounded on; stakeholder theory, diffusion on innovation theory and the agency theory. The philosophical direction of the study was pragmatism. A descriptive survey design was used for the study. The objectives of the study were to establish the influence of project initiation process, monitoring and evaluation team capacity and the moderating compliance with legal framework influence on building project success. The research questions were how project initiation process, monitoring and evaluation team capacity and the moderating influence of compliance with legal framework may influence building project success. The study findings were; that the strength of the correlation between the project initiation process and building projects success was 0.808 and coefficient of determination was 0.652 which was significant (sig. F change of 0.000). The F change was 10.526 while standard error was 1.340. The results showed that 65.2% of variation in building project success was accounted for by project initiation process; the strength of the correlation between the monitoring and evaluation team capacity and building projects success was 0.813 and coefficient of determination was 0.649 which was significant (sig. F change of 0.020). The F change was 12.782 while standard error was 1.335. The results showed that 64.9% of variation in building project success was accounted for by monitoring and evaluation team capacity; the strength of the correlation between the compliance with legal framework and building projects success was 0.819 and coefficient of determination was 0.670 which was significant (sig. F change of 0.031). The F change was 11.425 while standard error was 1.309. The results show that 67% of variation in building project success is accounted for by compliance with legal framework. It was concluded that project initiation process, monitoring and evaluation team capacity, moderating compliance with legal framework had a significant and positive effect on building projects success.The study findings produced optimal model depicting relationship among variables of building project success. This could significantly enhance quality, functional buildings and improve the lives of the citizens in constituency.

CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND TO THE STUDY

The future of urbanization will depend on how countries and cities position housing as priority in the public debate around sustainable development (UN-Habitat, 2010). From slums to gated communities, from overcrowding to sprawl, from homeless to the vacant houses, there is much evidence that housing is shaping cities worldwide, regretfully, in many cases, by producing fragmentation and inequalities. The resulting models are leading to social, environmental and financial costs far beyond what the majority of cities can afford (UN- Habitat, 2010). While the most common problem is the shortage of adequate and affordable housing and the unprecedented proliferation of slums, other important challenges lay in the poor quality and livelihood opportunities, lack of accessibility and services. The housing challenge the world is facing today is likely to persist with six out of every ten people expected to reside in urban areas by 2030.

Building construction is a competitive high-risk business (Verzuh, 2015). Globally, it's a $1.7 trillion industry amounting to 5 to 7% of gross domestic product in most countries and accounts for a significant part of global gross capital formation - a little under one-third. The sector's role in economic development is undeniable-housing; roads, utility network, schools and clinics are all built assets. Because of construction's general role in development, poor performance of the industry can significantly reduce the economic return to investments and carry high human costs in terms of injury and death (World Bank, 2007). Further client satisfaction has remained low (Cheng, Fleming & Oduoza, 2005). Globally the construction industry suffers from many problems and complex issues in performance such as cost, time and safety. Although projects have existed since the beginning of civilization, project management, as a discipline, it emerged in the 1950's and 1960's with the development of network techniques such as Program Evaluation and Review Technique (PERT) and Critical Path Method (CPM). Its guidelines, the Project Management Body of Knowledge (PMBOK) strongly advocate the importance of project planning (PMI, 2016).

Within the architecture, engineering, construction (AEC) industry, the ability to complete projects successfully is of fundamental importance and concern, and thus the emphasis of project success through proper management practices can be seen from the foregoing arguments. Achieving success in building implementation process is the major function of project management. According to Nwachukwu *et al*., (2010), the rate at which building construction projects fail, or are abandoned, and the collapse of buildings, some even under construction, is retrogressive in a developing economy like Nigeria. When there is a problem of building development failure, abandonment, or collapse, everybody looks up to the engineers who in their professional pride and personality ego accept the blame but could not un-ravage the menace. The answer to project success, failure, abandonment, and collapse of building construction lies in efficient project management (Nwachukwu & Emoh, 2011). As a result, the identification of factors that predict project success or success factors is essential to the industry and has become a prolific area of research (Sanvido *et al*., 1992).

The building industry takes the key responsibility for construction of structures that are occupied by millions of Kenyans. The loss of lives and property emanating from collapse of buildings in Nairobi County in general has in the recent past been on the increase with several cases reported. Clearly, a lot of what has gone wrong with cities is related in one way or another to housing (UN- Habitat). Over 50% of the projects are likely to escalate in cost with a magnitude of over 20% (Auma, 2014). According to the Kenya National Bureau of statistics (KNBS; 2012) the construction industry contributed 3.8%, 4.1 %, 4.3% and 4.1 % towards Gross Domestic Product (GDP) for the years 2008, 2009, 2010 and 2011 respectively. This was an average of 4.1 % as compared to 10% for the developed economies (Hofman, Aravena & Aliaga, 2016). Previous studies by Auma (2014), the failure of any building project is mainly related to the problems and failure in performance; lack of completion of project within stipulated time and budget, poor quality, failure to achieve user and client satisfaction.

1.1.1 Concept of project success

The general concept of building project success remains ambiguously defined because of varying perceptions. Such a phenomenon also exists in the construction industry where

different parties are involved, including the client, the architect, the contractor, surveyors and various engineers. Each project participant will have his or her own view of building project success. The architect may consider the aesthetics aspect as the project success criterion, while the contractor may rank profitability the highest. Traditionally, a project is considered successful if the building is delivered at the right time, cost and quality. It should also provide the client with a high level of satisfaction. All projects originate from the needs or objectives of a client and thus if these objectives are achieved, the project is claimed to be successful. However, project success should be something much more important than simply meeting cost, schedule and performance specifications. Apart from the more tangible means, Basu (2018) suggest that the less tangible project success criteria should also be recognized from the respective viewpoints of different participants.

Project success factors have been previously explored extensively outside Kenya where most of those studies were context specific: their implementations and implications are limited to the countries where they were conducted (Toor & Ogunlana, 2009). There has been little effort to contextualize the findings into local environment context where the structure, culture and maturity of the concerned organizations are different. Moreover, many assumptions were made based on anecdotal evidence and hearsay without concrete empirical support. The ability to complete projects successfully is of fundamental importance and concern.

1.1.2 Concept of project initiation process

Initial phase principle is the primary activity of a project. These activities include; Project identification; project goals and objectives; determination of preliminary materials, equipment and materials; development of budget and schedule; identification of project team and conducting of Environmental Impact Assessment (Usman, Kamau & Mireri, 2014). Feasibility studies are also done for the project. When a project is created, or decided it has a special purpose strategy. Project strategy is a director in a project that contributes to success of the project in its environment Turner (2016). Pellegrinelli and Bawhar (1994) states that, once a strategy has been developed, its implementation appears to be seen a matter of operational detail and tactical adjustment and has received less attention. According to Katana (2017), implementation is a specific set of behaviors and techniques

that companies must master to have competitive advantage. Execution is the result of hundreds of decisions made every day by employees acting in accordance with the information that may have their own interests.

There are several proposals on how to implement the strategy effectively and the determinants of success in such implementation. When organizations have, projects related to strategy, they are better able to achieve their organizational goals considers the project management an essential tool for implementing strategies and say that project management must be practical and relevant for the organization. People at various levels, must realize the benefits of project management day-by-day in strategy implementation. The underperformance of projects (Verzuh, 2015) represents a significant but substantially avoidable loss of economic value. One factor that was consistently ranked high among factors leading to project failure is the lack of executive support (Management support in the form of project sponsorship has consistently been cited as critical to achieving project objectives (Kendrick, 2015). Repositories are databases that contain details deemed important, from previous projects. The data can then be used by personnel involved in project proposals and tendering for new projects as well as to develop refined and realistic estimates and for describing the capabilities of the company.

Project management theory emphasizes that the key project completion produces of project, the brief or project audit – provides a means of capturing project histories. However, in practice there exists a great discrepancy between perceived value of project debrief and its actual achievement. Unfortunately, the knowledge and experiences gathered in different projects are not systematically and successfully integrated in to organizational knowledge bases). Where project histories have been captured, the detail that forms part of the project histories is obtained through a variety of debrief techniques. These have classified techniques into two groups; process-based methods, and documentation-based methods. The process – based methods gather lessons – learned from the completed projects. These are the methods associated with approaches that include: project review/ project audits, post – control, post – project appraisal, and other action review. The documentation-based methods collect projects experiences as soon as they occur. Most

projects do not fail at the end; they fail at the beginning. Kharana and Rosenthal (1998), content that the key to product development success lies in the performance of the front-end activities.

Managers and researchers claim that the benefits resulting from improvements in the front end are likely to far exceed those that result from improvements aimed directly at design engineering process (Hartley, 2017). Just because these front-end activities are the final gate before the team decides to invest in designing and manufacturing the products, do they need to be well managed. Otherwise, both time and money may be wasted in building the wrong products. The from-end activities include pre-phase zero (idea generation), phase zero (assessment of market technology and competition) and phase one (product definition, project justification and action plan of phase review or stage-gate system (Such strategic, conceptual, objective setting and planning activities typically precede the new product of development execution activities such as the detailed design, prototype test, building and market launch. From the foregoing discussion it appears there is a need to establish project initiation process to project success in Kenya.

1.1.3 Concept of monitoring and evaluation team capacity

Project Monitoring and evaluation team capacity is important to different people for various reasons. It is therefore important that project staff, project managers and stakeholders (including donors) should know about it. Monitoring and evaluation of projects can be of great importance to various players including project sponsors as it would ensure similar projects replicated elsewhere as witnessed in various projects undertaken by the financial sector which revolve around a few areas (Marangu, 2012).

Monitoring activity supports both project managers and staff in the process of understanding whether the projects are progressing on schedule or meet their objectives, inputs, activities and deadlines (Solomon & Young, 2007). Therefore, monitoring provides the background for reducing schedule and cost overruns (Crawford & Bryce, 2003), while ensuring that required standards are achieved in project implementation. Evaluation can be perceived as an instrument for helping planners and project developers to assess to what extent the projects have achieved the objectives set forth in the project documents (Field

& Keller, 1997). Monitoring includes the collection of information on purpose level achievements as well as information on inputs and outputs. Evaluation should be an integral part of effective project management and should be supplemented by special studies and periodic impact analysis as needed. Monitoring and evaluation are used as continuous improvement tools which are susceptible to provide effective feedback for project teams, in order to develop a pro- active procedure for implementing further investments. Monitoring and evaluation are being regarded as project management functions, which are just as important as project planning or project implementation. They are focused on all components of a project: objectives, activities, deadlines, teams, risks among others.

1.1.4 Concept of legal framework

According to organization for economic co-operation and development (OECD), the word "Regulation" itself can mean many things, at its most basic level, it is treated as synonymous with" law". They are rules or norms adopted by government and backed up by some threat of consequences, usually negative ones in the form of penalties, often directed at businesses, non-profit organizations, other government entities, and even individuals. Given their variety, regulations can be described using many different labels: constitutions, statues, legislation, standards, rules and so forth. The construction industry in Kenya has been and continues to experience teething challenges mainly from rogue contractors colluding with other industry players to offer substandard works at prohibitive costs. These challenges did exist due to weak existing regulatory legal framework, then, with loopholes which were exploited by various industry players to their own advantage. Adherence to the law, delivery of quality works to good engineering practice was relegated to the rear, opening doors for pilferage of public resources.

National Construction Act of 2011 is an Act of Parliament which provides for the establishment, powers and functions of the National Construction Authority and for connected services. The Authority's main objective is: to regulate the construction industry and coordinate its development. This noble objective has been achieved by ensuring that all players in the industry register with the Authority: the Contractors and their Supervisory staff. In this case the authority is able to monitor the conduct of these players in the

industry. Contractors are evaluated according to the requirement set out and placed in their relevant categories to undertake works according to their technical and financial capabilities. In execution of its mandate the act empowers the Authority to meet out penalties for non-compliance to the existing legal framework. The Authority continues to streamline the construction industry and towards that end, it has made it mandatory to enlisting the services of engineers' professionals in all construction projects. However, it is common to find some building projects which had initially complied with National Construction Authority requirements, completing projects in disregard to construction practices raising doubt to the safety and health of the product. This forms the basis of a need to study the influence of compliance with legal framework on building project success.

1.1.5 Building Projects in Kenya

The building industry takes the key responsibility for construction of structures that are occupied by millions of Kenyans. The loss of lives and property emanating from collapse of buildings in Nairobi County in general has in the recent past been on the increase with several cases reported. Clearly, a lot of what has gone wrong with cities is related in one way or another to housing (UN- Habitat). Shortages in housing supply have caused an extension of familiarity in housing and additionally poor benchmarks of development; as proprietors are constrained to give reasonable housing to themselves and designers out to expand benefits gain by neglected housing request. Directions are ridiculed by property engineers for the rental market, who are guaranteed of interest for such homes by expansive area of the urban populace (Tati, 2016). Different researchers have reverberated this, seeing various advancements have informalities, incorporating inconsistencies with respect to ground inclusion and plot proportions (Onyango and Olima, 2011).

More than half of the activities are probably going to heighten in expense with a size of more than 20% (Nyangilo, 2012). As per the Kenya National Bureau of insights (KNBS; 2012) the development business contributed 3.8%, 4.1 %, 4.3% and 4.1 % towards Gross Domestic Product (GDP) for the years 2008, 2009, 2010 and 2011 individually. This was a normal of 4.1 % when contrasted with 10% for the created economies (Hillebrandt, 2000). Past investigations by Nyangilo and Lepartobiko (2012); Mhando and Mrema (2005), Takim and Akintoye (2002) demonstrate the disappointment of any building undertaking is principally identified with the issues and disappointment in execution; absence of fruition of task inside stipulated time and spending plan, low quality, inability to accomplish client and customer fulfillment.

1.1.6 Building Projects in Roysambu Constituency

Roysambu Constitueny will be chosen for the study due to its relative high building project failures in the recent past with the latest collapse of a Six storey high rise building behind the Thika Road Mall, killing 7 people and leaving scores injured and economic loss. Roysambu Constituency is among the seventeen constituencies of Nairobi County and had a total population of 202,284 (National census, 2009). It has an area of 48.80 square kilometers with five wards; Githurai, a population of 47,194 and are of 2 square kilometers; Kahawa West, a population of 39,994 and area of 13.90 square kilometers, Zimmerman, a population of 38,192 and are of 7.10 square kilometers; Roysambu, a population of 40,331 and 22.40 square kilometers; Kahawa, a population of 35,853 and area of 3.40 square kilometers. It had 113 approved buildings for construction in the year 2016 (NCCG- Urban planning management).

The NCCG has the mandate to control development within its boundaries. It is responsible for preparation of spatial plans, development and enforcement of planning and zoning regulations and infrastructure development in the city. Planners are charged with the stewardship of developing and enforcing planning laws and regulations. The Nairobi Metropolitan strategy 1973 did a comprehensive analysis of the city including recommendations, such as formulation of realistic housing programs and upgrading of infrastructure (Owuor & Mbatia, 2012). However, at the time most of the city areas were empty, and the strategy's author did not foresee that informal infill developments contrary

to planning laws and regulations would occur. Most of Nairobi was planned for low density, single dwelling units, with infrastructure to suit. This is overstretching infrastructures in those areas (Mwangi, 2016). This scenario is duplicated in the Eastlands and along Thika Road, but on a larger scale. This is hardly surprising, given that developers were left to cater for themselves with regard to basic infrastructure. The areas are crying out for intervention in the provision of a better environment and infrastructure, as evidenced by overflowing sewers, poor drainage, questionable road sizes and water supply issues (Mwangi, 2016). Commercial developers are out to maximize profit and are not concerned with the consequences, especially when they do not live in the areas in which they build (Mowforth & Munt, 2015).

Vision 2030, recognizes the need for housing and aims to provide the Kenya's population with adequate and descent housing in a sustainable manner. One of the pillars of sustainable development is the right to adequate housing and land. There is evidence that despite the heavy investment in training of professionals in the building industry in Kenya and regulation of the industry, building projects do not always meet their goals. The increasing demand for housing and space for commercial activities has resulted to private developers in taking short cuts to encroach on public space, roads and sewerage ignoring building construction processes leading to un-functional and unsafe buildings.

Studies by Babalola, Oluwatuy, Akinloye and Aiyewalelimmi (2015) on factors influencing the performance of construction projects in Akure, Nigeria recommended that contractor's progress payment should be made on time as well as minimizing change orders during construction to avoid delays. Also, consultants should give full commitment to monitor the project progress and ensure the work was executed according to specifications and satisfactory quality; meeting owner's needs and expectation, within budget and stipulated time. Finally, continuous coordination and relationship between project participants were required throughout the project cycle in order to ensure project performance.

Previous studies by Ofori (2013) on project management practices and project success factors in Ghana concluded that top management, effective communication, clarity of project goals and stakeholders' involvement contributes to the success of projects. Similar past studies by (Yong, Mustaffa, 2012), Analysis of factors critical to construction project success in Malaysia", concluded that the findings could be used to facilitate the analysis of performance of various procurement systems, as well as identifying critical elements crucial to the development of a relationship-based procurement in Malaysia. It fulfills an identified need to study the critical elements vital to the development of a new procurement approach in Malaysia.

In Kenya, on April 2015, June 2011, building collapsed in Embakasi; July 2011, building collapsed in Ngara Nairobi City; September 2011, Matigari Building at Mathare North off Thika road collapsed; September 2011, building collapsed in Luanda Vihiga in October 2009, and in 2006, building collapsed in Nairobi CBD Ronald Ngala Street (NCCG, 2016). Generally, past industry experiences show that, medium to large size projects have high failure rate. The consequences can be costly and lengthy, with the worst outcomes often leading to undesirable litigation engagement. Developing countries have higher rate of low project performance than developed countries.

The project failure rate at the World Bank was more than half in Africa (Barlow and Clarke, 2017). The World Bank's private arm, the International Finance Corporation has found that just 50% of its African activities succeed. Urbanization is seen emphatically as it facilitates the weight on horticultural land by making non-legislative business, however on the off chance that not took care of well, achieves issue like blockage, joblessness, natural corruption, high wrongdoing rates, poor framework administrations and expansion of casual settlements with to a great degree poor expectations for everyday comforts. This is showed by the heap building ventures that have cost invades, deferred fulfillment period, low quality, high support costs, disappointed customers, non-utilitarian structures and high rate of crumbled structures (Kibuchi and Muchungu, 2012). The instances of falling structures in Kenya could be ascribed to poor administration hones in the development business and further heightened by the clear inclination by designers forsaking and ignoring the endorsed development designs. With expanding higher client's necessities,

ecological mindfulness and constrained assets on one side, and high rivalry for development business commercial center on the opposite side, temporary workers must be able to do persistently enhancing their execution.

From the foregoing studies and reports, it appears that there is a knowledge gap and a social concern to establish practices and procedures on building project success. The trend of building collapsing in Kenya, has increasingly raised the concern of building construction practices in the country and thus creating a need to study and perhaps come up with a model which could be used to enhance building project success in the country and probably to the rest of the World. The objectives of this study will be to establish how project initiation process, Monitoring and evaluation team capacity and moderating compliance with legal framework may influence building project success in Roysambu Constituency, Nairobi County Kenya. This study therefore will assess the challenges facing building project success in Roysambu Constituency, Nairobi County, Kenya.

1.2 Purpose of the study

The purpose of this study was to investigate how project initiation processes, monitoring and evaluation team capacity and legal framework may influence building project success in Roysambu Constituency, Nairobi County, Kenya.

1.3 Objectives

This study was guided by the following objectives:

i). To establish the influence of project initiation process on building projects success.

ii). To determine the influence of Monitoring and evaluation team capacity on building projects success.

iii). To examine the moderating influence of compliance with legal framework on relationship between project initiation process and Monitoring and evaluation team capacity on building project success.

iv). To establish the moderating influence of compliance with legal framework on relationship between project initiation process and building project success.

v). To establish the moderating influence of compliance with legal framework on relationship between Monitoring and evaluation capacity and building project

success.

1.4 Research questions

i). How does project initiation process influence building project success?

ii). How does Monitoring and evaluation team capacity influence building project success?

iii). In what ways does compliance with legal framework influence building project success?

iv). How do moderating of compliance with legal framework on relationship between project initiation process and Monitoring and evaluation team capacity influence building project success?

v). How does moderating of compliance with legal framework on relationship between project initiation process influence building project success?

vi). How does moderating of compliance with legal framework and project initiation process influence building project success?

1.4.1 Hypothesis of the study

The following hypothesis explained the possible relationships of the variables as perceived by the study;

H_1: Project initiation process significantly influences building projects success.

$H_{2:}$ Monitoring and evaluation team capacity significantly influences building project success.

H_3: Compliance with legal framework has significant influence on building project success.

H_4: Moderating of compliance with legal framework and relationship between project initiation process and Monitoring and evaluation team capacity significantly influences building project success.

H_5: Moderating role of compliance with legal framework on relationship between project initiation processes has significant influence on building project success.

H_6: Moderating of compliance with legal framework and project initiation process significantly influences building project success.

1.5 Significance of the study

Project performance could be significantly enhanced through setting goals and objectives and how these can be achieved. The initial phase principles are series of activities setting out standards in aiding the project team to deliver within quality standards, cost and time specification. Basically, initial phase principles are activities to which project goals and expectations are met. Initial phase principles are the determining factors to enhance project delivery especially when surveys, EIA, resources and feasibilities are done according to plan. Indeed, initial processes may be comparable to setting a structurally sound foundation for a building with likelihood of attaining a safe and durable building. Getting it right from the beginning is likely to produce successful project. The researcher postulated that the project initiation process might determine significantly the success of building project. Further, monitoring and evaluation team capacity might significantly determine project success and the interaction of the two-independent variable might significantly affect the dependent variable where in all cases are moderated by the legal framework. The study results were significant to stakeholders in the building industry and institutions of higher learning especially at a time there are several problems of instances of project failures in the county, country and globally.

1.6 Statement problem

The current lapse in law and order in the building sector could be attributable to the haphazard use of shortcuts, corruption and general deviation from laid down procedures and standards. The managerial process of project initiation process, monitoring and evaluation appears to be overlooked in the building industry in ensuring that buildings are designed, constructed and supervised by qualified architects and engineers and compliance with legal framework. This study therefore sought to investigate project initiation process, Monitoring and evaluation team capacity and a moderating compliance with legal framework could influence building project success in Roysambu Constituency.

1.7 Assumptions of the study

The study assumed that there was willing respondents and data would be completed within time and budget. It was further assumed that political environment would be conducive to enhance success in data collection.

1.8 Delimitation of the study

The study focused on project initiation process, monitoring and evaluation team capacity as independent variables and moderating of compliance with legal framework and building projects success as dependent variable. The study also delimited itself to descriptive survey design for a period of one month to buildings which had been completed and handed over for occupancy in the last one year and are within defects liability period. This facilitated in identification of project managers and contractors as they had not been disengaged from the projects. Roysambu Constituency, Nairobi County, Kenya was chosen for study because of its proximity and consideration of constraints of time and resources, the high concentration of buildings and recent instances of building project failures. The scope of this study was also informed by the owners who were also interested with the findings from this research to enhance success of their building projects particularly at a time the tread of collapsing building projects has been on the rise. Although lists of project success have been identified (Chan *et al*., 2004), this study delimited itself to building project success which was measured by; project management success, approved houses for occupation and owner's satisfaction in Roysambu Constituency, Nairobi County, Kenya.

1.9 Limitations of the study

The study was limited to, Stakeholder theory, Diffusion of innovation theory (DoI) and Agency theory; Pragmatism philosophical underpinning and a mixed mode approach to conduct a descriptive survey of the building project success phenomenal. Further the study of variables was limited to those in the conceptual framework.

1.10 Definitions of key terms used in the study

Approved buildings for occupancy

Building Project, functionality, fitness for purpose, and its capacity to meet the user's habitation needs in terms of health and safety environment.

Building project success

Management success where the achievement of the building project objectives earlier set by the building developer; Provision of adequate services without wasting limited resources and ensuring services are affordable.

Building developer's satisfaction; Client is satisfied when project is delivered to quality,

reliably, efficiently, high service levels and minimum cost of ownership.

Project initiation process

This is the first phase in the project management life cycle, as it involves starting up a new project. You can start a new project by defining its objectives, scope, purpose and deliverables to be produced. It consist of Project formulation; Identification of project idea; Preliminary selection and feasibility assessment; Project evaluation and Goals identification, Project strategy; Determination of direction in a project that contributes to success of projects; a road map to focus on and commitment to the project goals and Historical information; Systems with repositories database that contain details from past experience for data that can then be used by personnel involved in project proposals and tendering new projects.

Monitoring and evaluation team capacity

This includes Financial Capacity; budgetary allocation to Monitoring and evaluation team activities, Human Capacity; People skills, beliefs, Attitude, Knowledge, Analytical, Information technology, Methodology, Interpersonal relations, Communication skills and Evaluation competency and Physical Capacity; Equipment, Technology and machinery to support Monitoring and evaluation activities.

Compliance with legal framework

This is the adherence to Building Code, Multiple laws that guide the planning and building sector in Kenya which include; National Environment Management Authority (NEMA, EMCA, 1999) act, Land planning act (1968), Physical Planning Act of 1996 and Water Management Authority Act (WARMA). Issuance of EIA, Issuance of building construction permit by County Government, License, and Project registration by NCA.

1.11 Organization of the study

Chapter one discussed the background to the study, statement of the problem, objectives of the study, research questions, hypotheses, significance of the study, delimitation and limitations of the study, and operational definition of terms. Chapter two focused on review of both empirical and theoretical literature and presented the conceptual framework. Chapter three described the research methodology which was used in the study. Specifically, it provided a detailed description of the research philosophy, research design, study population, data collection, reliability and validity of research instruments, operationalization of study variables and data analysis techniques. Chapter four, described data analysis, presentation and interpretation and finally, chapter five discussed summary of findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviewed literature concerning project initiation process, Monitoring and evaluation team capacity and the moderating of compliance with legal framework, and how it relates to building project success. The chapter drew from published articles, organization reports and empirical research report in an effort to present different views and arguments concerning these variables. The chapter explored the dependent variable (building project success) first, followed by independent variables (Project initiation process, Monitoring and evaluation team capacity and moderating of compliance with legal framework). This chapter also reviewed theories that informed the study and present a conceptual framework to show the relationship between the variables. Finally, the chapter presented gaps established from the literature that was reviewed as well as a summary of the chapter.

2.2 Building project success

Building construction is a major issue within the social and political integration of the society and ranks as one of the foremost budgetary areas of growing economies (Nwachukwu, 2008). The building construction enterprise is confirmed to be the cornerstone and bedrock of fast economic increase of any state (Sugimoto, 2014). The goods of construction industry are described specially for the offerings which they help to create as maximum commercial enterprise; social, spiritual, financial, commercial activities among many others perform on building infrastructure. Building construction projects have to be made to be successful because its execution often involves enormous price range, the loss through failure or abandonment has a crippling impact at the abilities of the buyers, the financiers and for the reality, that scarce resources are tied down for a long time as possible and cost for its alternative use (Nwachukwu & Emoh, 2011). The project could also be the only future hope for the customer; therefor he may not anticipate anything else other than success. Project management is thought to be justified as a means of warding off the ills inherent within the construction and production sectors and for which

most projects fail and or deserted. Efficaciously accomplishing a building project calls for the effective management of diverse forms of constraints amongst participants. The project manager's role arises from the need for a technical professional to take charge, control of activities at the project implementation process, a person who knows the intricacies of co-ordinating, controlling, organizing and directing the efforts and activities of the expert team and the physical issues of implementation process with the needs in the decision-making process (Sugimoto, 2014). For sure, estimating building project achievement is immaterial and can barely be settled upon. A developing economy is a marker of the improvement of a region's physical framework, for example, ventures, private units, streets, spans, nearby prepares among numerous others. For economic future development, infrastructural advancement is a vital essential (Construction Industry Development Council, 2005). In the course of the most recent three decades, various investigations have been completed on task achievement (Ahmedshareef, 2015), assessed utilizing countless (gatherings, for example, time, cost, quality, customer fulfilment, customer changes, business execution, wellbeing and security. Cheng et al., (2004), state that PS is a subject that has ceaselessly been examined however without noteworthy understanding having been achieved; accordingly, the meaning of PS stays ambiguous in light of the fact that different partners have diverse recognitions on its significance, which may prompt contradiction while surveying whether a specific undertaking is fruitful. For instance, a project may be considered successful by a client, whereas an end user or contractor may perceive it as unsuccessful (Toor & Ogunlana, 2010). However, there is general agreement that project success involves both efficiency and effectiveness.

Project success (PS) is "results much better than expected or observed in terms of costs, schedule, quality and safety. Project management and construction industry are complementary to each other. Construction sector has an influencing bearing on project management practice (Crawford, Pollack & England, 2006). Though project management has rich set of literature, the knowledge areas and concepts have been continuously been evolving. Although lists of variables have been identified over a period of time by different researchers, there is no general agreement (Verzuh, 2015). On the other hand, there are rapid changes that are taking place in the construction industry (Yong & Musttafa, 2012). In such a circumstance, it is prerequisite to revisit literature on critical success factors (CSF)

as a precise understanding of CSFs is a paramount need in the journey towards enhancing the likelihood of PS.

The study of PS and CSFs are for the most part of enhancing the productivity and adequacy of activities generally. As per Saqib et al. (2008), the idea of PS has persistently stayed uncertain in the psyches of experts in the development business. (Baccarini, 2009) additionally expressed that CSFs are a basic couple of elements or factors that an administrator should give careful consideration to with the end goal to accomplish his/her expressed objectives. Baccarinand Collins (2003), sees a venture's CSFs as an "arrangement of conditions realities or impact which adds to the task result. All-Timeemy et al. (2010) have presented a system for the assessment of PS having as extreme point the achievement of the short and long – term objectives of the organizations for building ventures; venture administration achievement (cost, quality, time), item success(customer fulfilment, specialized determination, practical prerequisite), showcase achievement (income and benefits, upper hand, piece of the pie, notoriety) and the four measurements of undertaking proficiency, effect on the client, direct and business achievement, and planning for what's to come. Customer fulfilments with the last outcome have a lot to do with the apparent achievement or disappointment of building ventures. What truly matters is whether the gatherings related with and influenced by an item are fulfilled. As indicated by Raimondo (2016), a venture is an arrangement of interesting, complex, and associated exercises having one objective or reason that must be finished inside a particular time, spending plan, and determinations.

In an independent rating, the Independent Evaluation Group (IEG), claimed that 39% of World Bank projects were unsuccessful. World Bank projects all too frequently fail to achieve their goals due to a number of problems that could be termed “managerial” and “organizational” (Reason, 2016). A number of studies have been conducted to examine factors impacting on PS in developing countries. The life span of projects in Nigeria is unpredictable as there are many abandoned projects littering everywhere as a result of poor planning (Oyedele, 2013; Ubani & Ononuju, 2013; Amode, 2014). In Imo state, in particular, most of the construction projects delivered for public depict evidence that they were not successfully executed. This could be as a result of lack of experience from

contractors in executing the projects, poor design, lack of knowledge in handling specific type of projects and corruptible tendencies amongst others.

One of the key critics bedeviling the Nigerian construction industry is growing trend in delays with project delivery. The construction industry in Nigeria according to (Oyadele, 2013) is neither organized nor controlled and as such anybody can put up whatever structure they want without adhering to laid down rules and procedures, the practice most often than not leads to incessant construction project collapse with attendant casualties. The industry is further known to be deviled by issues bordering on mistrust, more self-interest and competitiveness as well as the lack of effective communication which has consistently given rise to series of adversarial relationship amongst stakeholders (Orgen *et al*., 2011). Shortage of skills of manpower, poor supervision and poor site management, unsuitable leadership; shortage and breakdown of equipment among others contribute to construction delays in the United Arab Emirates. examined causes of client dissatisfaction in the South African building industry and found out that conflict, poor workmanship and incompetence of contractors to be among the factors which would negatively impact on PS. Mbachu and Nkando (2007) established that quality and attitude to service is one of the key factors constraining successful project delivery in South Africa. The performance of contractors in Zambia is apparently below expectation, it is not uncommon to learn of local projects that have not been completed or significantly delayed.

This poor execution of numerous neighborhood temporary workers has colossal ramifications as far as their aggressiveness (Zulu and Chileshe, 2008). UK development industry has been censured for not performing at indistinguishable level from that of other advancement nations. In connection to this, the UK working gatherings on key execution demonstrates (KPIs) have recognized ten parameters for benchmarking ventures, with the end goal to accomplish a decent execution, in light of Egan's report. These comprise of seven undertaking execution pointers, to be specific; development cost, development time, cost consistency, time consistency, deserts, customer fulfillment with the item and customer fulfillment with the administration; and three organization execution markers, in particular; wellbeing, benefit and efficiency. Akrah and Proverbs (2005) showed that despite the inherent benefits of performance measurement in helping identify unnecessary

causes of waste so that remedial actions can be taken, performance measurement is not extensively implemented because of the inadequacy of measures, complexity of measurement, time consuming and costly nature of performance measurement, and project-oriented nature of the industry. Where performance measurement is implemented, various frameworks are available, some targeting project performance while others focus on overall business performance, ideally, projects designed and managed by highly trained construction professionals and executed by qualified contractors selected on the basis of their capability should meet the project performance goals. These goals are in terms of the contract period, budget, quality, environmental sustainability and client satisfaction.

2.2.1 Measures of building project success

The Oxford Dictionary defines success as favorable outcome or the gaining of fame or prosperity. Criterion is also defined as a standard by which something is measured for value; as a principle or standard by which anything is or can be judged. When combining these terms together, criteria of project success can be defined as the set of principles or standards by which favorable outcomes can be completed within a set specification. When joining these terms together, criteria of task achievement can be characterized as the arrangement of standards or models by which great results can be finished inside set details. PS criteria mean the measure by which achievement or disappointment of an undertaking will be judged (De Wit, 1998; Cooke, 2002). Customarily, time, cost and details which are regularly alluded to as iron-triangle or triple – requirements in writing are utilized as PS.

PS has developed definitely in the ongoing past. Pinto and Slevin (1998) incorporated customer's fulfillment utilize and adequacy notwithstanding time, cost and execution. Laursen and Svejvig (2016) took a holistic view of PS that there are four major distinct success dimensions: project efficiency; impact on the customer; direct business and organizational success and preparing for future. PS perhaps could also be viewed on environmental dimensions; economic, physical and political. Based on the literature search, the identification of project effectiveness measures is associated with project ‘results’ in terms of accomplishing core business and project objectives, users’ satisfaction and use of project as identified by Pinto and Slevin (1989) and Cooke (2002), ten possible indicators are compiled for effectiveness measures and are reviewed. These are client

satisfaction on service, user satisfaction with product, project effectiveness, and project functionality, free from defects, value for money, profitability, absence of any legal claims and proceedings, learning and exploitation and generate positive reputation. For this study, building project success will be measured in three perspectives: project management success; approved buildings for occupancy; Owner's satisfaction as explained below;

2.2.2 Management success

Among the goals for management function is to optimize on the profitability of an enterprise. Value for money, a fundamental term in project management is a measure expressed in currency, effort, exchange, or on comparative scale which reflects the desire to obtain or retain an item, services or idea (Turner, 2016). Miles (2015) define 'value for money' as the provision of adequate services without wasting limited resources and ensuring services are affordable. Typically, the analysis sees 'value' in which the 'benefits' to each party are perceived as value. Earlier work on 'value for money' equated value for money in terms of cost reduction and higher quality thresholds, which lead to greater client satisfaction (Hamiton, 2002). Value for money is the optimum combination of whole life cost and project quality to meet a client's need and expectation, and value management aims to maximize the functional value of a construction facility to the clients. Value for money is an effectiveness measure of project success. Profitability measures the financial success of the project and a project must be properly managed to be profitable; measures profit as the increment by which revenues exceed costs; that is, profitability is measured as the total net revenue over total costs. Profitability is measured in post-construction phase when the final account is settled and both the paying and the paid parties can be sure of the financial result. Verzuh (2015) and regards profitability as revenues generated by firm exceeding the cost of producing the revenues.

Effectiveness encompasses the attainment of the organization's objectives both at the corporate level and project level can be measured against the objectives earlier set by the client organization's (Effectiveness refers to user satisfaction and the use of the project (Keyes, 2016). A system is effective if it achieves its objectives and since construction projects are directed towards client's objectives, an effective construction project is one that meets its objectives (Ashworth & Perera, 2015). Learning addresses specific criteria

in terms of organizational learning, changes in knowledge structure, on-going improvements and feedback (Hopkins, 2015). The learning and growth perspective focuses on internal skills and capabilities, in order to align them to the strategic goals of the organization. Learning and exploitation can be defined as the process of improving actions through better knowledge and understanding. In construction project development, the reasons learned in executing a project (whether the project is success or failure) could be applied to future projects. According to Posavac (2015), some developers believe that projects that were cancelled because they were late and over- budget could still be a success if they provided learning something that could be applied to future projects. Management success could also include efficient delivery of a project within time, budget and technical requirements.

2.2.3 Approved buildings for occupancy

Building project functionality and fitness for purpose of a building includes its capacity to meet the users' habitation needs in terms of health and safety environment Verzuh (2015) considers project 'functionality' as one of the success measures in the post- construction phase when the project is finished and delivered. According to them, project functionality correlates with expectations of project participant and can be measured by the degree of conformance to all technical specifications. In addition, they argue that both financial and technical aspects implemented to technical specifications should be considered, achieving the 'fitness for purpose' objective and client satisfaction in terms of the functionality of the finished product, meeting safety requirements, flexibility, time, and quality. Project functionality, is a building to be operationally efficient with its intended purpose, durable building and keeping existing buildings operational during construction. They found that 73% of those who are interested in keeping existing facilities functional are clients whose works were mainly concerned with alterations and renovations. Hence, taking the points mentioned by those writers, it seems possible that project functionality and fitness for purpose could be associated with project effectiveness measures.

In order to avoid construction defects, one way is to impose quality control during the construction process. According to Godish (2016), construction defects is a broad term used for wide range of conditions at a building such as leaky roof, improperly installed

windows among many others. Hughes, Champion and Murdoch (2015) defines construction defects as work performed that falls below the standard promised or expected by the client or purchaser of the work or services. Avgerou and Walsham (2017) divides the cause of buildings defects into lack of skills, lack of care and lack of knowledge of the site operative and difficult to build, low design and missing project information. It is a mixture of technical inadequacies, management inadequacies and operative skills. The indicator for measuring product for this study will be approved houses for occupancy.

2.2.4 Project developer satisfaction

The purpose of a building project is to provide shelter, a basic need for man. A construction organization is an open system organization that accepts its input of human resources, materials, money, machines, all the information including owner's requirements rules and regulations, and transforms them into a constructed facility (Pilcher, 1992). The owner is seldom familiar with the details of the building industry; he is uncomfortable with the risk in the building industry; in the building cost projections; he wants to manage the expose within the narrowest limits available (Quirke, 2017). Owner satisfaction describes the level of 'happiness' of people affected by a project (Verzuh, 2015). Owner is satisfied when the project is delivered to quality, reliably, efficiently, high service levels and minimum cost of ownership. There are two possible criteria which could be used to measure PS from effectiveness dimension are the resultant system (the product) which meets customer's satisfaction and benefits many stakeholders such as users. End- users will not be happy if the end product does not meet their requirements in terms of functionality and quality of service.

Meanwhile Suruto (2015) consider client satisfaction as an attribute of PS and reckon that if end- users are satisfied, the project can be considered successfully completed in the long run. In construction project development, project clients are more likely to have a favorable impression of contractor's company if they have a positive experience in the services offered with a good quality finished project tailored to their initial needs and expectations In this respect, maintaining a company's positive image and reputation could be an effective measure of PS to contactors and project consultants by creating good results in performance while implementing projects development. A positive reputation may be

generated by working closely with construction project management, identifying opportunities for operational improvements, exploiting new technology, product or markets, identifying management information requirements, and resources constraints in offering well defined services and delivering an expected product that fits the client's business objectives (George *et al*., 2016).

Absence of any legal claims and proceeding in construction can be based on the contract itself, a breach of contract, a breach of some other common law duty, a quasi- contractual assertion for reasonable compensation, or extra ex-gratia settlement request. Some construction claims are unavoidable or necessary, to accommodate unforeseen changes in project conditions or unavoidable changes in client's priorities (Hagan, 2016). The absence of any claims or proceedings on projects is a major criterion to all parties (client, designer, and contractor) for measuring project success. Whenever a project is completed without using jurisdiction to settle conflict, the construction project can be considered efficient.

2.3 Project initiation process and building project success

Project Management Institute PMI (2004) state that setting out the scope and specifications of the project at the initiation stage enables the project sponsor and manager to be clear on the purpose, expected outcomes, budget, deliverables and time frame of the project. In addition to this, experience shows that getting it right at the planning stage is critical for project success and the sustainability of the project outcomes. Further, PMI (2008) points out that planning should also involve all project stakeholders to guarantee agreement on scope and specifications, as well as support. According to Khang and Moe (2008), project initiation should lead to success if during conceptualization there is effectiveness of consultation with stakeholders, competency of project team, alignment with development priorities, adequate resource support, and compatibility of regulations for project management. Kharbanda and Pinto (1996), in an extensive investigation of the managerial factors responsible for construction project failures, identified poor project definition and poor project planning- front-end project management activities- as the two major causes of project failure. Smith *et al*. (1998) describe the project definition stage (which they term project initiation) as the stage where the stakeholders' needs, objectives and requirements

are clarified into the definition of a project, or projects. The broad-based national enquiry set up to review procurement and contractual arrangements in the U.K. construction industry also made significant statements supporting the need for project definition as a significant stage in the project delivery process.

Traditionally, the main participants in a construction project coalition are the client, the architect and the contractor. The interactions and interrelationships between these participants largely determine the overall performance of a construction project and have the crucial responsibility for delivering a project to successful completion. However, looking upstream and downstream in the construction project life cycle, there are multiple attributes that contribute to the success of a project, and these are influenced by a variety of decisions made by various individuals, bodies and organizations (Gordon, Kennedy, Gordon, Hadjerioua & Christian, 2017). These internal and external participants are recognized as stakeholders who are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution (Bourne, 2016). Previous work by (McNiff, 2016) defined stakeholders as people or groups that have, or believe they have, legitimate claims against the substantive aspects of a project.

Project performance is enhanced through setting goals and objectives and how these can be achieved. The initial phase principles are series of activities setting out standards in aiding the project team to deliver within quality standards, cost and time specification (Verzuh, 2015). Basically, initial phase principles are activities to which project goals and expectations are met According to Alzahrani *et al*. (2013), initial phase principles are the determining factors to enhancing project delivery especially when surveys, EIA, necessary project approvals, resources and feasibilities are done according to plan. A study by Alzahrani *et al*. (2013) shows that environmental issues during building production receives more attention from governments, non-governmental institutions and general public. Shem and Tam (2002) points that building projects affect the environment in many ways across the life cycle and are regarded as a major contributor to environmental impacts. However, many developers apparently hardly appreciate the need to comply with NEMA legal requirements for EIA license and other regulatory laws from respective government agencies.

2.3.1 Measures of project initiation process

In the initiation phase, alternative development projects to achieve the goals and targets are explored. Technological feasibility is determined of the proposed project. Seifoddini (1986) outlines the stages of the preparation phase as follows; definition of the objectives and scope of the Project, formulation of the alternative course of action and preliminary screening of the alternatives in terms of contribution to objectives, costs and degree of feasibility. In the goal setting phase, development goals, targets and priorities are also formulated according to the needs of the people (Seifoddini, 1986). The product of a strategic planning effort is typically a document (a strategic plan). A well-documented strategic plan is critically important for organizing thinking and communicating thoughts.

2.3.2 Project formulation and building project success

Identification of project plan, preliminary selection and feasibility assessment are indicators of project formulation. The system of project planning should consist of five phases; Goal setting, project preparation, project evaluation, project implementation and finally effectiveness assessment of the system (Seifoddini, 1986). In the goal setting phase, development goals, targets and priorities are formulated according to the need of the people. These needs can be determined using statistical technique of survey sampling. As stressed by (Seifoddini, 1986), people and their needs are only one component or subsystem consisting of the environment which affects the goal setting efforts. Other components of the environment are economic, political, and technical and so on. These environmental subsystems together provide the inputs to the goal setting phase as well as other phases of the planning system. In preparation stage, alternative development projects to achieve the goals and targets are explored.

Technological feasibility is determined of the proposed project. (Seifoddin, 1986), outlines the stages as follows: definition of the objectives and scope of the project; formulation of the alternative course of action, preliminary screening of the alternatives in terms of contribution to objectives, costs and degree feasibility. According to Eldin and Hamdy (1983), in the project evaluation phase, feasible projects need to be reviewed on the basis of economic efficiency and effectiveness and in the project selection process, a set of projects that satisfy the resources constraints are selected for implementation.

2.3.3 Project strategy and building project success

A strategy is a derived approach to achieving a mission. Strategic plans include elements that describe an organization's present state, aspirations, intentions for the future, and approach for going forward Miller and Rose (2017) states that once a strategy has been developed, its implementation appears to be seen a matter of operational detail and tactical adjustment. According to Bossidy and Chara (2011), implementation is a specific set of behaviors and techniques that companies must master to have competitive advantage. There are several proposals of how to implement the strategy effectively and what are the determinants of success in such implementation.

When organizations have, projects related to strategy, they are better able to achieve their organizational goals (Milosevic & Stivantaboon, 2007; Longman & Mullins 2004) and consider the project management an essential tool for implementing strategies and say that project management must be practical and relevant for the organization. People, at various levels, must realize the benefits of project management day- by- day in strategy implementation. The underperformance of projects (Williams, 2004; Johnson *et al*, 2001; Hayes, 2004; Flyvjerg, 2006) represents a significant but substantially avoidable loss of economic value, one factor that was consistently ranked high among factors leading to project failure is the lack of executive support (Maurino, Reason, Johnston & Lee, 2017). Management support in the form of project sponsorship has been cited as critical to achieving project objectives (Schwalbe, 2015). Formulation of a project strategy by the client is the first building block to a successful and cost-effective scheme. Construction industries in all countries face many difficulties and challenges (Charles, 2016).

In developing counties, these challenges are mainly socio- economic stress, chronic resource shortages and a generally inability to deal with key issues. Discontinuities and fluctuations which characterize construction demand are volatile in developing countries (Hansen & Li, 2015). For this reason, local contractors are not able to maintain and develop permanent supervisory staff and skilled labor, nor can they establish an appropriate supply of basic equipment. Although clients (usually the government) may require the use of qualified local contractors to do the work, there may be few qualified local contractors available and skilled labor which a factor for poor project performance are (Parmigiani &

Rivera-Santos, 2015).

2.3.4 Product description and building project success

PS criteria consist of the golden triangle (time, cost, quality) and key project stakeholder's satisfaction and their incorporation to the project. Many stakeholders, individuals and groups are involved in the provision and delivery of construction projects with their own role, requirements and objectives (Heravi, Coffey & Trigunarsyah, 2015). Depending on the type of the project being undertaken and its specific requirements, only certain groups may need to be fully involved in all phases of a project. Furthermore, the level of ability to impact the final project characteristics is at its highest at the beginning of the project and reduces as the project progresses (IFC, 2007). These groups include: Client, Project management team, Consultant and Design team, Contractor, Subcontractor, Supplier, Employees, Local Communities, Funding bodies, Government authorities. Moreover, early stakeholder involvement enables projects to utilize the knowledge base of the stakeholders.

According to Wikstrom *et al* (2010), early stakeholder involvement is one of the cornerstones for more accurate value creation. In the construction industry, during the different stages of a project from the initial planning through to the final operation and maintenance, specific parties get involved whose expectations can affect the outcomes of, or may be affected by, both negatively and positively by the implementation of the project (Olander, 2007). According to Lahdenpera and Cohen (2012), it has been noted that creating integrated project teams has had a positive impact on project outcomes. Despite the need Skaates *et al*. (2002) opines that finding the right methods for stakeholder identification, involvement and integration seems to be challenging. In Kenya, public participation is entrenched in the constitution for all projects as a way of enhancing ownership transparency, accountability and sustainability of every type of development.

2.3.5 Historical information and building project success

Construction companies and their personnel prefer to carry out their project management tasks based upon their past experiences, rather than following a textbook approach or established analytical approaches. Project expertise is personal and pervasively tacit. It is rarely acquired in an explicit form, and hardly even shared among others in a structured way. Word of mouth is a common medium through which such expertise disseminates

information and communication technology (ICT). Proliferation in construction industry has encouraged the more innovative organizations to develop systems commonly referred to as project histories. These repositories are databases that contain detail, deemed important, from previous projects.

Research on knowledge management (KM) has intensified in recent years because knowledge is considered one of the most important assets of organizations in the twenty first century (Geisler & Wickramasinghe, 2015). To obtain sustainable competitive advantages, companies must consider what everyone in the organization knows and how they use their knowledge, Companies' ignorance leads to inefficient projects that do not generate full benefits (Okun, 2015). Because critical success factors(CSF) are the driving force behind KM, they do not only generate knowledge in companies but also stimulate the creation of knowledge and experience in all people, thereby allowing organizational knowledge to grow concurrently and systematically. Skyrme and Arridon (1997) identified what they believe to be the success factors that organizations are able to reach through successful KM implementation; competitive advantages, customer focus, improved employee relations and development; innovation and lower costs.

2.4 Monitoring and evaluation team capacity and building project Success

There seems to be consensuses across the project management field of study in the statement that monitoring and evaluation is a major contributor to PS. Monitoring and Feedback was one of factors leading to PS (Barker & Pistrang, 2015). Like-wise, (Shamp, 2017) also noted that the probability of achieving PS seemed to be enhanced among other factors, by constantly monitoring the progress of the project. Hwang & Lim (2013) also established that monitoring and evaluation, budget performance, schedule performance and quality performance could lead to PS. Ika *et al*., (2012) ranks monitoring and evaluation highly as one of the major PS factors. Ika et' al (2010) accentuates that monitoring and evaluation is even more critical than planning in achievement of PS. PMBOK (2001) a book which presents a set of standard guidelines which are widely accepted and consistently applied, continually stresses the importance of monitoring and evaluation in achieving project success.

The most important, yet quite often the most neglected aspect of Monitoring and evaluation, is feedback. Feedback basically means linking evaluation findings to the decision-making processes, particularly to its planning process. Different types of mechanisms, channels and methods are used for dissemination of evaluation information, most commonly; reports/returns; review meetings, workshops/seminars; newsletters; and computer networking. Most project managers appreciate that monitoring and evaluation of projects is important if the project objectives and success is to be achieved. There are a number of activities that have been identified as key to building capacity in monitoring and evaluation. These include; professional development, resources and support, organizational development and creation of enabling environment (Taylor – Powell *et al*, 2008). Patton (1997) argued that no matter how rigorous the methods of data collection, design and reporting are in evaluation, if it does not get used it is a bad evaluation. There is a growing trend toward professionalization of Monitoring and evaluation due to an exponential demand for high quality evaluations. According to Taylor- Powell and Boyd (2008), this professionalism is seen in activities aimed at building knowledge, beliefs, and skills of individuals in evaluation. This could be the motivation which should be behind trainings at all levels in monitoring and evaluation cycle.

Since evaluation competence could be determined by factors such as skills, knowledge and attitudes of individuals towards monitoring and evaluation, training of individuals in these factors is key (Njenga, 2017). Fullan (2014) argued that Monitoring and evaluation function should be looked upon as the collective responsibility in the organization. This she says, would help to create a culture of conscious Monitoring and evaluation, information sharing, seeking internal assistance in case of problem and most of all sharing credit for success and responsibility for future. Besides trainings, other components that could be done to develop professionalism in monitoring and evaluation include; technical assistance, collaborative evaluation of projects, mentoring and coaching and establishing communities of practice (Taylor-Powell & Boyd, 2008). Singh, Murty, Gupta and Dikshit (2009) suggested a number of activities that are used by development organizations around the world to improve the performance of Monitoring and evaluation. They include among others, team-building; coaching; mentoring; exchange visits; technical assistance; short and long-term training. Another important aspect of monitoring and training team capacity

is the concern of internal support structures that supports monitoring and evaluation activities, some firms may lack necessary logistical support (such as computers, transportation) to enable them perform efficient monitoring and evaluation data-gathering, data-entry and analysis (Douglah *et al*., 2003). When these and other support systems are missing, no amount of professional training and planning would make much difference in Monitoring and evaluation performance and this would mean that the data collected may not be sufficient to support meaningful results.

Allocation of resources is the apportioning of productive assets among different uses in a project. Resource allocation arises as an issue because the resources of a project are always limited in supply and because any given can have many alternative uses. Monitoring and evaluation resources are people, money, computer hardware and software, vehicles etc. (Kithinji, 2015). According to Singh, Murty, Gupta and Dikshit (2009), the resources allocated for use in Monitoring and evaluation may be categorized into three; financial capacity to do Monitoring and evaluation, human capacity to do Monitoring and evaluation (People skills and knowledge) and physical capacity to do Monitoring and evaluation (Equipment, technology and machinery) (UNAIDS 2008). Financial capacity to do Monitoring and evaluation is critical for any work to be undertaken. Credibility of information gathered from Monitoring and evaluation system that is underfunded would be questioned more especially the quality of that information. More likely is that crucial data may have been left out. As Woodhill (2005) points out, utilization of such data may not be meaningful.

Human capacity to do Monitoring and evaluation refers to the ability of persons mandated to carry out Monitoring and evaluation activities. This ability includes a variety of skills and knowledge to steer each step in a Monitoring and evaluation system. Organizations need to invest in skilled personnel to run Monitoring and evaluation either by hiring already trained people, which may very difficult for most projects to achieve because few people are skilled in conventional Monitoring and evaluation, train the people you need either on the job or through external courses; or hire external consultants for focused inputs (IFAD, 2002). Ability to gather and interpret data to make it usable and the ability to themselves

use the same is the key element of investing resources in Monitoring and evaluation personnel (Briceno, 2010). In building resource capacity for Monitoring and evaluation, several strategies and interventions have been suggested. Douglah *et al* (2003) suggested that sufficient allocation of resources and technical assistance should be part of a well-planned Monitoring and evaluation capacity building process.

2.5 Compliance with legal framework and building project success

Sustainable construction has emerged as a guiding paradigm to create a new kind of built environment. It is one that meets the needs of humans in the present without limiting the ability of future generations to meet their own needs (Ojori, 2001). The creation, operation and disposal of the build environment dominate humanity's impact on the national world (Kibert, 2016). The construction industry is the largest destroyer of the natural environment (Woolley, 2000). It is a major consumer of non-renewable resources, produces substantial waste, pollutes air and water, and contributes to land dereliction Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs (United Nation, 1987). A primary goal of sustainability is to reduce humanity's environmental or ecological footprint on the planet. Sustainable development has given rise to green buildings.

Most green buildings practices fall into seven basic categories; energy saving, land saving, storm water runoff-reducing, material conservation and pollution reduction (ECO Northwest, 2001). A green building uses an average of 30% less energy than conventional building (Economist, 2004), material waste generated during construction is reduced or recycled. Energy efficiency is improved perhaps by relying on the use of natural light and ventilation or solar power. Less water is used, or rainwater harvesting system is installed to ensure wiser use. Measures taken to make buildings and construction more sustainable rely increasingly on life cycle approaches.

Construction is a major and primary sector of the Nigerian economy and its consideration of issues of sustainability covers a huge spectrum of the sector (Nwafor, 2006). Thus, the role buildings play is fundamental to the realisation of sustainable development. Public awareness of environmental issues has increased significantly in Nigeria. Property owners

and clients are seeking commercial buildings that meet acceptable environmental and health levels. Unfortunately, there is lack of institutional structures promoting green buildings; awareness on the part of clients, tenants, professionals in the build environment and other stake holders; professional capacity to incorporate green building issues and opportunities and financial resources to undertake green building construction and upgrades.

Legal aspects are an indispensable part in the construction industry. Legal aspects ensure that projects are functioning as per the statutory framework. Every construction project must take into account the legal set up while framing the basic aims and objectives of the project (Arthi, Hemamalinie & Ramajeyam, 2014). Windapo and Cattell (2013) found the following challenges in South Africa; increases in costs of building materials, high rate of enterprise failure, delivery capacity and performance, mismatch between available skills and required skills, external influences such as government legislation, procurement practices, capacity for sustainable empowerment and technology among others. Kaggwa *et al*., (2013) studied 323 public sector projects in Botswana. Deficiencies in construction industry include; lack of project supervision, lack of prompt payment system for suppliers, deficiency in regulation of professionals, ineffective regulation of project success, ineffective regulation of consultants and contractors, and incompetent consultants.

There are a multiple of statutes that guide the planning and building sector in Kenya. These include; National Environment Management Authority (NEMA), EMCA (Amendment) 2015; Land Planning Act enacted in 1968, aimed at controlling the development of the urban land. The contents of the plans and the machinery of preparation were however not clearly spelt and its use in rural areas was limited (Land Planning Act, 1968). This act was repealed in 1996 when the Physical Planning Act of 1996 was enacted. The Physical Planning Act of 1996 (Cap 286, 1996) provides for the formulation of National, Regional and Local physical planning guidelines, policies and strategies. It further provides for the preparation of regional and local physical (Physical Planning Act of 1996). The building and construction is also guided by a multiplicity of institutions. After the promulgation of Kenya's new constitution and the creation of County Government, there is challenge of legal provisions to guide the building industry as most of the Acts which were focused on

Local Authorities became obsolete. Accidents continue to happen in the building sector leading to injuries, loss of life and property (Kimani & Musungu, 2010). In addition, National Construction Act of 2011 is an Act of Parliament which provides for the establishment, powers and functions of the National Construction Authority and for connected services. The Authority's main objective is: to oversee the construction industry and coordinate its development (National Construction Act, 2011). This noble objective has been achieved by ensuring that all players in the industry register with the Authority: the contractors and their Supervisory staff. In this case the authority is able to monitor the conduct of these players in the industry.

Contractors are evaluated according to the requirement set out and placed in their relevant categories to undertake works according to their technical and financial capabilities. In execution of its mandate the act empowers the Authority to mete out penalties for non-compliance to the existing legal framework. Watson (2003) has urged that there is a gap between the reality of residents and reality of planners. Jenkins and Anderson (2011), have also noted that what an urban resident consider to be an adequate and suitable home space may not meet the standards of planning officials. As a result, those standards become irrelevant and destructive as people struggle to survive in the city.

It has been argued that housing professionals involved in the design and approvals in development in Nairobi have adopted a top –down approval to housing design, resulting in regular and formed aesthetics, but designs which do not adequately address user's needs (Onyango & Olima 2008). As a result the city has refused to be tamed and orderly as envisaged by the colonial planners (Onyango & Oloma, 2008; Anyumba, 2011). Whilst planners seem oblivious to this gap, in reality developers have stepped in to create realistic living spaces for the residents. It is evident that no matter what checks and controls are put in place to govern space; society always tends to find a way to subvert these if their needs are not provided for (Simone & Pieterse, 2018). According to Mwangi (2016) land use management is concerned with the stewardship or custodianship of land both for the present and the future and it incorporates the concept of sustainable developments (as used by Brundland Commission); the use of available resources now without compromising the use of the same resources by the future generations.

Planners in urban areas are faced with the task of ensuring stability and sustainability city in relation to urban land resources (Ravetz, 2016). Planners are involved in the identification of resources; they are responsible for regulations and or controlling the use land, its location, intensity and amount of land designated for various uses. Watson, (2009), points out that land use regulations that accompany master plans usually demand standards of construction and forms of land use which are unachievable and inappropriate for the poor in cities. Such standards have sometimes led to forced evictions from unplanned areas and demolitions of un-authorized development. In Zimbabwe for example, over 700,000 urban dwellers were evicted in 2005 at Murambatsvina operations and their homes demolished as they were deemed not to comply with the objectives of planning (UN-habitat, 2007). Likewise, in Abuja Nigeria, 800,000 people were evicted in 2006 from land because their land use did not confirm to the master plan (Watson, 2009). UN-habitat (2015) noted how, in many developing countries urban land management is ineffective due to fragmented services and institutions, corruption, lengthy and costly procedures. The Habitat Agenda recommended that there should be appropriate structures for enforcements of land laws and regulations, provision of institutional support, accountability and transparency in land management and generation of accurate information on land ownership and land transactions as well as land use.

A widespread system of informality is known to exist in African societies, and corruption is among the most rampant informal practices. It is embedded in daily governance and routine administrative practices that foster and accommodate the practice (Brundo & Oliver 2006). There is general consensus that corruption is the abuse of public power for private benefits; a practice that hinges on practices by people attempting to subvert or undermine existing rules in order to generate extra-legal income (Mbaku, 2010). Transparency International (2015), among others defines corruption as, behavior that deviates from the formal duties of a public role (elective or appointive) because of private regarding (personal, close family, private clique) wealth or status gains. Similarly, it is a behavior that deviates from the formed rules of conduct governing the actions of someone in a position of public authority because of private –regarding motives, such as wealth, power, or status.

State regulations may exempt entrepreneurs from compliance with laws and regulations so as to reduce their costs in exchange for proportionate monetary rewards. Moonlighting is another form of corruption, whereby public officials carry out private consultancy work whilst employed in the public service (Tickner, 2017). Indeed, Kamau (2004) found moonlighting activities among Government Surveyors in Nairobi. In an urban planning system, either type of corruption is harmful in that the former undermines and delegitimizes the system in the eyes of developers, whilst the latter is often outright theft and misappropriation of state resources. According to Tickner (2017), impunity, another form of corruption, mostly arises from clienteles'. This is echoed by Benson (2015) despite stigmatization of corruption as an evil practice, impurity is enjoyed by those practicing it.

Impunity can defeat attempts at reforms in that individuals being sanctioned and protected in clientele's network, with sanction threats being met with either interventions or threats, from pears or more senior actor because sanctioning one peer or more senior actors, could pause a threat to the whole corrupt system (Tickner, 2017). Goodfellow (2013) found that persistent political interference in Uganda impacted on the effectiveness of planning with impunity extended to elite and popular groups who could give financial or electoral incentives to the politicians. It is not just impunity from politicians that renders planning ineffective; where there is mistrust between service users and state officials, users are compelled to develop relationships with officials who can then protect them from obstacles in formal procedures (Tickner, 2017). A user with a 'contact' in a department gets preferential and personalized treatment whereas anonymous users are usually excluded from public services. In systems where impunity prevails over sanctions, implementation of laws and regulations is ridiculed.

2.6 Theoretical framework

This study was informed by Stake holder theory, Diffusion of innovation theory and Agency theory.

2.6.1 Stakeholders' theory

The various stakeholders involved in the study of project initiation process and Monitoring and evaluation team capacity as independent variables and moderating compliance with

legal framework on buildings project success included; County Government officials, building developers, project managers, contractors and regulatory bodies. This could be linked to stakeholders' theory for better study and understanding. Managers should understand the success of building projects could be influenced greatly by the participation of various stakeholders. Overall, a central and original purpose of stakeholder theory is to enable managers to understand stakeholders and strategically manage them (Patton, 2008).The managerial importance of stakeholder management has been accentuated in various studies that demonstrate that just treatment of stakeholders is related to the long-term survival of the organization (MC Manus, 2004). While having its origins in strategic management, stakeholder theory has been applied to a number of fields and presented and used in a number of ways that are quite distinct and involve very different methodologies, concepts, types of evidence and criteria of evaluation.

As the interest in the concept of stakeholders has grown, so has the proliferation of perspectives on the subject (Oakley, 2011). The stakeholder approach has been described as a powerful means of understanding the firm in its environment. This approach is intended to broaden the management's vision of its roles and responsibilities beyond the profit maximization function (Marangu, 2012) and stakeholders identified in input-output models of the firm, to also include interests and claims of non-stockholding groups. The stakeholder model entails that all persons or groups with legitimate interests participating in an enterprise do so to obtain benefits and that there is no pre-set priority of one set of interests and benefits over another (Nyandika & Ngugi, 2014). Associated corporations, prospective employees, prospective customers, and the public at large, needs to be taken into consideration. This theory emphasizes the significance of the relationship between the top management staff with the stakeholders. Specifically, managers should understand the success of the projects can be influenced greatly by the participation of various stakeholders. These stakeholders will participate depending on the relationship they foster with the top management and not workers acting on their behalf.

2.6.2 Diffusion of Innovation theory

There are several stakeholders from different backgrounds involved in a typical building project.

This reality could be beneficial to a building project, if the divulge wealth of knowledge and skills could contribute to building project success. Project initiation processes, Monitoring and evaluation team capacity as independent variables on building projects success as dependent variable, could best be understood by incorporating (Diffusion of innovation) DOI theory in the study. DOI is a theory of how, why, and at what rate new ideas and technology spread through cultures, operating at the individual and firm level. DOI theory sees innovations as being communicated through certain channels over time and within a particular social system (Sarker & Sahay, 2004). Individuals are seen as possessing different degrees of willingness to adopt innovations, and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time. According to Wallace, Keil and Rai (2004) breaking this normal distribution into segments leads to the segregation of individuals into the following five categories of individual innovativeness; from earliest to latest adopters, innovators, early and adopters, early majority, late majority, laggards, those firms that are late adopters of technology tend to have trouble securing the support and participation of the stakeholders.

The innovation process in organizations is much more complex. It generally involves a number, of individuals, perhaps including both supporters and opponents of the new idea, each of whom plays a role in the innovation and decision (Tabish & Jha, 2012). Based on the DOI theory at firm level (Sense, 2008), innovativeness is related to such independent variables as individual (leader) characteristics, internal organizational structural characteristics, and external characteristics of the organization. Individual characteristics describe the leader attitude toward change. When the leader is flexible and ready to accept change, the stakeholders are put into practice since the leader does not value his/her opinions above those of the stakeholder.

Internal characteristics of organizational structure include observations according to (Tabish & Jha 2012) whereby centralization is the degree to which power and control in a system are concentrated in the hands of a relatively few individuals, complexity is the degree to which an organizations member possess a relatively high level of knowledge and expertise, formalization is one degree to which an organization emphasizes members following rules and procedures, interconnectedness is the degree to which the units in a social system are linked by interpersonal networks, "organizational slack is the degree to which uncommitted resources are available to an organization", "site is the number of employees of the organization" external characteristics of organizational refer to system openness (Zou, Zhang & Wang, 2006). Thus, organization of a firm based on the DOI theory highlights the aspects that instigate support from stakeholders.

2.6.3 Agency theory

The application of Agents theory in the study, underpinned project initiation processes and monitoring and evaluation team capacity as independent variables and compliance with legal framework as moderating variable in the conceptual framework. Agency theory, also called principal-agent theory explain two-party relationships; between employer and its employee, between organizations executives and shareholders, and between buyers and sellers (Ross, 1973), whose goals are not congruent with each other.

The goal of agency theory is to specify optimal contracts and the conditions under which such contracts may help minimize the influence of goal incongruence. The core assumptions of this theory are that human beings are self- interested individuals, bounded rational, and risk- averse, and the theory can be applied at the individual or organizational level (Renn, 2017). The two parties in this theory are the principal and the agent; the principal employs the agent to perform certain tasks on its behalf. While the principle's goal is quick and effective completion of the assigned task, the agent's goal may be working at its own pace, avoiding risks, and seeking self-interest such as personal pay over corporate interest, hence the goal incongruence (Renn, 2017). Compounding the nature of the problem may be information asymmetry problems caused by the agent's behavior or the agent may not put forth the effort needed to get the task done (the moral hazard

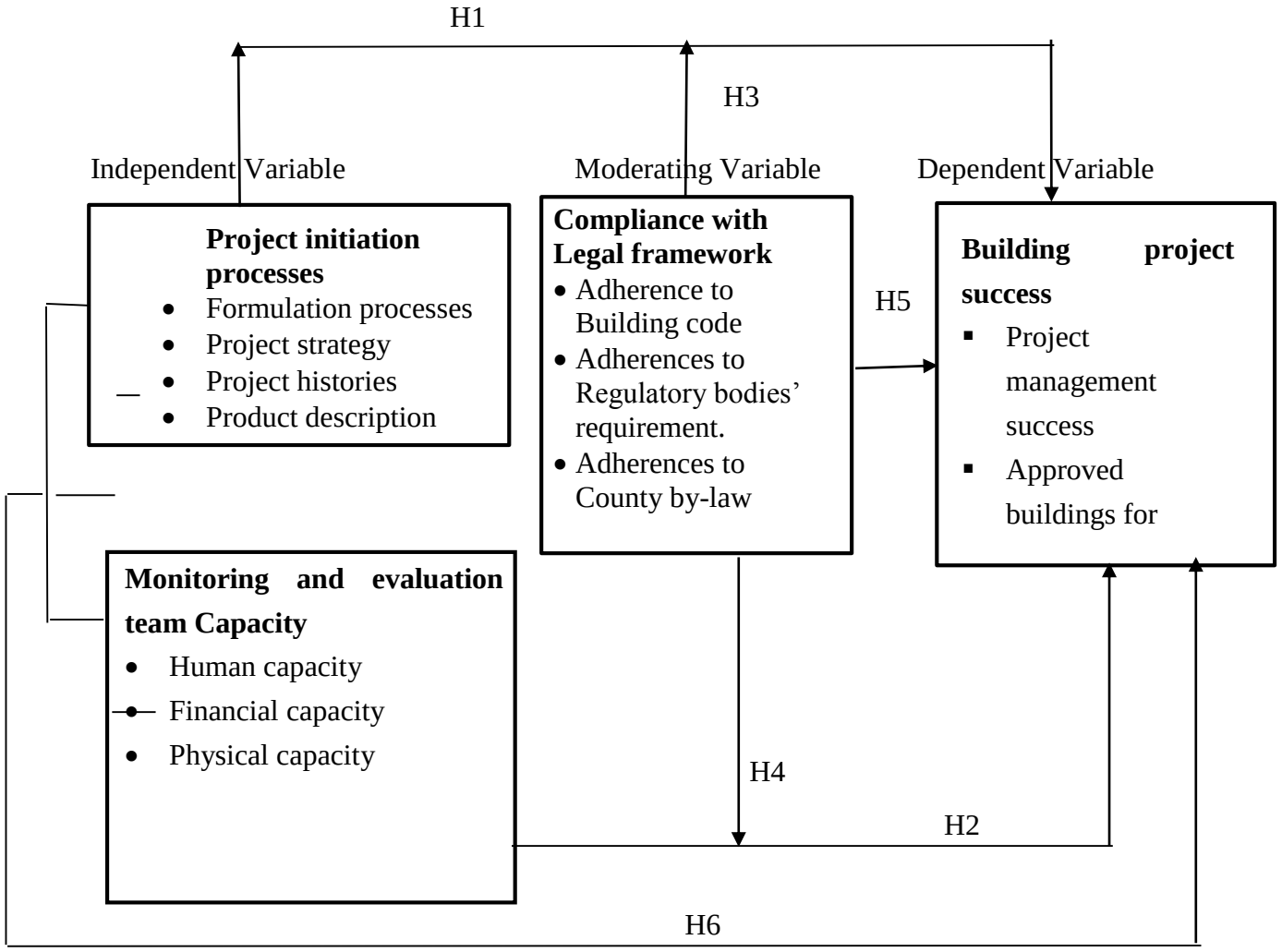
problem) or may misrepresent its expertise or skills to get the job but not perform as expected (the adverse selection hazard).

Typical contracts that are behavior-based, such as monthly salary, cannot overcome these problems. Hence, agency theory recommends using out-come based contracts, such as commissions or fee payable upon task completion, or mixed contracts that combine behavior-based and out-come based contracts). Agency theory also recommends tools that principals may employ to improve the efficiency of behavior-based contracts, such as investing in monitoring mechanisms (such as hiring supervisors) to counter the information asymmetry caused by moral hazard, designing renewable contracts contingent on agent's performance (performance assessment makes the contract partially outcome-based), or by improving the structure of the assigned task more programmable and therefore more observable (Renn, 2017).

2.7 Conceptual framework

This study had two independent variables; project initiation processes, Monitoring and evaluation team capacity, a moderating variable legal framework and a dependent variable; building project success. The researcher postulated that project initiation processes could significantly determine building project success. Further, Monitoring and evaluation team capacity could also significantly determine building project success and the interaction of the two-independent variable significantly influence the dependent variable where in all cases were moderated by the legal framework. Moderating variable tends to interact in some fashion to alter the relationship between the dependent and the independent variable.

Figure 1: Conceptual Framework



2.8 Gaps established in the literature review

From the foregoing studies and reports, it appears that there is a social concern and a need to establish practices and procedures on building project success. From the literature reviewed, this study has picked out a number of concerns for each of the study variable; the first variable that this study will consider is; project initiation process; the second is Monitoring and evaluation team capacity, third is the moderating of compliance with legal framework, the fourth is Moderating of compliance with legal framework and relationship between project Initiation process and Monitoring and evaluation team capacity significantly influences building project success, and the fifth is moderating of compliance with legal framework on relationship between Monitoring and evaluation team capacity,

its actual influence on building project success in general needs to be studied More specifically, the Table below shows a summary of all the gaps and how this study will attempt to bridge them.

Table 3.1: Summary of the knowledge gaps

Researcher	Variables	Findings	Knowledge Gap	Action
Babalola Oluwatuy (2015).	Factors influencing the performance of projects in Akure, Nigeria.	Contractor's progress payment should be made on time as well as minimizing change orders during construction to avoid delays. Also, consultants should give full commitment to monitor the progress and ensure the work was according to specifications and satisfactory quality, meeting owner needs and expectation within the project budget and stipulated time.	Focus was on implementation process and no mention of legal framework.	Continuous coordination and relationship between project participants were required through the project cycle in order to ensure project performance.
Ofori (2013).	Project management practices & critical success factors.	Top management, Effective communication, clarity of project goals and stakeholders involvement contributes to the success of projects.	Focus was on human capital and project scope. It was silent on identification project idea, preliminary selection, feasibility study, project histories, Monitoring & evaluation	Linkage was established between success of a project and top management support, effective communication, clarity of goals and stakeholder involvement on project success.

Ika (2011).	Relationship between critical success factors and project success.	Monitoring, coordination and institutional environment were found to have statistically significant and positive relationship on project success.	Critical success factors appeared to be limited project implementation activities. It was silent on inputs of resources, time, scope which define a project. There was no mention of evaluation.	Established linkage between project supervision and managers strengthening on improvement of project success.
Adnan, Sherf, Saleh (2009).	Factors affecting performance of construction projects in Gaza Strip.	Delays because of; Borders roads closure leading to materials shortage. Unavailability of resources. Low level of project leadership skills. Escalation of materials prices. Unavailability of highly experienced and qualified personnel. Poor quality of available equipment and raw materials.	Focused on two inputs for a project of time and resources and was silent on the input of project scope, initiation processes.	Project owners must work collaboratively with contractors. Project participants should actively have their input in the process of decision making. Continuous coordination and relationship between project participants are required through the project life cycle.
Kamau, Mireri, (2014)	Adoption of life cycle management and how initial phase principle influence project performance.	Projects were not delivered on time, within cost and quality due to poor management of projects, inadequate planning and budgetary provisions, costly project execution.	Project performance was limited to cost and quality. It was silent on project performance which could be broadly be captured in product success, management success and market success.	If initial phase principle is adopted, it could improve project performance and reduce cost and time overruns.

Idoro (2012).	Project Monitoring and control efforts by contractors' contribution to project outcome.	Contractors should ensure that their project monitoring and control efforts are directed towards improving the entire outcomes of their projects.	The study was limited to contractor's contribution on project outcome. There was no mention of project outcome which is influenced by multiple players like management, budgetary resources among many others.	The firms should also ensure that their management staff possesses adequate knowledge of how to utilize the reports and statements prepared.
Akewashola (2012)	Influence of project management on project success.	There is a relationship between project quality and business success, project quality and technical success, project cost and acceptability by clients.	Project success was limited to concepts of cost and quality and acceptability by clients. It was silent to a broader approach to project success in relation to completion period, user satisfaction, and market success among others.	Total project cost on the side of clients should be minimized by ensuring that the project manager is innovative enough and creative in the apportion of project cost without reducing the quality of the project.
Yang, Mustaffa (2012)	Principal factors that are critical to the success of a construction project in Malaysia	Human related factors such as competence, commitment, communication and corporation towards success of a construction project		

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter described the research methodology which was used in the study. Specifically, it provided a detailed description of the research philosophy, research design, study population, data collection, reliability and validity of research instruments, operationalization of study variables and data analysis techniques.

3.1.1 Research paradigm

Research is founded on some philosophical paradigms or underpinnings. A paradigm is a way of looking at the world. It is composed of certain philosophical assumptions that guide and direct thinking and action ((Gakuu C.M, Kidombo H.J & Keiyoro P.N, 2018). The philosophical underpinning of this study was pragmatism. The study was mixed mode approach as it asked objective and subjective type questions using structured questionnaires, interviews, observation sheet and document analysis as instruments for data collection on project initiation process, Monitoring and evaluation team capacity, moderation of compliance with legal framework and building project success.

Pragmatism views knowledge as being constructed and based on the reality of the world we experience and live in (Johnson & Onwnegbuzie, 2004). It claims that knowledge arises out of actions, situations, and consequences; it is concerned with applications (what works) and solutions to problems thus putting the problem as most important instead of methods (Crewell, 2013). Creswell argues that pragmatic places the research problem as central and applies all approaches to understanding the problem. It means that data collection and analysis methods are chosen as those most likely to provide insights into the problem with no philosophies loyalty to any alternative paradigm. The way social science researchers' view and study social phenomena are shaped by two fundamental sets of philosophical assumptions: ontology and epistemology. Ontology refers to our assumptions of how we see the world; does the world consist mostly of social order or constant change? Epistemology refers to our assumptions about the best way to study the world; should we use an objective or subjective approach to study social reality? In this regard, in choosing an appropriate ontological assumption (philosophical view of the study), the researcher

must decide whether reality is considered as objective, singular and external to the researcher or conversely whether reality is considered as subjective and multiple hence only understood by examining the perceptions of selected sample size. Whichever perspective the researcher adopts, it affects the methodological approach the researcher chose in research and in turn the findings of such research. The concern of research philosophy is not only about the development of knowledge but the nature of the knowledge. The ontological and epistemological assumptions for this study justified the pragmatism philosophical direction.

3.2 Research design

A research is a systematic plan to study a scientific problem. It is a structure of doing something. It can also refer to the overall strategy that integrates the different components of the study in a coherent and logical way. It enables a researcher to ensure that the research is effectively addressed as unambiguously as possible. It constitutes a blueprint for collection, measurement and analysis of data. Research design can be considered as a strategy concerned with planning an optimum method for attaching or solving a problem which provides efficiently the strongest references possible with minimum cost and time constraints (Gakuu C.M, Kidombo H.J & Keiyoro P.N, 2018). This study used a mixed mode approach to conduct a descriptive survey of the phenomena based on pragmatism philosophical framework amenable to mixed-method approaches in research (Padgett, 2016). This approach attempted to consider multiple viewpoints, perspectives, positions and standpoints of a phenomenon to enable confirmation or correlation of each through triangulation and to develop analysis in order to provide richer data.

The research design chosen for this study was guided by the purpose of the study, the type of investigation, the extent of researcher involvement, the stage of knowledge in the field, the time period over which the data is to be collected and the type of analysis. The study sought to observe, describe and understand project initiation process, Monitoring and evaluation team capacity and moderating of compliance with legal framework on building project success. The purpose was to have an in-depth understanding of the project construction activities as practiced by individual projects and stakeholder's perspective of

the practice in order to draw important lessons for project construction practices (Cooper, Schindler & Sun, 2006). Data was collected over a short span of time (about two months) with the aim of making inferences on the influence of project initiation processes, Monitoring and evaluation team capacity and moderating of compliance with Legal framework on building project success, thus making the study a cross-sectional survey So as to test the hypothesis, quantitative data was used in line with positivist view of developing knowledge. Data was collected using predetermined instruments that would yield statistical data (Creswell, 2008). This data would be subjected to rigorous quantitative analysis in a formal and rigid fashion. As suggested by (Kotrlik & Higgins, 2001), information gathered from the survey was used to make generalizations from the sample and assumed application of the same back to entire population within the limits of random error.

Our design and conduct of research is shaped by our mental models or frames of references that we use to recognize our reasoning and observations. These mental models or frames (beliefs systems) are called paradigms (Kuhn, 1962). A research methodology was about the procedure framework within which the research was conducted. Hevner and Chatterjee (2010) posits that research is usually conducted in the spirit of an inquiry, which relies on facts, experience, data, concepts and constructs, hypothesis and conjectures, principles and laws. In contrast to the definition by Armaratunga *et al*. (2002) on research methodology, a common definition of methods can be described as the technique and instruments of data collection that researchers employ such as observations or interviews, questionnaires, statistical techniques, extracting themes from unstructured data and sampling to name a few (Bryma & Bell, 2007). Broadly speaking data collection methods can be grouped into two categories: quantitative and qualitative. Quantitative methods, such as laboratory experiments and survey research, are aimed at theory (hypotheses) testing while qualitative methods, such as action research and ethnography, are aimed at theory building. Quantitative methods employ a deductive approach to research, starting with a theory and testing theoretical postulates using empirical data. In contrast, qualitative methods employ inductive approach that starts with data and tries to derive a theory about the phenomenon of interest from the observed data (Renn, 2017). The study applied field surveys and action research.

Field surveys are no-experimental that do not control or manipulate independent variables or treatments but measure these variables and test their effects using statistical methods. Field surveys captured snapshots of practice, beliefs or situations from a random sample of subjects in field settings through a survey questionnaire or a structured interview. In cross-sectional field surveys, independent and dependent variables are measured at the same point in time (using a single questionnaire). The strengths of field surveys are their external validity (since data is collected in field settings), their ability to capture and control for a large number of variables, and their ability to study a problem from multiple perspectives or using multiple theories (Bhattcherjee, 2012). Field survey was appropriate for this study as it involved data collection from buildings projects with multiple stakeholders as respondents with different perspectives of building project success phenomenon.

Secondary data analysis was analysis of data that has previously been collected and tabulated by other sources. Such data included data from government agencies such as statistics for contractors from NCA, NEMA and County Governments. Action research assumes that complex social phenomena are best understood by introducing interventions or "actions" into those phenomena and observing the effects of those actions. In this method, the choice of actions was based on theory, which should explain why and how such actions may cause desired change. A research design is the scheme, outline, plan, structure or a strategy of investigation conceived so as to obtain answers to research questions and control variance. It provided a framework for planning and conducting a study. It is the 'glue' that holds all the elements in a research project together. It constitutes a blueprint for the collection a blueprint for the collection measurements, and analysis of data (Kothari, 2003). Research design is a comprehensive plan for data collection in an empirical research project. It is a "blueprint" for empirical research aimed at answering specific research questions or testing specific hypothesis and must specify three processes: the data collection process, the instrument development process and sampling process. The researcher simultaneously learned from action and generated theoretical insights about the target problem of project success.

3.3 Target population

The target population was approved buildings for construction by NCCG in Roysambu

Constituency of Nairobi County, Kenya in the year 2016. This was influenced by ease of getting contacts of the respondents for buildings which had been constructed within one year as the buildings still were within defects liability period. When a project is within the defects liability period, the contractor can still be called upon to make good defects by the project manager and so both are still on the project. The respondents for the study was ; 3 respondents from each of the 113 buildings, one building developer, one Project manager, one contractor, one NEMA official, 2 Sub- County Officials, 2 NCA officials. A research population is generally a large collection of individuals or objects that is the main focus of a scientific query Roysambu Constituency was chosen for the study because of its high density of buildings spread within the five wards of; Githurai, Kahawa West, Zimmerman, Roysambu and Kahawa and their proximity to the researcher.

The size of a study sample is always critical of producing meaningful results (High, 2000). The overall sample size for this study was 113 approved buildings for construction in Roysambu Constituency in the year, 2016 (NCCG Urban Planning Management- Development Control Section). This formed the sampling frame with list of building projects and contact information of the owner and project manager.

3.4 Sample and sampling procedure

Sampling is the statistical process of selecting a subset (called a "sample") of a population of interest for purpose of making observations and statistical inferences about that population. We cannot study entire populations because of feasibility and cost constraints, and hence, we must select a representative sample from the population of interest for observation and analysis (Renn, 2017). The sampling process comprises of several stages. The first stage is defining the target population. A population can be defined as all people or items (unit of analysis) with the characteristics that one wishes to study (Renn, 2017). The unit of analysis may be a person, group, organization, country, object or any other entity that you wish to draw scientific inferences about. The sampling frame for this study was an accessible section of the target population with a list of contact information. The sampling frame was the list of the approved buildings for construction in the year, 2016 in Roysambu Constituency which for this study were 113 buildings (NCCG Urban Planning Management- Development Control Section).

3.4.1 Sample size selection

To determine the size of the sample used, the Yamani Taro (1967) formula was used. It states that the desired sample size is a function of the target population and the maximum accepTable margin of error (also known as the sampling error) and it expressed mathematically thus:

$$n = \frac{N}{1 + Ne^2}$$

Where n = Sample size

N = target population

e = maximum accepTable margin of error (5%)

Roysambu constituency had 113 approved buildings for construction in the year 2016.

Thus: N = 113

$$n = \frac{113}{1 + 113\ (0.05)^2}$$

N = 88 buildings

The sample size was then 269 which included 3 respondents from 88 buildings, one NEMA official, 2 Sub- County Officials, 2 NCA officials. Ary, Jacobs, Irvine and Walker (2018) proposes a rule of the thumb for determining a sample size of 30 to 500 is appropriate for most academic researches but there is no fixed number of percentages of subjects that determine the size of adequate sample.

To them, the ideal sample is "large enough to serve as an adequate representation of the population about which the researcher wishes to generate and small enough to be selected economically in terms of time and money and complexity of analysis.

3.5 Research instruments

This study was based on pragmatism which allows use of various tools in data collection. The instruments which were used for data collection for this study were; Questionnaires, Interview guide, Observation guide and document analysis.

3.5.1 Questionnaires

A self-administered structured, closed-ended question was used as the tool for collecting

data from project managers and Contractors as respondents as they were more conversant on construction process and may not require assistance. Two trained research assistants with the introductory letter from University of Nairobi and research permit from NACOSTI, dropped and later picked the filled self- administered Questionnaires. Questionnaires were invented by Sir Francis Galton, as a research instrument consisting of a set of questions (item) intended to capture responses from respondents in a standardized manner. Besides being an instrument that can collect a lot of data, questionnaires are considered easier to administer, analyze and would be economical to use; in terms of time and money (Kothari, 2009; Miller & Salkin, 2002). Subjects' responses to individual questions (items) on a structured questionnaire were aggregated into a composite scale or index for statistical analysis. Questions were designed such that respondents were able to read, understand, and respond to them in a meaningful way. Two trained research assistants administered the questionnaires by dropping them to the respective respondents and appealing for corporation in the task of giving the information with assurance of confidentiality. The data was summarized into frequencies, percentages and graphs. Responses were tabulated, coded and processed by use of a Computer for Statistical Package for Social Science (SPSS} version 25.0 program to analyze the data.

3.5.2 Interview guide

In addition to questionnaires, closed ended structured interview guide was used to collect in-depth information through interview from building developers on building project success. Interview guide was appropriate since not all building owners might be comfortable with answering written answers. This allowed flexibility since it presented an opportunity to restructure questions as needed (Kothari, 2009). The respondent's response was useful to verify and add meaning to the data which was collected using questionnaires. The interviews were face to face, which was advantageous since the interviewer would probe and note non-verbal signs that would add meaning to the process. This data was used to triangulate the findings of the study. The data was summarized into frequencies, percentages and graphs. Responses were tabulated, coded and processed by use of a Computer for Statistical Package for Social Science (SPSS} version 25.0 program to analyze the data.

3.5.3 Observation sheet

The study utilized an observation sheet to record what was observed. Two trained research assistants filled the observation sheet using visual observations on predetermined features in the unit of study (building) that were checked. These were limited to; cracks on the floor or walls (visible), leakages/ dampness, lighting, waste water disposal, solid waste disposal (Garbage), sanitary facilities, facilities per floor, electrical wiring and firefighting equipment. The data was summarized into frequencies, percentages and graphs. Responses were tabulated, coded and processed by use of a Computer for Statistical Package for Social Science (SPSS} version 25.0 program to analyze the data.

3.5.4 Document analysis

This is the use of data which has already been collected and analyzed by somebody else. In this study, the materials which were checked included approved houses for occupation certificate, approval project plans by physical planning and public health sub county officials, construction permit from County Government, NEMA license and NCA project registration certificate. The respondents were building owners, Sub- County Physical planners, Public health, NEMA and NCA officials. The data was summarized into frequencies, percentages and graphs. Responses were tabulated, coded and processed by use of a Computer for Statistical Package for Social Science (SPSS} version 25.0 program to analyze the data.

3.5.5 Piloting of the research instrument

This process allowed the researcher to identify whether respondent understand the questions and instructions, and whether the meaning of questions were be the same for all respondents (Kelly, Clark, Brown, Sitzia, 2003).Twenty respondents from neighboring Starehe Sub-county were used to answer questionnaire while 5 interviews were conducted. Documents from one of the building projects were reviewed to check if the themes developed for document analysis were appropriate. The target population had the same characteristic as with study population since the social economic was similar.

Half-split method was used. In the first round, researcher took detailed notes on how participants reacted to the format of the instrument, how long it took the respondent to answer the questions, questions that needed to be explained, and the reaction to each

question and so on. Answers to all questions were studied to check whether they represented the data that was intended to be collected. The researcher would identify and collected problems relating to the content, wording, layout, length, format and instructions that was not be clear. The results of the pilot study were shared by my supervisors to evaluate the findings.

3.6 Validity and Reliability of research instruments

Reliability and validity is a major concern in research. In particular, the research instruments you use to collect data must have a given level of validity and reliability for the results of the research to be acceptable by other researchers (Gakuu C.M, Kidombo H.J & Keiyoro P.N, 2018).

3.6.1 Validity of instruments

Validity refers to the appropriateness, meaningfulness and usefulness of data that a researcher collects using a research instrument. The question of concern was the interpretation of the test results or determining if the measurement picked the expected variables without contamination from another characteristic. Traditionally, validity of instruments has been determined by examining construct, content and criterion- related concepts. Construct validity is a degree to which an instrument measures the variable it was designed to measure. Construct validity is supported if the instruments are related to its operationally defined theory and concepts.

This study operationalized the variables based on literature reviews and theory studied by number of researchers to validate them to assure the construct validity. To ensure content validity, this study considered the variables and their dimensions as searched in the literature (Hogan, Greenfield & Schmidt, 2001). The study then proceeded to seek opinion from research supervisors as experts to review the appropriate indicators of the variable and identify consistencies of the questionnaire with the content area. Criterion –related validity pertains to evidence of a relationship between the attributes in a measurement tool with its performance on some other variables The criterion should possess relevant what is judged to be the proper measure; freedom from bias (giving each subject to score well) and reliability (sTable or reproducible) qualities (Kothari, 2009).

3.6.2 Reliability of instrument

Reliability has to do with the quality of measurement. In its everyday sense, reliability is the consistency or repeatability of measures (Gakuu C.M, Kidombo H.J & Keiyoro P.N , 2018). All the items were checked on how well they fit with the concepts in the area of study before piloting is done. The questionnaire used Liker-type scales to measure the indicators of each variable. After piloting, it was necessary to calculate and report Cronbach's alpha coefficient for internal consistency reliability for all the scales used (Gliem & Gliem, 2003). Alpha was calculated for each of the concepts to avoid inflating the value of alpha by including larger number of questions (Tavakol & Dennik, 2011). Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale. There seems to be general agreement that an alpha coefficient of 0.7 and above is an acceptable reliability. Reliability of the of the measurement by the variables was accepted, as; Project initiation process, Monitoring and evaluation team capacity and compliance with legal framework had Crobach's alpha of 0.893; 0.894; and 0.879 respectively as presented in table 4.9, and thus were all above the acceptable threshold of 0.79

3.7 Data collection procedures

The researcher first obtained a research permit from the Department of Extra Mural, University of Nairobi offices and NACOSTI to aid in collecting data from high rise buildings in Mathare Sub-county. The study also used trained qualified research assistants to assist with interviews, filling of observation sheets and distribution of questionnaires. The study targeted sampled buildings using observation sheets as instrument of data collection and identified key stakeholders as respondents using interviews and structured questionnaires for data collection on the independent and dependent variables.

3.7.1 Data Analysis

Data analysis was categorizing, ordering, manipulating, and summarizing of data to obtain answers to research questions. It was the process of reducing data to interpretable form using statistics; Statistics is a means of finding order and meaning in the collected data. The data collected from the research instruments was analyzed using Statistical Package

for Social Sciences (SPSS) version 25.0 (2010). Descriptive analysis was used to study distributions of variables as they were represented. This was a way of summarizing data. This analysis limited generalization to the particular group of individuals that was observed. The data was described in the following ways; tabular representation of data, graphical representation of data and numerical representation of data.

Descriptive statistics included the following measures of central tendency; mean, median and mode, measures of dispersion/ spread- range and standard deviation. The data generated through the questionnaire and interviews was edited to detect errors and omissions and to correct these where possible. Data was coded, assigning numerals to ensure that data is put into a limited number of categories or classes. Because of the large volume of data which was collected, classification was done to reduce the data into homogenous groups which would enable the researcher to get meaningful relationships and interpretation. Inferential statistics were used to test if there was significant linear correlation. The strength of the relationship between independent variables and the dependent variable was measured by a correlation coefficient analysis. To test the significance of the influence the independent variables have on the dependent variable, hypothesis testing regression analysis using F-test was done.

3.7.2 Likert scale as an interval measure

Likert scale types of questions were used in the study. These were differentiated as Likert item; when an item is used to measure a single variable and Likert scale; when a number of items are arranged as a group intended to measure a simple variable (Babbie, 2015). Likert method assumes equal weights for all items, and hence, respondent's responses to summed to create a composite score for that respondent. Hence, this method is called summated. Likert scale data can be analyzed as an interval measurement scale. These scales are created by the researcher by calculating a composite score (sum or mean) from four or more Likert-types items. Therefore, the composite score for Likert scales should be analyzed as an interval measurement scale. Descriptive statistics recommended for interval scales items include the mean for central tendency and standard deviations for variability. Additional data analysis proceeding appropriate for interval scales would include the Personsγ, t-test, ANOVA, and regression procedures. To support this new Bonnett (2015) argued that Likert scale can themselves be scaled to add further requirements and weighed

scoring to the aggregation of items into sub-scale and total scales to scores, which also tends to empire to linear and interval scale properties of the resulting composites. To support this Cummins (2018) said that in summing up Likert questions responses which makes the data interval, all questions must use the same scale (5-point scale) and there must be a defendable approximation to an interval scale.

Composite score was used in analysis and decision rules after analysis of mean scores and it was guided by the logical equal levels of the score approximated to the first decimal point in line. This study used one verbal anchors; 1 = not at all (NA); 2 = to a little extent (LE); 3 = to a moderate extent (ME); 4 = to a great extent (GE); 5 = to a very great extent (VGE). Therefore, the judgment rule followed this argument; Not at all would be for values lying between $1 < NA > 1.8$; to a little extent for values between $1.8 < LE > 2.6$ to a moderate extent for values between $2.2 < ME > 3.4$; to a great extent for values between $3.4 < GE > 4.2$. To a very great extent for values between $4.2 < VGE > 5.0$. This creates a scale that has an equidistance of correlations coefficient was used to measure relationships. Decision rule which was followed guidelines that γ-value of between 0.10 to 0.29 means small or weak correlation; γ-value of between 0.30 to 0.49 means medium or moderate correlation and γ value of between 0.50 to 1.0 means large or strong correlation. These guidelines apply whether or not share is a negative sign out in front of the γ value. The negative sign refers only to the direction of the relationship, not its strength.

Theoretical propositions consist of relationships between abstract constructs. Testing theories (theoretical propositions) require measuring these constructs accurately, correctly, and in a scientific manner, before the strength of their relationships can be tested (Renn, 2017). Measurements refer to careful, deliberate observations of the real world and are the essence of empirical research. Conceptualization is the mental process by which fuzzy and imprecise constructs (concepts) and their constituent components are defined in concrete and precise terms. One important decision in conceptualizing constructs is specifying whether they are one-dimensional and multidimensional. One-dimensional constructs are those that are expected to have a single underlying dimension. These constructs can be measured using a single measure or test. Multidimensional constructs consist of two or more underlying dimensions. Each of the underlying dimensions in this case must be measured separately, say, using different tests (Renn, 2017). Once a theoretical construct is defined, and it has to be operationalized. It is the process of developing indicators or

items for measuring these constructs. Indicators operate at the empirical level, in contrast to constructs, which are conceptualized at theoretical level.

The combination of indicators at the empirical level representing a given construct is called a variable. Indicators may have several attributes (or levels) and each attribute represent a value. Values of attributes may be quantitative (numeric) or qualitative (non- numeric). Quantitative data can be analyzed using quantitative data analysis technique, such as regression while qualitative data require qualitative data analysis techniques, such as coding (Renn, 2017). Many variables in social science research are qualitative, even when represented in quantitative manner. For instance, we can create a customer satisfaction indicator with five attributes: strongly dissatisfied, somewhat dissatisfied, neutral, somewhat satisfied, and strongly satisfied, and assign numbers 1 through 5 respectively for these five attributes.

3.7.3 Hypothesis testing

Regression models were used to test the strength of the independent variables as far as their relationship with the dependent variable was concerned. The contribution of each of the activities for; project initiation processes, Monitoring and evaluation team capacity and moderating role of compliance with legal frames and framework was determined using the coefficient of determination. F-statistics were used to test hypothesis of the study since the population was 218.

The strength of the relationship between the independent variable and dependent variable is measured by a correlation coefficient symbolized as "r". Formula to find the value "r";

$$\mathbf{r} = \sum(\text{dxdy}) - \frac{(\sum \text{dx})\,(\sum \text{dy})}{\text{N}}$$

"r" is always between -1 and 1inclusive. -1 means perfect negative linear correlation and +1 means perfect positive linear correlation.

Regression models were used to test the strength of the independent variables as far as their relationship with the dependent variable is concerned. The contribution of each of the initiation process, Monitoring and Evaluation team capacity and Moderating of compliance with legal framework on building project success, was determined using the coefficient of determination. F statistics were used to test hypothesis.

Table 3. 2: Models for Testing the Hypothesis

Objective	Hypotheses	Model for hypothesis testing
To establish the influence of project initiation process on building project success in Roysambu Constituency, Nairobi	**Hypothesis 1** H_1; Project initiation process significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a+\beta, x, +e$ Y = Building Project success a = Constant B_1 = Beta coefficient X_1 = Building project initiation processes E = error term
To determine the influence of Monitoring and evaluation team capacity on building project success in Roysambu Constituency, Nairobi	**Hypothesis 2**: H_2: Monitoring and Evaluation team capacity significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a +\beta_2 X_2+e$ Y = Building project success a = Constant β = Beta coefficient X_2 = Monitoring and evaluation team capacity e = error term
To assess the influence of Compliance with legal framework on building project success in Roysambu Constituency, Nairobi	**Hypothesis 3**: H_{o3}: Compliance with legal framework significantly influences building project success in Roysambu Constituency, Nairobi.	$Y = a+\beta_3X_3+e$ Y = Building project success a = Constant β = Beta coefficient X_3 = Compliance with legal framework E – error
To examine the moderating Compliance with legal framework on relationship between building project initiation process, Monitoring and evaluation team capacity on building project success in Roysambu Constituency, Nairobi	**Hypotheses 4**: H_o; Moderating compliance with legal framework, relationship between building project initiation process, Monitoring and evaluation team capacity significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a+ \beta X_4+e$ Y = Building project success a = Constant β_4 Beta coefficient e = error
To establish the influence of moderating Compliance with legal framework and project initiation process on building project success in Roysambu Constituency, Nairobi	**Hypothesis 5**: H_5; Moderating compliance with legal framework and project initiation process significantly influences building project success in Roysambu Constituency, Nairobi.	$Y = a+ \beta_5X_5+e$ Y = Building project success a = Constant β_5 = Beta coefficient α = error
To establish the influence of moderating Compliance with legal framework, Monitoring and evaluation team capacity on building project success in Roysambu Constituency, Nairobi	**Hypothesis 6:** H_6; Moderating compliance with legal framework, Monitoring and evaluation team capacity significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a+ \beta_6X_6+e$ Y = Project success a = constant β_6 = Beta coefficient α = error

Multiple regression equation

A multiple regression equation with two independent variables (x_1 and x_2) and one independent variable has the form;

$Y = a + b_1x_1 + b_2x_2$

The general form of the multiple regression equation with K independent variables is:

$Y = a+b_1x_1+b_2x_2 + \ldots+b_kx_k$

The x's are the independent variables. The value for "a" is more or less an intercept. In a multiple regression, the strength of the relationship between the independent variables and the dependent variable is measured by a correlation coefficient. This multiple correlation coefficient is symbolized by R. The value of R can range from 0 to +1; R can never be negative. The closer to +1, the stronger the relationship, the closer to 0, the weaker the relationship.

In multiple regressions, as in simple regression, the strength of the relationship between the independent variables and the dependent variable is measured by a correlation coefficient. This multiple correlation coefficient is symbolized by R. The value of R can range from 0 to +1; R can never be negative. The closer R is to +1, the stronger the relationship; the closer to 0, the weaker the relationship. The value of R takes into account all the independent variables and can be computed by using the values of the individual correlation coefficients. The formula for the multiple correlation coefficients when there are two independent variables is as shown below:

$$R = \sqrt{\left\{ \frac{(\gamma_{yx1})^2 + (\gamma_{yx2})^2 - 2\,\gamma_{yx1}.\gamma_{yx2}.\gamma_{x1x2}}{1-(x1x2)^2} \right\}}$$

Where $\gamma_{yx1,}$ is the value of the correlation coefficient for variables y and x_1; and $\gamma_{yx2}$is the correlation coefficient for variables y and $x_{2;}$ and γ_{x1x2} is the value of correlation coefficient for variables x_1 and x_2.

Testing the significance of R

An F test is used to test the significance of R. the hypothesis is; H_0: þ = 0 and H_1: þ ≠0 where þ represents the populations correlation coefficient for multiple correlation.

Regression models were used to test the strength of the independent variables as far as their relationship with the dependent variable is concerned. The contribution of each of the initiation process, monitoring and evaluation team capacity and moderating of compliance with legal framework on building project success was determined using the coefficient of determination. F statistics were used to test hypothesis.

F test for significance of R

The formula for the F test is

$$F = \frac{R^2/k}{(1-R^2)/(n-k-1)}$$

Where n is the number of data groups (x_1, x_2, …. y) and k is the number of independent variables.

The degrees of freedom are d.f.n = n – k and d.f.d = n – k – 1

3.8 Ethical Issues.

Permission was sought from relevant authorities to carry out this research. Letters were written and dispatched to seek a chance to distribute questionnaires, conduct interviews and seek authority to review documents from sampled projects. There was no coercion for anyone to take part in this study. All the respondents were assured that their identity and that of the sampled projects they have interest was kept a secret and for this they were not requested to indicate their names or that of the developer on the questionnaires. The findings of the study would be made available on request and the researcher pledged to be liable if any of this were not kept

3.9 Operational Definition of Variables.

The first decision to be made in operationalization a construct is to decide on what is the intended level of measurement. Levels of measurement also called rating scales refer to the values that an indicator can take (but says nothing about the indicator itself). According to Stanley Smith Stevens (1946), indicators can be defined by four generic types of rating scales for scientific measurements: nominal, ordinal, interval and ratio scales. Ratio scales is the highest level of measurement that entails expressing the number of persons, and other

attributes such as proportions of the total population. It is a scale that possesses the actual zero, or zero points (Gakuu, Kidombo & Keiyoro, 2018).The scaling type used for the study was Likert scale. These are scales that are developed by utilizing the item analysis approach wherein a particular item is evaluated on the basis of how well it discriminates between those persons whose total scores is high and those scores is low. Those items or statements that best meet this sort of discrimination test are included in the final statement (Gakuu. Kidombo & Keiyoro, 2018).

Table 3.3: Operational Definition of Variables

Variables	Indicators	Items	Scales	Types of analysis
Building Project success:	Management success;	Attainment of the building project objectives earlier set by the client. Provision of adequate services without wasting limited resources and ensuring services are affordable.	Five point likert	Mean Percentage ANOVA Correlation Regression
	Approved houses for occupancy	Fitness for purpose Free from defects Health and safety requirements Project functionality		
	Developer Satisfaction.	Absence of any legal claims Delivery of building project reliably and efficiently Quality of service		
Project initiation process:	Project formulation	Identification of project idea; preliminary selection; feasibility is assessed, evaluated & classified		
	Project strategy	Goals identified & objectives identified; Ideas are developed into alternative concepts, strategic plan	Five point likert	Mean, percentage, ANOVA Correlation , Regression
	project histories	Databases that contain detail from previous projects. Project audit, Project debrief, project review, post- project		

		appraisal, action review.		
	Product description	Idea generation, assessment of market technology and competition, product definition, project justification, detailed design, proto type test. Technical solutions are identified; specifications, scope.		
Monitoring and evaluation Team Capacity:	Financial capacity	Budgetary allocation.	Five point likert	Mean, percentage, ANOVA, Correlation , Regression .
	Human capacity	Evaluation competency; attitude; beliefs; skills; analytical; information technology; methodology; interpersonal relations and communication skills.		
Compliance with Legal framework:	Utilization of Building code; Regulatory bodies building approval County Government building approvals	NEMA license, NCA project registration license Building construction permit.	Five point likert	Mean, percentage, ANOVA Correlation , Regression

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter discusses the findings obtained from the primary instrument used in the study. It discusses the characteristics of the respondents, their opinions on how project initiation processes monitoring and evaluation team capacity and legal framework influenced building project success in Roysambu Constituency, Nairobi County, Kenya. The chapter was organized to present the findings by first looking at the response rate, the demographic variables and objectives of the study. In order to simplify the discussions, the researcher provided tables that summarized the collective reactions of the respondents. The hypothesis was also tested and diagnostic tests conducted.

4.2 Response rate

The respondents targeted 269 respondents to respond to the questionnaires. This was comprised of 88 building developers, 88 project managers, 88 contractors all from the 88 buildings, 1 NEMA , 2 Sub County and 2 NCA officials. Out of the targeted respondents, there were 196 respondents who included 193 respondents (building developers, Project managers and contractors) from the 88 buildings, one NEMA official, one Sub- County Officials and one NCA officials who filled questionnaires and returned. This gave a response rate of 72.9% which was within what Kumar (2008) prescribed as a significant response rate for statistical analysis and hence it was accepted for the study according to Gliem and Gliem (2003) recommendation that a response rate of above 70% was appropriate for the study.

Table 4. 1: Response rate

Respondents	Population	Percent
Response	196	72.9
Non-Response	73	27.1
Total	**269**	**100**

4.3 General information of respondents

This section required the respondents to indicate their general information which included type of ownership of the building, gender, age bracket, the position one holds in current building project, highest education level attained, category classification of the firm by NCA and status of their profession. This general information was presented in form of tables.

4.3.1 Type of ownership of the building

The respondents were required to indicate type of ownership of the building they were developing. Their responses were as presented in Table 4.2.

Table 4. 2:Type of ownership of the building

Type of Ownership	Frequency	Percent
Family	6	9.4
Members group	8	12.5
Individual	38	59.4
Government department	2	3.1
Cooperative society	10	15.6
Total	**64**	**100**

Majority of the buildings were owned by individual shown by 59.4%, 15.6% owned by cooperative society, 12.5% were owned by members group, 9.4 % owned by family members and 3.1% owned by government department.

4.3.2 Gender of the respondents

The respondents were also asked to indicate their gender. The results were as shown in the Table 4.3.

Table 4. 3: Gender of the respondents

Gender	Frequency	Percent
Male	176	91.2
Female	17	8.8
Total	**193**	**100**

As per Table 4.3, 91.2 % of the respondents were male while 8.8 % were female. This showed that the study obtained more information from male respondents since construction

industry was a male dominated field due to the intensity of physical work involved and the nature of human resource management. However, there were 17 female respondents who responded to the questionnaires making the data obtained to be from a wide scope on gender basis.

4.3.3 Age of the respondents

The respondents were required to indicate their age bracket. Their responses were as shown in Table 4.4.

Table 4. 4: Age of the respondents

Age	Frequency	Percent
30-39 years	31	16.1
40-49years	143	74.1
50-59years	19	9.8
Total	**193**	**100**

As per Table 4.4, majority of the respondents indicated that their age bracket was 40 - 49 years as shown by 74.1% followed by age bracket of 30 - 39 years with a percentage of 16.1% while those who were aged 50 - 59 years were only 9.8%. This implied that most of the respondents were old and were experienced hence were in good position to give reliable information required for the study. Age goes hand in hand with the time a respondent has been involved in projects implementations.

4.3.4 Position in the current building project

The respondents were required to indicate the position they held in the current building project position. Their responses were as shown in Table 4.5.

Table 4. 5: Current building project position

Current Building Project Position	Frequency	Percent
Project developer	64	33.2
Project manager	51	26.4
Contractor	78	40.4
Total	**193**	**100**

Majority of the respondents indicated they were contractors as shown by 40.4%, project developers were 33.2% and the project managers were 26.4%. This showed that most of

the respondents were in significant positions to give reliable information on the subject under study.

4.3.5 Education level of the respondent

The respondents were asked to indicate the highest level of education attained. Their responses were as shown in Table 4.6.

Table 4. 6: Education level of the respondent

Education Level of Respondent	Frequency	Percent
KCSE/EACE	12	6.2
Diploma	31	16.1
Bachelor's degree	77	39.9
Master's degree	73	37.8
Total	**193**	**100**

As per Table 4.6 majority of the respondents indicated they had attained bachelor's degrees as shown by 39.9% and 37.8% of the respondents indicated to have attained master's degree as their highest level of education. In addition, 16.1% of the respondents indicated they had attained diploma and then 6.2% who had attained KCSE or EACE. All the respondents had basic education and hence the ability to provide reliable information required by the researcher on the subject under study.

4.3.6 Classification of the firm

The respondents were required to indicate the firm category as classified by NCA. Their responses were as shown in Table 4.6.

Table 4. 7: Classification of the firm

Classification	Frequency	Percent
Category 4	4	2.1
Category 5	2	1.0
Category 6	8	4.1
Category 7	64	33.2
Category 8	77	39.9
Skilled Supervisor	38	19.7
Total	**193**	**100**

As per Table 4.7, majority of the respondents indicated that they were in category 8 as shown by 39.9%, category 7 as indicated by 33.2%, skilled supervisor as expressed by 19.7%, category 6 as shown by 4.1%, category 4 as indicated by 2.1% and category 5 as indicated by 1.0%. Most of the respondents had the required information hence the information they gave could be relied upon.

4.3.7 Professional status

The respondents were asked to indicate the status of their profession. Their opinions were presented in Table 4.8.

Table 4. 8: Profession status of project managers

Profession Status	Frequency	Percent
Graduate	8	15.5
Registered professional (engineers)	17	33.2
Current practicing license	26	51.3
Total	**51**	**100**

As per Table 4.8, majority of the respondents indicated that they had current practicing license as shown by 51.3% followed by registered professionals (engineers) as shown by 33.2% then, least were respondents who were graduates shown by 15.5%. Most of the respondents had the required professional qualifications to give the reliable information needed.

4.4 Diagnostic tests

The study conducted multicollinearity test, linearity test, sampling adequacy, normality test, heteroscedasticity test and autocorrelation test. The diagnostic tests confirmed the need to use parametric statistics for data analysis as the data collected was discreet and continuous.

4.4.1 Reliability analysis

A pilot study was carried out to determine reliability of the questionnaires. The pilot study involved 19 respondents. Reliability analysis was done using Cronbach's Alpha which measures the internal consistency by establishing if certain items within a scale measure the same construct. Kothari (2004) established the Alpha value threshold at 0.7.

Table 4. 9: Reliability analysis

Reliability	Cronbach's Alpha	Number of items	Decision
Project initiation processes	0.873	19	Reliable
Monitoring and evaluation team capacity	0.894	14	Reliable
Compliance with legal framework	0.879	35	Reliable

As presented in Table 4.9, compliance with legal framework had an alpha value of 0.879, project initiation processes had an alpha value of 0.873 while monitoring and evaluation team capacity had an alpha value of 0.894. This illustrated that all the three variables were reliable as their reliability values exceeded the prescribed threshold of 0.7 (Kothari, 2004). This, therefore, depicted that the research instrument were reliable and therefore required no amendments.

4.4.2 Validity analysis

With factor analysis, the construct validity of a questionnaire can be tested (Lewis, 2015). It is always ideal to conduct a factor analysis on the scale data to see if the scale really is one-dimensional. These variables are generally well correlated with one another. In this case, the aim is to reduce the (large) number of variables to a smaller number of factors that capture most of the variance in the observed variables. If variables correlate too highly ($r > 0.8$ or $r < -.8$), it becomes impossible to determine the unique contribution to a factor of the variables that are highly correlated. If a variable correlate lowly with many other variables ($-0.3 < r < 0.3$), the variable probably does not measure the same underlying construct as the other variables. Both the highly and lowly correlating items should be eliminated. If a questionnaire is a construct valid, all items together represent the underlying construct well. Exploratory factor analysis detects the constructs - i.e. factors – that underlie a dataset based on the correlations between variables (in this case, questionnaire items) (Meyers, Gamst & Guarino, 2016). The factors that explain the highest proportion of variance the variables share are expected to represent the underlying constructs.

Table 4. 10: Component matrix

	component										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
There was identification of project ideas	**.804**	.458	.004	.162	.028	.047	.026	.035	.212	.079	.004
Project feasibility studies were done	.348	.122	**.868**	.052	.157	.025	.037	.067	.080	.066	.147
Project assessment was done.	**.673**	.584	.098	.332	.098	.025	.048	.140	.134	.026	.039
Project evaluation was done	**.849**	.454	.132	.123	.106	.056	.042	.053	.048	.051	.011
There was project classification	.214	.056	.314	.260	.116	**.609**	.380	.289	.172	.060	.240
There was project preliminary selection.	**.**184	.118	.214	.251	.152	.084	.100	.162	**.709**	.096	.005
Project objectives were established	**.878**	.268	.221	.083	.077	.078	.052	.195	.018	.093	.048
Project goals were determined	**.884**	.118	.214	.251	.152	.084	.100	.162	.009	.096	.005
Project ideas into alternative concepts were examined	**.575**	.522	.196	.182	.016	.196	.423	.190	.044	.037	.229
Project strategic plan was developed.	**.926**	.046	.072	.024	.050	.034	.161	.235	.007	.052	.143
Project past experience information was accessed and applied	.070	.300	.007	.191	.196	.407	.232	.153	.128	**.653**	.143
Development of systems with repositories database that contain project details were established and applied.	**.855**	.375	.158	.053	.197	.126	.022	.037	.086	.107	.009
Project ideas generation were examined.	**.**480	.161	.517	.157	**.570**	.031	.417	.092	.204	.239	.045
Standard specifications of building were available and adhered to in my building project.	**.745**	.527	.069	.128	.089	.085	.058	.009	.114	.165	.249

The above findings allowed for the identification of variables which fell under each of the 11 major extracted factors. Each of the 68 parameters was looked at and placed to one of the 11 factors depending on the percentage of variability it explained the total variability of each factor (Check Appendix VII). Based on the study objectives, individual questions were developed so as to reveal whether the wording of items used to measure a concept were related to that concept or one of it dimension. The purpose of this check was to ensure that each measure adequately assessed the construct it purported to assess. From the factor analysis, all the variables indicators had high construct validity since all exceeded the prescribed threshold of 0.40 (Wang, 2015).

4.4.3 Multicollinearity

The assumption of collinearity requires that the independent variables are not correlated. Multicollinearity exists when there is a strong correlation between 2 or more independent

variables and this reduces the predictive power of individual variables. This study tested the analysis variables for multicollinearity using the multicollinearity statistics of Tolerance and Variance Inflation factors (VIF). VIF indicates whether the independent variable has a strong linear relationship with another independent variable. VIF values of greater than 10 indicate multicollinearity and Tolerance values of below 0.1 indicate serious multicollinearity problems. The results for Collinearity tests were presented in Table 4.11.

Table 4. 11: Multicollinearity test results

	Collinearity statistics	
	Tolerance	**VIF**
Project initiation processes	0.343	4.115
Monitoring and evaluation team capacity	0.781	3.559
Compliance with legal framework	0.612	4.717

As per Table 4.11, the collinearity statistics, project initiation process (VIF = 4.115, T = 0.343); monitoring and evaluation team capacity (VIF = 3.559, T = 0.781) and compliance with legal framework (VIF = 4.717, T = 0.612). All the VIF values for the independent variables were less than 10 ranging from 3 and 5, while the Tolerance values for all the independent variables as shown in Table 4.60 were greater than 0.1 indicating the non-existence of multi-collinearity (Field, 2009). Based on the results, there was no collinearity between the independent variables that could affect their predictive power; hence all the independent variables were appropriate for regression analysis.

4.4.4 Normality test

Normality can be defined as the shape of the data distribution for an individual metric variable and its correspondence to the normal distribution, the benchmark for statistical methods (Hair *et al.,* 2010). Normality is one of three assumptions for multivariate analysis. Regression assumes normality between the variables under analysis (Hair *et al.,* 2010). Skewness and kurtosis measures of the distributions should be calculated (Tabachnick & Fidell, 2007).

Table 4. 12: Normality test results

	N	Skewness		Kurtosis	
	statistic	statistic	std. Error	statistic	std. error
Project initiation processes	193	.413	.285	-1.213	.563
Monitoring and evaluation team capacity	193	.405	.285	-1.262	.563
Compliance with legal framework	193	-0.194	.285	.565	.563

Where skewness describes how symmetrical the distribution is around the center, kurtosis describes how flat or peaked the distribution is (Cohen *et al.*, 2003). A variable with perfect normal distribution has zero skewness and kurtosis (Hair *et al.*, 2010). To assess how far the value of skewness and kurtosis depart from normality, a rule of thumb suggests that the value for skewness and kurtosis should be between -1 and +1. Table 4.12 shows all variables with corresponding skewness and kurtosis values. Clearly, most of the variables did not violate (or were at least close enough to) the assumption of normality based on the rule of -1 and +1 statistics threshold (Aluja, Blancha & Garcia, 2005).

4.4.5 Heteroscedasticity test

In the classical linear regression model, one of the basic assumptions is homoskedasticity assumption that states as the probability distribution of the disturbance term remains same for all observations. That is the variance of each *ui* is the same for all values of the explanatory variable. However, if the disturbance terms do not have the same variance, this condition of nonconstant variance or non-homogeneity of variance is known as heteroscedasticity (Bedru & Seid, 2005). Accordingly, in order to detect the heteroscedasticity problems, Breusch-Pagan or Cook- Weisberg test was utilized in this study.

Table 4. 13: Heteroscedasticity test results

Breusch-Pagan / Cook-Weisberg test	0.238

This test states that if the Breusch-Pagan value is less than 0.05, the data has heteroscedasticity problem and when the Breusch-Pagan value is greater than 0.05, the data

has no heteroscedasticity problem. Thus, as shown in Table 4.13, there was no heteroscedasticity problem for this study since Breusch-Pagan value (0.238) was greater than 0.05.

4.4.6 Autocorrelation test

The researcher tested the autocorrelation assumptions that imply zero covariance of error terms over time which means errors associated with one observation are uncorrelated with the errors of any other observation. Independence of error terms, which implies that observations are independent, was assessed through the Durbin-Watson test. Durbin Watson (DW) test checked that the residuals of the models were not autocorrelated since independence of the residuals was one of the basic assumptions of regression analysis. DW statistic ranges from zero to four where scores between 1.5 and 2.5 indicate independent observations (Garson, 2012). These results were shown in Table 4.14.

Table 4. 14: Autocorrelation test results

Variables	Durbin Watson	Comment
Project initiation processes	1.987	No autocorrelation
Monitoring and evaluation team	2.084	No autocorrelation
Compliance with legal framework	2.231	No autocorrelation

As per Table 4.14 DW statistics ranged between 1.987 for project initiation processes, 2.084 for monitoring and evaluation team capacity and 2.231 for Compliance with legal framework. This confirmed that all the research variables yielded DW values that were close to the recommended value of 2.0 (Garson, 2012) and thus the residuals of the empirical model were not autocorrelated.

4.4.7 Linearity test

This test determined whether the relationship between the dependent and independent variables was linear. Linearity was tested using the linearity test in the regression model. This was indicated by the sig. value for deviation from linearity p, if $p > 0.05$ then we accept the H_0; the relationship is linear and if $p < 0.05$, we reject H_0 that the relationship is not linear. The Linearity test results were shown in Table 4.15.

Table 4. 15: Ramsey reset test

Variables	Linearity	Sum of Squares	Mean Square	F	Sig.
Building Project Success* Project initiation processes	Deviation from Linearity	2.296	.765	.801	.495
Building Project Success* Monitoring and evaluation team capacity	Deviation from Linearity	.064	.021	.020	.996
Building Project Success* Compliance with legal	Deviation from Linearity	.707	.354	.391	.677

Based on the linearity test results in Table 4.15, all the sig. values for deviation from linearity was greater than 0.05 hence insignificant, p-value for project initiation processes was 0.495 > 0.05, p-value for monitoring and evaluation team capacity was 0.996 > 0.05 and the P value for compliance with legal framework was 0.677 > 0.05. We therefore accepted the H_0 that the relationship between building project success and project initiation processes, monitoring and evaluation team capacity and the compliance with legal framework was linear and concluded that the assumption of linearity between the variables was satisfied.

4.4.8 Homoscedasticity

Homoscedasticity is the assumption that the dependent variables have equal variance across the range of the independent variables. When there is unequal variance across the independent variables, we have heteroskedasticity which violates the assumption of linear regression. Levenes test statistic was used to test the variance of the error terms. The following hypothesis was used to test for homoscedasticity H_0 - There is homogeneity of variance, hence the difference between the variance is zero; H_1- There is no homogeneity of variance; hence there is a difference between the variance. If Levenes' test is significant and $p < 0.05$ we reject H_0 and if the test statistic is insignificant i.e. $p > 0.05$ we accept H_0, hence the assumption of homoscedasticity is fulfilled. The results of the Levenes' test for homogeneity of variance were presented in Table 4.16.

Table 4. 16: Test for Homogeneity of Variance

Independent variable	Levene Statistic	Sig.
Project initiation processes	0.602	.662
Monitoring and evaluation team capacity	1.658	.178
Compliance with legal framework	1.865	.138

Results for homogeneity were presented in Table 4.16 and indicated the levene's statistic for project initiation processes was 0.662 > 0.05, for monitoring and evaluation team capacity was 0.178 > 0.05, compliance with legal framework was 0.138 > 0.05. Hence, we accepted the H_0 hypothesis, that the variance was equal since the p value in project initiation processes, monitoring and evaluation team capacity and compliance with legal framework was p > 0.05, thus insignificant. The study therefore concluded that the variances were equal and the assumption of homoscedaticity was ascertained. Levene's test verified the equality and homogeneity of variance since all the sig. values were greater than 0.05. The results of linear regression hold.

4.4.9 Tests of sampling adequacy

Kaiser-Meyer-Olkin measure (KMO) and Bartlett's Test of Sphericity (BTS) tests were performed to establish sampling adequacy of the research data. KMO measure varies between 0 and 1, and values closer to 1 are better with a threshold of 0.5. Williams, Brown and Onsman (2012) stated that KMO of 0.50 is acceptable degree for sampling adequacy. BTS tests the null hypothesis that the correlation matrix is an identity matrix; that is, it analyzes if the samples are from populations with equal variances. These results were presented in Table 4.17.

Table 4. 17: KMO and Bartlett's Test

	Kaiser-Meyer-Oklin Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
		Approx. Chi-Square	Df	Sig.
Project initiation processes	.733	928.302	193	.001
Monitoring and evaluation team capacity	.585	74.437	193	.023
Compliance with legal framework	.680	429.893	193	.000

Table 4.17 showed that KMO measures of sampling adequacy produced values of between 0.585 and 0.733 while BTS had a consistent significance of calculated probability of 0.000 well below the 0.05 threshold. Therefore, the research sample was adequate, factorable and further statistical analysis could be performed as recommended by Williams *et al.*, (2012).

4.5 Descriptive Analysis

Descriptive analysis of data helps describe, show or summarize data in a meaningful way such that, for example, patterns might emerge from the data. Descriptive analyses do not, however, allow us to make conclusions beyond the data we have analysed. They are simply a way of describing our data (Gakuu C.M, Kidombo H.J & Keiyoro P.N, 2018). Descriptive statistics recommended for interval scales items include the mean for central tendency and standard deviations for variability. The qualitative data generated through the interviews was done through organization of categorization of the data into themes. Data belonging to the same concepts were grouped and analysed together.To support this Cummins (2018) said that in summing up Likert questions responses which makes the data interval, all questions must use the same scale (5-point scale) and there must be a defendable approximation to an interval scale.

The research focused on the research questions together with the objectives to come up with the findings for each variable. The study focused on project initiation processes, monitoring and evaluation team capacity and legal framework on their influence on building project success.

4.5.1 Building project success

The level of agreement with the following statements about building project success.

Table 4. 18: Management success

	SD%	D%	U%	A%	SD%	Mean	Std. Dev.
The building project objectives were timely met	21.2	36.2	7.7	19.2	15.7	2.812	1.464
Services provided were adequate	7.4	0	20.3	62.1	10.2	3.869	0.770
Projects progressively set up better contract	9.2	0	45.2	26.4	19.2	3.753	0.816
The project encounter very fewer changes due to some avoidable circumstances	9.1	1.1	12.4	41.2	36.2	4.283	0.722
Composite values						**3.679**	**0.943**

Results in Table 4.18 showed that the respondents agreed that the project encountered very fewer changes due to some avoidable circumstances as shown by a mean of 4.283 and a standard deviation of 0.722, services provided were adequate as shown by a mean of 3.869 and a standard deviation of 0.77 and that projects progressively set up better contract as shown by a mean of 3.753 and a standard deviation of 0.816. However, the respondents indicated that the building project objectives were timely met as shown by a mean of 2.812 and a standard deviation of 1.464. From the interview guide, the Sub County officials stated that incompletion of buildings in Roysambu Constituency in time was caused by lack of monitoring and evaluation of the building progress to help keep the project on the track. There had been poor project definition where you found construction plan was not correctly stated and use of shortcuts instead of following the requirements stated by the building codes. In most of the projects the contractors did not manage funds well hence you found there were no funds when a project was not yet finished. There had been poor project planning in the constituency.

NCA officials stated that incompletion of buildings in Roysambu Constituency in time was caused by failure to adhere to building codes. This had made some of the buildings not to be allowed to be completed with some of contractors charged with violation of building codes. Inadequate funds had caused most of the projects to be delayed. There were contractors with limited knowledge or experience in the construction making them prone to project failure.

Table 4. 19: Approved houses for occupancy

	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
The project attained health and safety requirements	10.4	5.7	0	41.2	42.7	4.415	0.703
Building in completion had a safe access	5.1	12.2	11.3	50.3	21.1	4.031	0.549
Project functionality was reliable and designed in relation to cost	5.1	12.2	15.3	50.3	17.1	3.879	0.770
Buildings attained a pleasant aesthetic value	11.1	0	2.2	31.3	55.4	4.295	0.457
Building location had a reliable security	5.1	12.2	11.3	50.3	21.1	3.969	0.612
Composite values						**4.118**	**0.618**

Results in Table 4.19, showed that the respondents strongly agreed that the project attained health and safety requirements as shown by a mean of 4.415 and a standard deviation of 0.703, buildings attained a pleasant aesthetic value as shown by a mean of 4.295 and a standard deviation of 0.457 and that building in completion had a safe access as shown by a mean of 4.031 and a standard deviation of 0.549. However, the results also showed that the respondents agreed that building location had a reliable security as shown by a mean of 3.969 and a standard deviation of 0.612 and that project functionality was reliable and designed in relation to cost as shown by a mean of 3.879 and a standard deviation of 0.77.

NEMA officials stated that building projects in Roysambu Constituency met the needs of the residents by 45% level though there were issues of buildings collapsing and incomplete buildings. NCA officials stated that there had been cases of buildings collapsing in the area because of weak foundations. Since adequate foundations could be costly such that it could cost up to half the price of a building, owners of the buildings opted for weak foundations which was cheap and hence lead to collapse of the building with time. There were instances where some building materials which were of poor quality were used as project managers colluded with contractors. Counterfeit materials like scrap metal had been used instead of steel putting the building in a risk of collapsing. Further Sub County officials said that there had been cases of buildings collapsing in the area where developers had abandoned and neglected the approved construction plans. There were buildings which had been

constructed on the riparian land and with poor quality building materials. Commercial developers were out to maximize profit and were not concerned with the standard specifications required for a building. There were buildings which had been constructed by people who had no technical capacity.

Table 4. 20: Developer satisfaction

	SD%	D%	U%	A%	SA%	Mean	Std. Dev
The entire project did not encounter any legal claims	11.1	0	2.2	31.3	55.4	4.315	0.703
Delivery of building project was reliable and efficient	5.1	12.2	15.3	50.3	17.1	3.824	0.786
Zero defects were experienced on building handover	11.1	0	2.2	31.3	55.4	4.124	0.472
The project had minimal Schedule Over-runs	21.2	36.2	7.7	19.2	15.7	2.829	1.464
A good community relationship was established at end of the project	5.1	12.2	11.3	50.3	21.1	3.969	0.612
Composite values						**3.812**	**0.807**

Results in Table 4.20 showed that the respondents strongly agreed that the entire project did not encounter any legal claims as shown by a mean of 4.315 and a standard deviation of 0.703 and that zero defects were experienced on building handover as shown by a mean of 4.124 and a standard deviation of 0.472. The findings also gave an indication that the respondents agreed that a good community relationship was established at the end of the project as shown by a mean of 3.969 and a standard deviation of 0.612 and that delivery of building project were reliable and efficient as shown by a mean of 3.824 and a standard deviation of 0.786. Finally, the findings showed that the respondents disagreed that the project had minimal schedule over-runs as shown by a mean of 2.829 and a standard deviation of 1.464.

The interview guide revealed that NCA officials stated that limitation in ensuring efficiency of projects was corruption which had been an issue where people did not want to follow the regulations but bribed authorities and failed to carry out monitoring and evaluation of the construction buildings. They also stated that strategy that guided project managers to minimize schedule over-runs was monitoring. Monitoring provides the

background for reducing schedule and cost overruns while ensuring that required standards are achieved in project implementation.

Table 4. 21: Rating the building project success

	Frequency	Percent
To great extent there was success	136	70.5
To a very great extent success	57	29.5
Total	**193**	**100**

Results in Table 4.21, showed that most of the respondents stated that to great extent there was success in their building project success as shown by 70.5% and others stated that to a very great extent there was success for their building project as shown by 29.5%. This showed that building project was successful to a great extent.

Research assistants were required to assess the state of the buildings to ascertain the success of the building projects using an observation schedule. The findings were as shown in Table 4.22.

Table 4. 22: Findings on the observation features

Observation features	SD %	D%	U %	A %	SA %	Mean	Std. Dev.
The building did not have any cracks	8.1	0	3.2	33.3	55.4	4.312	.879
The building did not have any leakages	5.1	12.2	15.3	50.3	17.1	3.812	.648
The building did not have adequate lighting	11.1	0	2.2	31.3	55.4	4.230	.893
The building did not have adequate waste disposal	3.2	10.1	15.3	50.2	17.2	3.895	.922
The building did not have adequate toilets per floor	10.1	0	40.2	26.4	23.3	3.612	.871
The building did not have adequate showers per floor	12.5	0	18.2	50.2	19.1	3.852	.692
The building did not have safe electrical wiring	0	9.2	41.1	26.4	23.3	3.704	.893
The building did not have firefighting equipment	5.1	12.2	11.3	50.3	21.1	3.795	.935
The building did not have a good drainage system	11.1	0	17.3	31.4	35.2	4.312	.762
The building did not have proper fire exit labeling	12.3	0	36.1	31.6	20.0	3.852	.942
The building did not have facilities for physically challenged	5.1	12.2	25.3	40.3	17.1	3.633	.883
The building floors and wall were not in level	13.1	0	34.1	29.2	23.6	3.794	.913
The building stair cases had protective barriers	11.1	0	2.2	41.3	45.4	4.315	.813
The building environment was untidy and had stagnant water	6.2	12.3	20.2	50.2	11.1	3.823	.782
The building was attractive from a distance	13.4	0	20.2	52.3	14.1	3.789	.719
Composite values						**3.915**	**0.836**

Findings on the observations revealed that, research assistants agreed that the building stair cases had protective barriers as showed by a mean of 4.315 and a standard deviation of 0.813, that the building did not have any cracks as illustrated by a mean of 4.312 and a

standard deviation of 0.879 and that the building did not have a good drainage system as showed by a mean of 4.312 and a standard deviation of 0.762. Moreover, they agreed that the building did not have adequate showers per floor as expressed by a mean of 3.852 and a standard deviation of 0.642, that the building did not have proper fire exit labeling as showed by a mean of 3.852 and a standard deviation of 0.942, that the building did not have any leakages as indicated by a mean of 3.812 and a standard deviation of 0.648 and that the building did not have firefighting equipment as expressed by a mean of 3.795 and a standard deviation of 0.935.

Further the research assistants agreed that the building floors and wall were not in level as indicated by a mean of 3.794 and a standard deviation of 0.913, that the building was attractive from a distance as expressed by a mean of 3.789 and a standard deviation of 0.719 and that the building did not have facilities for physically challenged as indicated by a mean of 3.633 and a standard deviation of 0.883. They further agreed that the building did not have adequate toilets per floor as expressed by a mean of 3.612 and a standard deviation of 0.871, that the building did not have adequate waste disposal as indicated by a mean of 3.895 and a standard deviation of 0.922, that the building did not have adequate lighting as expressed by a mean of 4.230 and a standard deviation of 0.893, that the building did not have safe electrical wiring as illustrated by a mean of 3.704 and a standard deviation of 0.893 and that the building environment was untidy and had stagnant water as illustrated by a mean of 3.823 and a standard deviation of 0.782.

4.5.2 Project initiation process

The project initiation process is the initial phase principle of a project. It includes activities like Project identification; project goals and objectives; determination of preliminary materials, equipment and materials; development of budget and schedule; identification of project team and conducting of Environmental Impact Assessment. Feasibility studies are also done for the project. When a project is created, or decided it has a special purpose strategy. Project strategy is a director in a project that contributes to success of the project in its environment where once a strategy has been developed, its implementation appears to be seen a matter of operational detail and tactical adjustment and has received less attention. Execution is the result of hundreds of decisions made every day by employees

acting in accordance with the information that may have their own interests.

The study sought to establish the influence of project initiation process on building projects success measured using various statements on a Likert scale of 1 Strongly disagree 2 Disagree 3 Neutral 4 Agree and 5 Strongly agree. The findings showed different level of agreement with the statements on initiation process on their building project success in terms of mean and standard deviation. The study findings were presented in various Tables under this section which included Table 4.23, Table 4.24, Table 4.25, Table 4.26, Table 4.27, and Table 4.28.

Table 4. 23: Project formulation as an aspect of project initiation process

	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
There was identification of the project ideas.	3.6	4.7	5.6	29.4	5.7	4.415	0.703
Project feasibility studies were done.	0	28.5	40.9	30.6	0	3.021	0.770
Project assessment was done.	0	0	40.3	21.4	38.3	4.166	0.472
Project evaluation was done.	0	0	50.3	26.4	23.3	3.731	0.816
There was project classification.	4.8	0	5.2	47.2	42.8	4.295	0.457
There was project preliminary selection.	0	0	20.2	62.7	17.1	3.969	0.612
Composite values						**3.933**	**0.638**

As pet the study findings in Table 4.23 the results showed that the respondents strongly agreed that there was identification of the project ideas as shown by a mean of 4.415 and a standard deviation of 0.703, there was project classification as shown by a mean of 4.295 and a standard deviation of 0.457 and that project assessment was done as shown by a mean of 4.166 and a standard deviation of 0.472. In addition, the results showed that the respondents agreed that there was project preliminary selection as shown by a mean of 3.969 and a standard deviation of 0.612, project evaluation was fairly done as shown by a mean of 3.731 and a standard deviation of 0.816 and that respondents were undecided whether project feasibility studies were done as shown by a mean of 3.021 and a standard deviation of 0.77

An analysis of interview guide, the Sub County officials opined that project initiation process had been poor because in most of them; assessment had not been done, evaluation was not done and no feasibility tests were carried out at any stage of the project. There had

been no effective classification of projects in Roysambu where the project managers had not classified the projects in terms of size (cost, duration, team, and business value, number of departments affected) and by type (new, maintenance, upgrade, strategic, tactical, and operational). Further the NCA officials from the interview guide also indicated that pre-investment analysis that helped the project-sponsoring body, the project implementing body and the external consulting agencies to accept/reject the proposal had not been done effectively and this had affected project success. The project costs; operating cost as well as fund requirements were not estimated well by the project managers where they had not clearly indicated how much was needed for the project and how it was going to be utilized. This had posed challenge to the building project success.

Table 4. 24: Project strategy as an aspect of project initiation process

	SD%	D%	U%	A%	SD%	Mean	Std. Dev.
Project objectives were established.	23.2	34.2	6.7	17.2	18.7	2.829	1.464
Project goals were determined.	0	28.5	40.9	30.6	0	3.021	0.770
Project ideas into alternative concepts were examined.	3	2	45.3	26.4	23.3	3.731	0.816
Project strategic plan was developed.	3	9	10.4	38.6	39	4.295	0.722
Composite values						**3.469**	**0.943**

The findings presented in Table 4.24 indicated that the respondents strongly agreed that project strategic plan was developed as shown by a mean of 4.295 and a standard deviation of 0.722. Moreover, the respondents agreed that project ideas into alternative concepts were examined as shown by a mean of 3.731 and a standard deviation of 0.816. The results also indicated that the respondents were undecided that project goals were determined as shown by a mean of 3.021 and a standard deviation of 0.77. Further, the results indicated that the respondents disagreed that the project objectives were established as shown by a mean of 2.829 and a standard deviation of 1.464.

NCA officials pointed out that there had been poor project planning in front-end project management activities, poor project definition and that project managers had also failed to follow the construction plan and maneuvered their own ways to carry out the project. Sub County officials stated that most project managers failed in formulation of project

objectives since most of the projects managers were quacks and had no knowledge undertaking feasibility studies. They also failed in determining the project goals since they had not received enough training on the formulation of project strategies.

Table 4. 25: Project histories

	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
Project past experience information was accessed and applied.	0	28.5	40.9	30.6	0	3.034	0.770
Development of systems with repositories database that contain project details were established and applied.	0	0	23.2	62.7	14.1	3.959	0.612
Composite values						**3.497**	**0.691**

The study findings as per Table 4.25 indicated all the respondents agreed that development of systems with repositories database that contain project details were established and applied as shown by a mean of 3.959 and a standard deviation of 0.612. In addition, the respondents were undecided that the project past experience information was accessed and applied as shown by a mean of 3.034 and a standard deviation of 0.77. Sub County officials pointed out that project manager did not consult them so often because most of them wanted to use shortcuts instead of following the correct procedure. Those that consulted were only during early stages of the project where they stated the objectives and the goals of the projects and also during the conferences and benchmarking programs.

Table 4. 26: Product description

	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
Project ideas generation were examined.	24.8	22.4	34.7	2.6	15.5	2.648	1.287
There was project assessment of market and competition.	0	2.3	18.2	62.4	17.1	3.969	0.612
There was involvement of currently practicing technical professionals in the definition of the product.	3.2	25.3	40.9	30.6	0	3.021	0.770
There was involvement of currently practicing technical professionals in project detailed design.	0	5.1	45.2	26.4	23.3	3.731	0.816
There was involvement of currently practicing professionals in the project technical specifications.	30.1	33.2	5.1	25.9	5.7	2.508	1.242
Project scope was determined	25.2	33.2	6.7	19.2	15.7	2.829	1.464
Composite value						**3.118**	**1.032**

As per the findings in Table 4.26, all the respondents agreed that there was project assessment of market, technology and competition as shown by a mean of 3.969 and a standard deviation of 0.612 and that there was involvement of currently practicing engineers' professionals in project detailed design as shown by a mean of 3.731 and a standard deviation of 0.816. The results also indicated that the respondents were undecided that there was involvement of currently practicing engineers' professionals in the definition of the product as shown by a mean of 3.021 and a standard deviation of 0.77. However, the results also indicated that the respondents disagreed that project scope was determined as shown by a mean of 2.829 and a standard deviation of 1.464, that project ideas generation were examined as shown by a mean of 2.648 and a standard deviation of 1.287 and that there was involvement of currently practicing professionals in the project technical specifications as shown by a mean of 2.508 and a standard deviation of 1.242.

The NCA officials from the interviews pointed out that lack of involvement of currently practicing professionals in the project technical specifications had been a major cause of failure of projects because most of them were not yet experienced to undertake the project hence they were not competent. The other reason was most of them used shortcuts to undertake the project initiation process. The NCA officials also stated that they availed the relevant guideline information to assist in project formulation not frequently because they were only three officials in the constituency and were not as frequent as required to visit buildings and give the reliable guideline information needed. Moreover, from the interviews, Sub County officials stated that they availed the relevant guideline information to assist in project formulation through engineers' conferences, through annual project magazines and through trainings and benchmark programs organised by the county government. Sub County officials also stated that mostly they were involved in determination of the project goals as well as establishing a project timeline.

Table 4. 27: Project initiation process

	Frequency	**Percent**
Contributed to some extent	5	2.6
Contributed to achievement of most of my success	165	85.5
Contributed to achievements of all my project success	23	11.9
Total	**193**	**100**

As per Table 4.27, most of the respondents stated that project initiation process contributed to the achievement of most of their building project success as shown by 85.5%. Other respondents also stated that project initiation process contributed to the achievement of all their building project success as shown by 11.9%. The least of the respondents stated that project initiation process contributed to some extent to the achievement of their building project success as shown by 2.6%.

Summarized data of Project initiation process on building project success findings were as shown in Table 4.28.

Table 4. 28: Influence of project initiation process

Project Initiation Process	Mean	Std. Dev.
Project Formulation	3.933	0.638
Project Strategy	3.469	0.943
Project Histories	3.497	0.691
Product Description	3.118	1.032
Composite value	**3.504**	**0.826**

As per the composite mean, the findings showed that project formulation as shown by a composite mean of 3.933 affects the building project success greatly. Further the research showed project histories with a composite mean of 3.497, project strategy with a composite mean of 3.469 and product description with a composite mean of 3.118 have a moderate effect on building project success.

4.5.3 Monitoring and evaluation team capacity and building project success

The respondents were required to tick the most appropriate response regarding monitoring and evaluation team capacity and their building project success. Their responses were as shown in the following Tables 4.29, 4.30, 4.31, 4.32 and 4.33.

Table 4. 29: Financial capacity

	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
There was budgetary allocation for project monitoring and evaluation team.	0	5.1	45.2	26.4	23.3	3.731	0.816
The funds allocated for the monitoring and evaluation were adequate	25.2	33.2	6.7	19.2	15.7	2.829	1.464
Composite						**3.280**	**1.140**

As per Table 4.29, the respondents agreed that there was budgetary allocation for project monitoring and evaluation team as shown by a mean of 3.731 and a standard deviation of 0.816. In addition, the results also indicated that the respondents disagreed that funds allocated for the monitoring and evaluation were adequate as shown by a mean of 2.829 and a standard deviation of 1.464.

From the interview guides, the NCA officials stated that they met with monitoring and evaluation team thrice a month where they gave report of ongoing projects. NCA officials

put forward that monitoring and evaluation team influenced completion of projects positively. This was because monitoring and evaluation helped in identifying possible risk and coming up with ways of managing the risk. For a case like a building project, monitoring and evaluation helped in evaluating whether the project was still being built as per construction plan and in ensuring the project manager had m*et al*l project objectives which led to projects completion. Monitoring activity supports both project managers and staff in the process of understanding whether the projects are progressing on schedule or meet their objectives, inputs, activities and deadlines. Further, NCA officials stated that the county checked on the buildings under construction that are registered and with their number they budget for funds required to be used.

Further from the interview guides, the Sub County officials pointed out that monitoring and evaluation team undertook physical and financial monitoring that measures progress of project or program activities against established schedules and indicators of success. This prompted measures to be undertaken if the project was failing. They also identified factors accounting for progress of activities or success of output production in order to see how to meet the project goals and objectives. Monitoring and evaluation team also assessed the stakeholders' understanding of the project so as to see whether they were able to complete the project. It also minimized the risk of project failure and promoted systematic and professional management as well as assessing progress in implementation.

Table 4. 30: Human capacity

Human capacity	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
Project Monitoring and evaluation team possessed relevant skills towards their work.	0	0	2.1	74.6	23.3	4.212	0.458
Project Monitoring and evaluation team believed in their work.	0	0	20.2	62.7	17.1	3.969	0.612
Project Monitoring and evaluation team had the right attitudes towards their work.	0	28.5	40.9	30.6	0	3.021	0.770
Project monitoring and evaluation team was knowledgeable in their work.	0	0	50.3	26.4	23.3	3.731	0.816
Project Monitoring and evaluation team was analytical in their work.	21.8	44	3.1	25.3	5.8	2.508	1.242
Project Monitoring and evaluation team was competent in information technology for their work.	22.2	33.2	6.7	18.2	19.7	2.829	1.464
Project Monitoring and evaluation team applied the right methodology in performing their work.	4.2	3.1	8.2	42.2	42.3	4.295	0.722
Project Monitoring and evaluation team possessed interpersonal relations.	7.1	0	50.2	22.4	20.3	3.731	0.816
Project Monitoring and evaluation team possessed communication skills.	13.4	0	2.1	31.1	53.4	4.648	0.521
Composite values						**3.660**	**0.825**

The findings presented in Table 4.30 showed that the respondents strongly agreed that project monitoring and evaluation team possessed communication skills as shown by a mean of 4.648 and a standard deviation of 0.521, project monitoring and evaluation team applied the right methodology in performing their work as shown by a mean of 4.295 and a standard deviation of 0.722 and that project monitoring and evaluation team possessed relevant skills towards their work as shown by a mean of 4.212 and a standard deviation of 0458. The respondents also agreed that project monitoring and evaluation team believed in their work as shown by a mean of 3.969 and a standard deviation of 0.612. In addition, the

results showed that the respondents agreed that project monitoring and evaluation team was knowledgeable in their work and that project monitoring and evaluation team possessed interpersonal relations as shown by a mean of 3.731 and a standard deviation of 0.816. However, the respondents were undecided that project monitoring and evaluation team had the right attitudes towards their work as shown by a mean of 3.021 and a standard deviation of 0.77. Finally, the respondents disagreed that project monitoring and evaluation team was competent in information technology for their work as shown by a mean of 2.829 and a standard deviation of 1.464 and that project monitoring and evaluation team was analytical in their work as shown by a mean of 2.508 and a standard deviation of 1.242.

From the interview guides, the Sub County officials asserted that they were involved in recruitment of competent monitoring and evaluation team by conducting interviews to assess whether the recruited team had the relevant qualifications. NCA officials added that they were involved in recruitment of competent monitoring and evaluation team in the panel that recruited the monitoring and evaluation team so as to ensure that they got capable people who were skilled and experienced. Moreover, from the interviews guide, the NCA officials stated that they used the recommendations to check on the progress of the buildings under construction, to check on completed buildings if they were done well and according to the stated plan and to check whether project goals were met.

Table 4. 31: Physical capacity

	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
Equipment's were available for project Monitoring and evaluation team to perform their work.	12.3	15.3	18.1	52.2	2.1	3.347	1.089
Technology and machinery were available for project Monitoring and evaluation team to perform their work.	9.1	3.3	15.3	70.2	2.1	3.834	0.425
Composite values						**3.591**	**0.757**

As per Table 4.31, the respondents agreed that technology and machinery were available for project monitoring and evaluation team to perform their work as shown by a mean of 3.834 and a standard deviation of 0.425. The results also indicated that the respondents

were undecided that equipment's were available for project monitoring and evaluation team to perform their work as shown by a mean of 3.347 and a standard deviation of 1.089.

From the interview guides, Sub County officials stated that their view on adoption of appropriate technology and machinery for project monitoring and evaluation team to perform their work was that it made it easy for assessment of the progress towards the achievement of the pre-determined objectives at the end of the program and also provided a basis for decisions on future action. They generated data that allowed for cumulative learning which, in turn, contributed to better designed programmes, improved management and a better assessment of their impact. They provided the regularized flow of information needed for decision-making and a history of the project which could be the basis for lessons learned and evaluation of the project.

Moreover, from the interview guides, the NCA officials stated that they supported the adoption of appropriate technology and machinery for project monitoring and evaluation team to perform their work, as it was to make the work easy and accurate results was to be achieved.

Table 4. 32: Monitoring and evaluation team capacity

	Frequency	**Percent**
Contributed to some extent	14	7.3
contributed to achievement of most of my success	169	87.6
contributed to achievements of all my project success	10	5.2
Total	**193**	**100**

The findings presented in Table 4.32 showed that most of the respondents stated that monitoring and evaluation team capacity contributed to the achievement of most of their building project success as shown by 87.6%. In addition, respondents also stated that monitoring and evaluation team capacity contributed to some extent to the achievement of their building project success as shown by 7.3%. The least of the respondents stated that monitoring and evaluation team capacity contributed to the achievement of all their building project success as shown by 5.2%.

Summarized data of Monitoring and evaluation team capacity on the findings were as shown in Table 4.33.

Table 4. 33: Monitoring and evaluation team capacity

Monitoring and Evaluation Team Capacity	Mean	Std. Dev.
Financial Capacity	3.280	1.140
Human Capacity	3.660	0.825
Physical Capacity	3.591	0.757
Composite values	**3.510**	**0.907**

As per the composite mean, the findings showed that human capacity and physical capacity as shown by a composite mean of 3.660 and 3.591 respectively affects the building project success greatly. However, the findings showed that financial capacity with a composite mean of 3.280 had a moderate effect on building project success.

4.5.4 Compliance with legal framework

The researcher required the respondents to indicate their level of agreement with statements about compliance with legal framework and building project success. Their opinions were as shown in the Table that follow.

Table 4. 34: Adherence to building code

	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
Standard specifications of building were available and adhered to in my building project.	8.1	14.2	72.5	5.2	0	2.979	0.353
Guidelines on quality of building materials were available and adhered to in the building project.	24.3	3.3	18.1	52.1	2.2	3.347	1.089
Composite values						**3.163**	**0.721**

As per Table 4.34, the study findings showed that the respondents were undecided that guidelines on quality of building materials were available and adhered to in the building project.as shown by a mean of 3.347 and a standard deviation of 1.089. The results also showed that the respondents disagreed that standard specifications of building were available and adhered to in the building project as shown by a mean of 2.979 and a standard deviation of 0.353.

The interview guide responses revealed that NCA officials pointed that building projects adherence to building code was ensuring that buildings were built guided by the strategic plan for that building. They should meet the buildings standards. The NCA officials stated that it was because of failure to adhere to building code where buildings were constructed without meeting the standard specifications of building. In most building constructions guidelines on quality of building materials were not adhered to. NCA officials stated that standard specifications of building were adhered to in building project where the buildings are constructed according to the strategic plan and with quality materials.

The Sub-County officials also from the interview guides stated that building projects adherence to building code was where project managers with working permit were the only ones allowed to undertake the projects.

The NEMA officials indicated that the buildings were connected to sewer systems using the right procedures. This guaranteed the health of the occupants since the waste was disposed properly. The electricity connections were done properly to ensure safety to the people. Illegal connections were discouraged. The sub County officials pointed out that it was true that most of the building that were incomplete was as a result of failure to adhere to building code as some of them did not possess license resulting to closure of the works.

Table 4. 35: Adherence to county by-laws

	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
Technical designs were approved by County Physical planning department for my building for the building project.	24.3	3.3	18.1	52.1	2.2	3.347	1.089
Technical designs were approved by County public health department for the building project.	10.1	0	40.3	26.4	23.3	3.731	0.816
Work construction permit was issued by County Government for the building project.	13.4	0	0	34.4	52.3	4.523	0.501
Composite						**3.867**	**0.802**

The findings presented in Table 4.35 indicated that the respondents strongly agreed that work construction permit was issued by County Government for the building project as shown by a mean of 4.523 and a standard deviation of 0.501. The results also showed that the respondents agreed that technical designs were approved by County Public health department for the building project as shown by a mean of 3.731 and a standard deviation of 0.816 and that the respondents were undecided that technical designs were approved by County physical planning department for the building project as shown by a mean of 3.347 and a standard deviation of 1.089.

The NCA officials stated that guideline on how building project adhered to County by-laws was where the County physical planning department undertook the task to approve the project designs of the buildings being constructed. County public health department undertook to approve project designs which met health standards. Building project had to receive a construction permit from the County government before the construction started. The NCA officials offered the construction permit if the building project was compliant with legal framework.

Table 4. 36: Adherence to regulatory bodies' requirements

	SD%	D%	U%	A%	SA%	Mean	Std. Dev.
The project had been issued with NEMA License	24.3	3.3	18.1	52.1	2.2	3.731	0.816
The project had been issued with NCA construction permit.	10.1	0	40.3	26.4	23.3	3.342	0.977
Composite						**3.537**	**0.897**

As per table 4.36, the study findings showed that the respondents agreed that the project had been issued with NEMA License as shown by a mean of 3.731 and a standard deviation of 0.816. The results also showed that the respondents were undecided that the project had been issued with NCA construction permit as shown by a mean of 3.342 and a standard deviation of 0.977.

NEMA officials stated that project qualified to be issued with NEMA License if it had adhered to the environment conservation Act that provided a framework for protection of the Kenyan environment, including its biodiversity and its natural and culturally significant places. Sub County officials added that project qualified to be issued with NEMA License

after it had met the environment impact assessment as a legal framework having no negative environmental impacts.

Summarized data of Compliance with legal framework findings were as shown in Table 4.37.

Table 4. 37: Compliance with legal framework

Compliance with Legal Framework	Mean	Std. Dev.
Adherence to Building Code	3.163	0.721
Adherence to County By-Laws	3.867	0.802
Adherence to Regulatory Bodies Requirements	3.537	0.897
Composite values	**3.522**	**0.807**

As per Table 4.37, the composite mean, showed that there was adherence to County by-laws and adherence to Regulatory bodies requirements as showed by a composite mean of 3.867and 3.537 respectively, had a moderating effect on the building project success. However, the findings showed that adherence to Building code with a composite mean of 3.163 had a moderating effect on building project success.

4.5.5 Karl Pearson Coefficient of Correlation Analysis

The researcher used correlation technique to analyse the degree of relationship between two variables with the Pearson correlation coefficient (r), which yields a statistic that ranges from -1 to 1. The sign indicates the direction and strength of the relationship. The data collected was discreet and continuous, thus justifying the need to use parametric statistics for analysis. The researcher sought to establish the strength of the relationship between aspects of project initiation process, monitoring and evaluation team capacity and compliance with legal framework and building project success in Roysambu Constituency, Nairobi County, Kenya. The Correlation coefficients were as presented in Table 4.38.

Table 4. 38: Pearson Moment Correlation Analysis

Project Initiation Process Aspects and Building Project Success		**Building project success**	**Project Formulation**	**Project Strategy**	**Project Histories**	**Product Description**
Building project success	Pearson Correlation	1				
	Sig. (2-tailed)	.				
Project Formulation	Pearson Correlation	.887	1			
	Sig. (2-tailed)	.000	.			
Project Strategy	Pearson Correlation	.739	.223	1		
	Sig. (2-tailed)	.027	.006	.		
Project Histories	Pearson Correlation	.815	.243	.497	1	
	Sig. (2-tailed)	.025	.002	.000	.	
Product Description	Pearson Correlation	.872	.333	.420	.531	1
	Sig. (2-tailed)	.017	.000	.000	.000	.
Monitoring and Evaluation Team Capacity Aspects and Building Project Success			**Building project success**	**Financial Capacity**	**Human Capacity**	**Physical Capacity**
Building project success	Pearson Correlation		1			
	Sig. (2-tailed)		.			
Financial Capacity	Pearson Correlation		.812	1		
	Sig. (2-tailed)		.010	.		
Human Capacity	Pearson Correlation		.736	.673	1	
	Sig. (2-tailed)		.022	.026	.	
Physical Capacity	Pearson Correlation		.821	.813	.619	1
	Sig. (2-tailed)		.025	.012	.000	.
Compliance with Legal Framework Aspects and Building Project Success			**Building project success**	**Adherence to Building Code**	**Adherence to County By-Laws**	**Adherence to Regulatory Bodies**
Building project success	Pearson Correlation		1			
	Sig. (2-tailed)		.			
Adherence to Building Code	Pearson Correlation		.843	1		
	Sig. (2-tailed)		.031	.		
Adherence to County By-Laws	Pearson Correlation		.711	.413	1	
	Sig. (2-tailed)		.022	.011	.	
Adherence to Regulatory Bodies Requirements	Pearson Correlation		.806	.562	.412	1
	Sig. (2-tailed)		.003	.003	.000	.

The analysis of Pearson moment correlation results between the building project success and project formulation showed a positive correlation coefficient 0.887, with p-value of 0.000. It indicated that the result was significant at α =5% and that if the project formulation increased it would have a positive impact on the building project success by 88.7%. The Pearson moment correlation results between project strategy and building project success also indicated the same type of result where the correlation coefficient was 0.739 and a p-value of 0.027 which was significant at α = 5% and that if the project strategy increased, it would have a positive impact on the building project success by 73.9%. The results also showed that there was a positive Pearson moment correlation between project histories and building project success where the correlation coefficient was 0.815, with a p-value of 0.025 and that if the project histories increased it would have a positive impact on the building project success by 73.9%. Further, the result showed that there was a positive Pearson moment correlation between product description and building project success where the correlation coefficient was 0.872, with a p-value of 0.017 and that if the project product description increased it would have a positive impact on the building project success by 87.2%. All the variables had a significant relationship with the building project success. This revealed that any positive change in project initiation process aspects would enhance building project success.

The analysis of Pearson moment correlation results between the building project success and financial capacity showed a positive correlation coefficient 0.812, with p-value of 0.010. It indicated that the result was significant at α =5% and that if the financial capacity increased it would have a positive impact on the building project success. The Pearson moment correlation results between human capacity and building project success also indicated the same type of result where the correlation coefficient was 0.736 and a p-value of 0.022 which was significant at α = 5%. The results also showed that there was a positive Pearson moment correlation between physical capacity and building project success where the correlation coefficient was 0.821, with a p-value of 0.025. This revealed that any positive change in monitoring and evaluation team capacity aspects would enhance building project success.

The analysis of Pearson moment correlation results between the building project success and adherence to building code showed a positive coefficient 0.843, with p-value of 0.031. It indicated that the result was significant at α =5% and that if the adherence to building code increased it would have a positive impact on the building project success. The Pearson moment correlation results between adherence to county by-laws and building project success also indicated the same type of result where the correlation coefficient was 0.711 and a p-value of 0.022 which was significant at α = 5%. The results also showed that there was a Pearson moment positive correlation between adherence to regulatory bodies' requirements and building project success where the correlation coefficient was 0.806, with a p-value of 0.003. This revealed that any positive change in monitoring and evaluation team capacity aspects would enhance building project success.

4.6 Hypothesis testing

Regression models were used to test the strength of the independent and moderating variables as far as their relationship with the dependent variable was concerned. Coefficient of determination determined the contribution of each variable on building project success while F-statistics was used to test hypothesis at 95% confidence levels with a margin error of 5%. The R-value indicates the strength of relationship between the variables while coefficient of variation shows the extent to which variations in independent variables explain the indicators of the dependent variable (goodness of fit or explanatory power).

The F-value shows the statistical significance of the overall model while t-values represent the significance of the individual variables. Beta values show the effect of the independent variable on the dependent variable (positive or negative). The p-values represents the confidence level at 95% or 0.05 significant level at which point a decision to confirm the hypothesis was made at values of F-Ratio where $p < 0.05$. The general rule is if F-calculated < F-critical, and the null hypothesis are accepted since the p-value > .05 and when F-calculated < F-critical, and the null hypothesis are rejected since the p-value < .05. Table 4.39 showed the summary of the objectives and their corresponding hypothesis and the summary of the results.

Table 4. 39: Relationship between study objectives, hypothesis and statistical model

Objective	Hypotheses	Model for hypothesis testing
To establish the influence of project initiation process on building project success in Roysambu Constituency, Nairobi	H_1; Project initiation process significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a+\beta, x, +e$ Y = Building Project success a = Constant B_1 = Beta coefficient X_1 = Project initiation processes E = error term
To determine the influence of Monitoring and evaluation team capacity on building project success in Roysambu Constituency, Nairobi	Hypothesis 2: H_2: Monitoring and Evaluation team capacity significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a +\beta_2 X_2+e$ Y = Building project success a = Constant β = Beta coefficient X_2 = Monitoring and evaluation team capacity e = error term
To assess the influence of Compliance with legal framework on building project success in Roysambu Constituency, Nairobi	Hypothesis 3: H_{o3}: Compliance with legal framework significantly influences building project success in Roysambu Constituency, Nairobi.	$Y = a+\beta_3X_3+e$ Y = Building project success a = Constant β = Beta coefficient X_3 = Compliance with legal framework E – error
To examine the moderating Compliance with legal framework on relationship between building project initiation process, Monitoring and evaluation team capacity on building project success in Roysambu Constituency, Nairobi	Hypotheses 4: H_o; Moderating compliance with legal framework, relationship between building project initiation process, Monitoring and evaluation team capacity significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a+ \beta X_4+e$ Y = Building project success a = Constant β_4 Beta coefficient e = error
To establish the influence of moderating Compliance with legal framework and project initiation process on building project success in Roysambu Constituency, Nairobi	Hypothesis 5: H_5; Moderating compliance with legal framework and project initiation process significantly influences building project success in Roysambu Constituency, Nairobi.	$Y = a+ \beta_5X_5+e$ Y = Building project success a = Constant β_5 = Beta coefficient α = error
To establish the influence of moderating Compliance with legal framework, Monitoring and evaluation team capacity on building project success in Roysambu Constituency, Nairobi	Hypothesis 6: H_6; Moderating compliance with legal framework, Monitoring and evaluation team capacity significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a+ \beta_6X_6+e$ Y = Project success a = constant β_6 = Beta coefficient α = error

Hypothesis One: Project initiation process does not significantly influence building projects success

This hypothesis aimed at establishing the influence of project initiation process on building projects success.

Table 4. 40: Model summary on project initiation process influence on building projects Success

Model	R	R Square	Adjusted R Square	Std. Error	Change Statistics				
					R square Change	F Change	Df1	Df2	Sig. F change
1	0.808	0.654	0.652	1.340	.213	10.526	1	191	.000

From the results, the strength of the correlation between the project initiation process and building projects success was 0.808 and coefficient of determination was 0.652 which was significant (sig. F change of 0.000). The F change was 10.526 while standard error was 1.340. The results show that 65.2% of variation in building project success is accounted for by project initiation process. These include project formulation, project strategy, project histories and product description. This supports Verzuh, (2015) findings that project performance is enhanced through setting goals and objectives and how these can be achieved. The initial phase principles are series of activities setting out standards in aiding the project team to deliver within quality standards, cost and time specification. Moreover, it was found out that development of systems with repositories database that contain project details establishment and application, project past experience information its access and application and project assessment of market, technology and competition affect building projects success.

The results show a statistically significant relationship between project initiation process and building projects success with F-value of 10.526 and $p < 0.05$ at 95% level of significance. This shows that the model estimated is significant, an indication that the project initiation process significantly influences the building projects success. Table 4.41 and 4.42 provides results for ANOVA and coefficients between project initiation process and building projects success respectively at 95% level of significance.

Table 4. 41: ANOVA on project initiation process influence on building projects success

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	657.922	1	657.922	360.486	.000
	Residual	348.594	191	1.825		
	Total	**1006.516**	**192**			

Table 4. 42: Regression coefficients on project initiation process influence on building projects success

	Un standardized Coefficients		Standardized Coefficients	t	Sig	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.545	0.254		6.083	.000		
Project initiation process	0.843	0.046	0.887	18.326	.000	1.000	1.000

b. Dependent: variable: Building project success

The regression equation obtained from this output was: -

Building project success =1.545 + 0.843 Project initiation process **……Equation (1)** In Table 4.41 and 4.42, the coefficient for project initiation process is positive and significant (0.843). This shows that there is a significant positive relationship between the project initiation process and building projects success such that if there is a unit change in project initiation process, building project success changes by 0.843 (84.3%.

The results show that project initiation process is important if the building projects are to be successful. This is attributed to the fact that identification of the project ideas, project feasibility studies, project assessment and evaluation, project classification and preliminary selection are important for any building project. These findings agreed with Kharbanda and Pinto (1996) who stated that in an extensive investigation of the managerial factors responsible for construction project failures, identified poor project definition and poor project planning- front-end project management activities- as the two major causes of project failure.

The results validate findings by Seifoddin (1986) who outlined the stages as follows: definition of the objectives and scope of the project; formulation of the alternative course of action, preliminary screening of the alternatives in terms of contribution to objectives, costs and degree feasibility. Project evaluation phase, feasible projects need to be reviewed on the basis of economic efficiency and effectiveness and in the project selection process, a set of projects that satisfy the resources constraints are selected for implementation.

The findings support Eldin and Hamdy (1983), in the project evaluation phase, feasible projects need to be reviewed on the basis of economic efficiency and effectiveness and in the project selection process, a set of projects that satisfy the resources constraints are selected for implementation.

Given the results, the hypothesis that project initiation process significantly influences building projects success is accepted. The results agreed with Wikstrom (2010) who notes that early stakeholder involvement is one of the cornerstones for more accurate value creation. In the construction industry, during the different stages of a project from the initial planning through to the final operation and maintenance, specific parties get involved whose expectations can affect the outcomes of, or may be affected by, both negatively and positively by the implementation of the project.

In comparison to other studies, the study makes it clear that if the managers undertake the steps taken to initiate a project successfully then the success of the building projects is guaranteed. These initial stages include project formulation, project strategy, project histories and product description. All these stages need to be done carefully to give any building project a strong foundation. Indeed, poor project scope will undermine coordinated efforts for a successful project. It appears that strategies should always be formulated to empower potential developers or their representatives on the need to embrace project initiation process as a key component of their construction activities for success of their projects.

Hypothesis Two: Monitoring and evaluation team capacity does not significantly influence building project success

This hypothesis aimed at establishing the influence of monitoring and evaluation team capacity on building projects success.

Table 4. 43: Model summary on monitoring and evaluation team capacity influence on building projects success

Model	R	R Square	Adjusted R Square	Std. Error	Change Statistics				
					R square Change	F Change	Df1	Df2	Sig. F change
1	0.813	0.661	0.649	1.335	.267	12.782	1	191	.020

a. Predictors: (Constant), Monitoring and evaluation team capacity

From the results, the strength of the correlation between the monitoring and evaluation team capacity and building projects success was 0.813 and coefficient of determination was 0.649 which was significant (sig. F change of 0.020). The F change was 12.782 while standard error was 1.335. The results show that 64.9% of variation in building project success is accounted for by monitoring and evaluation team capacity. The findings agreed with Carens Kithinji (2015) findings that only few personnel in Monitoring and evaluation have background in evaluation where training is used to enhance knowledge, skills, and confidence so that project staffs are able to conduct adequate evaluations of their own projects.

The results show a statistically significant relationship between monitoring and evaluation team capacity and building projects success with F-value of 12.782 and $p < 0.05$ at 95% level of significance. This shows that the model estimated is significant; an indication that the monitoring and evaluation team capacity significantly influences the building projects success. Table 4.44 and 4.45 provides results for ANOVA and coefficients between monitoring and evaluation team capacity and building projects success respectively at 95% level of significance.

Table 4. 44: ANOVA on monitoring and evaluation team capacity influence on building projects success

Model		Sum of Squares	Df	Mean Square	F	Sig
1	Regression	674.013	1	674.013	372.584	.000
	Residual	345.523	191	1.809		
	Total	**1019.536**	**192**			

The ANOVA results shows that relationship between the building project success and monitoring and evaluation team capacity was significant since the F-calculated = 372.584 was greater than F-critical= 3.8906 and the p value =0.00 was less than 0.05.

Table 4. 45: Regression coefficients on monitoring and evaluation team capacity influence on building projects success

	Un standardized Coefficients		Standardized Coefficients	t	Sig
	B	**Std. Error**	**Beta**		
(Constant)	17.345	0.867		20.006	.000
Monitoring and evaluation team capacity	0.882	0.051	0.943	17.294	.000

a. Dependent Variable: Building project success

The regression equation obtained from this outcome was: -

Building project success = **17.345** + **0.882** Monitoring and evaluation team capacity ……**Equation (2)**

The results illustrated in Table 4.44 and 4.45 shows statistically significant positive regression coefficient for monitoring and evaluation team capacity on building project success of 0.882. This shows that there is a significant positive relationship between the monitoring and evaluation team capacity and building projects success such that if there is a unit change in monitoring and evaluation team capacity, building project success changes by 0.882 (88.2%).

The results show that Monitoring and evaluation team capacity is significant in success of any building projects. It entails financial capacity, human capacity and physical capacity. These findings agreed with those of Singh, Murty, Gupta and Dikshit (2009) who pointed out that the resources allowed for use in Monitoring and evaluation may be categorized into three; financial capacity to do Monitoring and evaluation, human capacity to do

Monitoring and evaluation (People skills and knowledge) and physical capacity to do Monitoring and evaluation (Equipment, technology and machinery) (UNAIDS 2008). The results validate findings by Taylor- Powell and Boyd (2008) who asserted that professionalism is seen in activities aimed at building knowledge, beliefs, and skills of individuals in evaluation.

Given the results, the hypothesis that monitoring and evaluation team capacity significantly influences building projects success is accepted. These findings were same as those of Singh, Murty, Gupta and Dikshit (2009) who pointed out financial capacity to do Monitoring and evaluation is critical for any work to be undertaken. Credibility of information gathered from Monitoring and evaluation system that is underfunded would be questioned more especially the quality of that information.

Since the success of most of the building projects is significantly affected by monitoring and evaluation team capacity, there is a need for the project stakeholders to make sure that the team for Monitoring and evaluation consist of skilled and qualified individuals. The projects managers should also make sure that there is adequate equipment, technology and machinery to ensure that monitoring and evaluation team do their job effectively. A functional monitoring and evaluation team will significantly enhance building project success. However, in many instances the team suffers from managerial support resulting to ineffectiveness in performing its mandate. Project management professionals may ultimately be the solution in leading monitoring and evaluation team in the county and perhaps with the necessary legislation to make it mandatory. This will enhance effective and efficient project delivery and project success.

Hypothesis three: Compliance with legal framework does not have a significant influence on building project success

This hypothesis aimed at establishing the influence of compliance with legal framework on building projects success.

Table 4. 46: Model Summary on Compliance with legal framework influence on building projects success

Model	R	R Square	Adjusted R Square	Std. Error	Change Statistics				
					R square Change	F Change	Df1	Df2	Sig. F change
1	0.819	0.671	0.670	1.309	.267	11.425	1	191	.031

From the results, the strength of the correlation between the compliance with legal framework and building projects success was 0.819 and coefficient of determination was 0.670 which was significant (sig. F change of 0.031). The F change was 11.425 while standard error was 1.309. The results show that 67% of variation in building project success is accounted for by compliance with legal framework. These findings contradict with findings by Jenkins and Anderson (2011) who noted that what an urban resident considers to be an adequate and suiTable home space may not meet the standards of planning officials. As a result, those standards become irrelevant and destructive as people struggle to survive in the city. It has been argued that housing professionals involved in the design and approvals in development in Nairobi have adopted a top –down approval to housing design, resulting in regular and formed aesthetics, but designs which do not adequately address user's needs.

The results show that a statistically significant relationship between compliance with legal framework and building projects success with F-value of 11.425 and $p < 0.05$ at 95% level of significance. This shows that the model estimated is significant, an indication that the compliance with legal framework significantly influences the building projects success. Table 4.47 and 4.48 provides results for ANOVA and coefficients between compliance with legal framework and building projects success respectively at 95% level of significance.

Table 4. 47: ANOVA on Compliance with legal framework influence on building projects success

Model		Sum of Squares	Df	Mean Square	F	Sig
1	Regression	679.345	1	679.345	390.153	0.000
	Residual	332.574	191	1.741		
	Total	**1011.919**	**192**			

a. Dependent Variable: Building project success
b. Predictors: (Constant), Compliance with Legal Framework

From the findings in Table 4.47, the probability value of 0.000 indicates that the regression relationship was significant in predicting how the Compliance with legal framework affected building project success in Roysambu Constituency. The F calculated at 5 per cent level of significance was 396.282 Since F calculated is greater than the F critical (value = 3.8906), this shows that the overall model was significant.

Table 4. 48: Regression coefficients on Compliance with legal framework influence on building projects success

	Un standardized Coefficients		Standardized Coefficients	t	Sig
	B	**Std. Error**	**Beta**		
(Constant)	21.547	1.341		16.068	0.000
Compliance with Legal Framework	0.931	0.054	0.986	17.241	0.000

a. Dependent Variable: Building project success

The regression equation obtained from this outcome was: -

Building Project Success = 21.547+ 0.931 Compliance with Legal Framework**…Equation (3)**

The results illustrated in Table 4.48 shows statistically significant positive regression coefficient for compliance with legal framework on building project success of 0.931. This shows that there is a significant positive relationship between the compliance with legal framework and building projects success such that if there is a unit change in compliance with legal framework, building project success changes by 0.931(93.1%).

The results show that compliance with legal framework is very significant in success of any building projects. Compliance with legal framework entails adherence to standard

specifications of building and guidelines on quality of building materials, technical designs approval and issuance of work construction permit by County Government and adherence with regulatory bodies' regulations. These findings also validate findings by Kassel (2016) that legal aspects are an indispensable part in the construction industry. Legal aspects ensure that projects are functioning as per the statutory framework. Every construction project must consider the legal set up while framing the basic aims and objectives of the project. These findings agreed with Shem and Tam (2002) who points that building projects affect the environment in many ways across the life cycle and are regarded as a major contributor to environmental impacts. However, many developers apparently hardly appreciate the need to comply with NEMA legal requirements for EIA license and other regulatory laws from respective government agencies.

These findings contradict with findings by Jenkins and Anderson (2011) who noted that what an urban resident considers to be an adequate and suitable home space may not meet the standards of planning officials. As a result, those standards become irrelevant and destructive as people struggle to survive in the city. It has been argued that housing professionals involved in the design and approvals in development in Nairobi have adopted a top –down approval to housing design, resulting in regular and formed aesthetics, but designs which do not adequately address user's needs. This was consistent with Watson (2009) who points out that land use regulations that accompany master plans usually demand standards of construction and forms of land use which are unachievable and inappropriate for the poor in cities such standards have sometimes led to forced evictions from unplanned areas and demolitions of un-authorized development.

Given the results, the hypothesis that compliance with legal framework significantly influences building projects success is accepted. The compliance with legal framework was concluded to significantly influence building projects success. This is an indication that all the stakeholders of the building projects must ensure that standard specifications and guidelines on quality of building materials are adhered to as well as making sure that the project technical designs are approved by County Physical planning department. They should also adhere to regulatory bodies' requirements. This will reduce forced evictions and also unnecessary demolitions and encourage sustainable development. The county

government should endeavour to create forums of continuously sensitizing its citizens on the need to comply with legal framework to minimize on economic loss and promote quality and health living.

Hypothesis four: Compliance with legal framework does not moderate the relationship between project initiation process and building project success

The hypothesis sought to establish the moderating influence of compliance with legal framework on the relationship between project initiation process and building project success. Moderated influence in a regression model shows the influence of an independent variable on the dependent variable as a function of the third variable. The aim is to examine how the independent variable varies when a moderating variable is introduced in the model. The model was expressed as:

$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta 2 (X_1 X_2) + e$ where:

Y = Building Project success

a = Constant and β = Coefficient

X_1 = Project Initiation process; X_2 =Compliance with legal framework;

$(X_1 X_2)$ = Interaction term (Product of $X_1 X_2$)

e = error term

Stepwise regression technique consisting of three models was used to test moderating influence of compliance with legal framework on the relationship between project initiation process and building project success. Model 1 was for project initiation process as independent variable and building project success as the dependent, Model 2 was for project initiation process and compliance with legal framework as independent variable and building project success as the dependent, Model 3 was for project initiation process, compliance with legal framework and the interaction term as independent variable and building project success as the dependent. The results were as shown in Table 4.48 and 4.49.

Step one: Influence of project initiation process on building project success

In the first model, project initiation process influence on building project success was tested, with the equation adopted as $Y = a + \beta_1 X_1 + e$ where:

Y = Building Project success

a = Constant and β = Coefficient

X_1 = Project Initiation process

e = error term

As shown in Table 4.49, Model 1 fits the data since the strength of correlation between the project initiation process and building project success was 0.808 and coefficient of determination was 0.652 with a sig F change $p<0.05$ of 13.785. Based on the model, 65.2% of building project success was accounted for by project initiation process while the remaining 34.8% of building project success was attributed to other variables outside the study.

Step Two: Influence of project initiation process and compliance with legal framework on building project success

In the second model, Compliance with legal framework was introduced to the model with the equation adopted as $Y = a + \beta_1X_1 + \beta_2X_2 + e$ where:

Y = Building Project success

a = Constant and β = Coefficient

X_1 = Project Initiation process

X_2 =Compliance with legal framework

e = error term

The change statistics in the model as shown in Table 4.49 show an increase in R^2 by 20.2% from 65.4% to 85.6%. The increase of 20.2% was accounted by the moderating variable introduced in the second model which is significant since $p < 0.05$.

Step three: Influence of project initiation process, compliance with legal framework and interactive term on building project success

In the third model, interaction term was introduced to the model with the equation adopted as:

$Y = a + \beta_1X_1 + \beta_2X_2 + \beta (X_1X_2) + e$ where:

Y = Building Project success

a = Constant and β= Coefficient

X_1 = Project Initiation process; X_2 =Compliance with legal framework;

(X_1X_2) = Interaction term (Product of X_1X_2)

e = error term

By introducing the interaction term, the R^2 improved by 2.5% which was significant at 95% level of significance since 0.020 was less than 0.05. This shows that Compliance with legal framework moderates the relationship between the project initiation process and building project success.

Table 4. 49: Regression results for moderation

Model	R	R Square	Adjusted R Square	Std. Error	change statistics			
					R square Change	F Change	Df1	Df2	Sig. F change
1	.808	.654	.652	.340		13.785	1	191	.000
2	.925	.856	.853	.712	.202	12.995	1	191	.011
3	.973	.881	.649	.335	.025	.782	1	191	.020

The coefficient of the moderating influence of compliance with legal framework on the relationship between project initiation process and building project success was shown in Table 4.50.

Table 4. 50: Regression Coefficients to test for moderation

		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	1.545	0.254		6.083	.000
	Project initiation process	0.843	0.296	0.887	2.848	.005
	(Constant)	2.453	0.619		3.963	.000
2	Project initiation process	0.716	0.322	0.601	2.224	.032
	Compliance with legal framework	0.678	0.367	0.545	1.847	.007
	(Constant)	14.813	1.678		8.828	.000
	Project initiation process	0.882	0.341	0.901	2.587	.010
3	Compliance with legal framework	0.752	0.346	0.845	2.173	.031
	Project initiation process* Compliance with legal framework	0.431	0.054	0.586	7.981	.000

The findings show that compliance with legal framework significantly moderate the relationship between project initiation process and building project success (p = 0.00). The relationship was also positive an indication that the impact of of compliance with legal

framework is to get the project designs approved and adherence to adherence to standard specifications of building and guidelines on quality of building materials. These findings support Khang and Moe (2008) who pointed out that project initiation should lead to success if during conceptualization there is effectiveness of consultation with stakeholders, competency of project team, alignment with development priorities, adequate resource support, and compatibility of regulations for project management.

The results showed that the hypothesis that compliance with legal framework moderates the relationship between project initiation process and building project success was accepted. This is in line with Seifoddini (1986) who also outlines the stages of the preparation phase as follows; definition of the objectives and scope of the project, formulation of the alternative course of action and preliminary screening of the alternatives in terms of contribution to objectives, costs and degree of feasibility. In the goal setting phase, development goals, targets and priorities are also formulated according to the needs of the people.

The researcher concluded that the relationship between project initiation process and building project success was significantly moderated by compliance with legal framework. This was an indication that before the start of any building project, projects designs had to be approved and work permit issued to the project managers. This would ensure smooth and effective operations during implementation of the projects.

4.6.5 Hypothesis five: Compliance with legal framework does not moderate the relationship between monitoring and evaluation team capacity and building project success

The hypothesis sought to establish the moderating influence of compliance with legal framework on the relationship between monitoring and evaluation team capacity and building project success. Moderated influence in a regression model showed the influence of an independent variable on the dependent variable as a function of the third variable. The aim was to examine how the independent variable varied when a moderating variable was introduced in the model. The model was expressed as:

$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta (X_1 X_2) + e$ where:

Y = Building Project success

a = Constant and β = Coefficient

X_1 = Monitoring and Evaluation Team Capacity

X_2 =Compliance with legal framework

(X_1X_2) = Interaction term (Product of X_1X_2)

e = error term

Stepwise regression technique consisting of three models was used to test moderating influence of compliance with legal framework on the relationship between monitoring and evaluation team capacity and building project success. Model 1 was for monitoring and evaluation team capacity as independent variable and building project success as the dependent, Model 2 was for monitoring and evaluation team capacity and compliance with legal framework as independent variable and building project success as the dependent, Model 3 was for monitoring and evaluation team capacity, compliance with legal framework and the interaction term as independent variable and building project success as the dependent. The results were as shown in Table 4.48 and 4.49.

Step one: Influence of monitoring and evaluation team capacity on building project success

In the first model, monitoring and evaluation team capacity influence on building project success was tested, with the equation adopted as $Y = a + \beta_1X_1 + e$ where:

Y = Building Project success

a = Constant and β = Coefficient

X_1 = Monitoring and evaluation team capacity

e = error term

As illustrated Table 4.51, Model 1 fitted the data since the strength of correlation between monitoring and evaluation team capacity and building project success was 0.813 and coefficient of determination was 0.649 with a sig F change $p < 0.05$ of 42.186. Based on the model, 64.9% of building project success was accounted for by monitoring and evaluation team capacity while the remaining 35.1% of building project success was attributed to other variables outside the study.

Step two: Influence of monitoring and evaluation team capacity and compliance with legal framework on building project success

In the second model, Compliance with legal framework was introduced to the model with the equation adopted as $Y = a + \beta_1 X_1 + \beta_2 X_2 + e$ where:

Y = Building Project success

a = Constant and β = Coefficient

X_1 = Monitoring and evaluation team capacity; X_2 =Compliance with legal framework

e = error term

The change statistics in the model as shown in Table 4.51 showed an increase in R^2 by 20.7% from 66.1% to 86.8%. The increase of 20.7% was accounted by the moderating variable introduced in the second model which was significant since $p < 0.05$.

Step three: Influence of monitoring and evaluation team capacity, compliance with legal framework and interactive term on building project success

In the third model, interaction term was introduced to the model with the equation adopted as:

$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta 2 (X_1 X_2) + e$ where:

Y = Building Project success

a = Constant and β = Coefficient

X_1 = Monitoring and evaluation team capacity; X_2 =Compliance with legal framework

$(X_1 X_2)$ = Interaction term (Product of $X_1 X_2$)

e = error term

By introducing the interaction term, the R^2 improved by 2.4% which was significant at 95% level of significance since 0.020 was less than 0.05. This showed that he compliance with legal framework moderated the relationship between the monitoring and evaluation team capacity and building project success.

Table 4. 51: Regression results for moderation

Model	R	R Square	Adjusted R Square	Std. Error	Change Statistics				
					R square Change	F Change	Df1	Df2	Sig. F change
1	.813	.661	.649	1.335			1	191	.020
2	.932	.868	.866	.833	.207	42.186	1	191	.000
3	.986	.892	.649	.387	.024	.782	1	191	.032

The coefficient of the moderating influence of compliance with legal framework on the relationship between monitoring and evaluation team capacity and building project success was shown in Table 4.52.

Table 4. 52: Regression Coefficients to test for moderation

		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig
1	(Constant)	17.345	0.867		20.006	.000
	Project initiation process	0.882	0.051	0.943	17.294	.000
	(Constant)	2.514	0.212		31.169	.000
2	Monitoring and Evaluation Team Capacity	0.871	0.281	0.712	2.877	.001
	Compliance with Legal Framework	0.818	0.067	0.694	19.087	.000
	(Constant)	7.543	0.242		31.169	.000
	Monitoring and Evaluation Team Capacity	0.843	0.293	0.912	2.877	.004
3	Compliance with Legal Framework	0.878	0.046	0.894	19.087	.000
	Monitoring and Evaluation Team Capacity*Compliance with legal framework	0.512	0.154	0.601	3.325	.001

The findings showed that compliance with legal framework significantly moderated the relationship between monitoring and evaluation team capacity and building project success (p=0.001). The relationship was also positive an indication that the impact of of compliance with legal framework was to get the project designs approved and adhered to, adherence to standard specifications of building and guidelines on quality of building materials.

Therefore, the hypothesis that compliance with legal framework moderated the relationship between monitoring and evaluation team capacity and building project success was accepted. This was in line with Watson (2009) who pointed out that land use regulations that accompany master plans usually demand standards of construction and forms of land use which are unachievable and inappropriate for the poor in cities such standards have sometimes led to forced evictions from unplanned areas and demolitions of un-authorized development.

The researcher also concluded that the relationship between the monitoring and evaluation team capacity and building project success was significantly moderated by compliance with legal framework. This meant that monitoring and evaluation team must be capable of carrying the projects monitoring and evaluations under the set guidelines and regulations in a bid to ensure that the building projects were successfully completed.

Hypothesis six: Compliance with legal framework does not moderate relationship between project initiation process and monitoring and evaluation team capacity and building project success

The hypothesis sought to establish the moderating influence of compliance with legal framework on the relationship between project initiation process and monitoring and evaluation team capacity and building project success. Moderated influence in a regression model showed the influence of an independent variable on the dependent variable as a function of the third variable. The aim was to examine how the independent variables varied when a moderating variable was introduced in the model. The model was expressed as:

$Y = a+ \beta_1X_1 + \beta_2X_2 + \beta2 (X_1X_2) + e$ where:

Y = Building Project success

a = Constant

β = Coefficient

X_1 = Project Initiation Process and Monitoring and Evaluation Team Capacity

X_2 =Compliance with legal framework

(X_1X_2) = Interaction term (Product of X_1X_2)

e = error term

Stepwise regression technique consisting of three models was used to test moderating influence of compliance with legal framework on the relationship between project initiation process and monitoring and evaluation team capacity and building project success. Model 1 was for project initiation process and monitoring and evaluation team capacity as independent variable and building project success as the dependent, Model 2 was for project initiation process and monitoring and evaluation team capacity and compliance with legal framework as independent variable and building project success as the dependent, Model 3 was for project initiation process and monitoring and evaluation team capacity, compliance with legal framework and the interaction term as independent variable and building project success as the dependent. The results were as shown in Table 4.53 and 4.54.

Step one: Influence of project initiation process and monitoring and evaluation team capacity on building project success

In the first model, monitoring and evaluation team capacity influence on building project success was tested, with the equation adopted as $Y = a + \beta_1X_1 + e$ where:

Y = Building Project success

a = Constant and β = Coefficient

X_1 = Project Initiation Process and Monitoring * Evaluation Team Capacity

e = error term

As illustrated Table 4.53, Model 1 fitted the data since the strength of correlation between project initiation process and monitoring and evaluation team capacity and building project success was 0.798 and coefficient of determination was 0.635 with a sig F change $p < 0.05$ of 63.475. Based on the model, 63.5% of building project success was accounted for by

project initiation process and monitoring and evaluation team capacity while the remaining 36.5% of building project success was attributed to other variables outside the study.

Step two: Influence of project initiation process and monitoring and evaluation team capacity and compliance with legal framework on building project success

In the second model, compliance with legal framework was introduced to the model with the equation adopted as $Y = a + \beta_1 X_1 + \beta_2 X_2 + e$ where:

Y = Building project success
a = Constant and β = Coefficient
X_1 = Project initiation process and monitoring and evaluation team capacity
X_2 =Compliance with legal framework
e = error term

The change statistics in the model as shown in Table 4.51 showed an increase in R^2 by 22.6% from 63.7% to 86.3%. The increase of 22.6% was accounted by the moderating variable introduced in the second model which is significant since $p < 0.05$.

Step three: Influence of project initiation process and monitoring and evaluation team capacity, compliance with legal framework and interactive term on building project success

In the third model, interaction term was introduced to the model with the equation adopted as:

$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta 2 (X_1 X_2) + e$ where:

Y = Building project success
a = Constant and β = Coefficient
X_1 = Project initiation process and monitoring and evaluation team capacity
X_2 =Compliance with legal framework; $(X_1 X_2)$ = interaction term (Product of $X_1 X_2$)
e = error term

By introducing the interaction term, the R^2 improved by 2.6% which was significant at 95% level of significance since 0.020 was less than 0.05. This showed that the compliance

with legal framework moderated the relationship between the project initiation process and monitoring and evaluation team capacity and building project success.

Table 4. 53: Regression results for moderation

Model	R	R Square	Adjusted R Square	Std. Error	change statistics				
					R square Change	F Change	Df1	Df2	Sig. F change
1	.798	.637	.635	0.852			1	191	.000
2	.929	.863	.861	0.737	.226	63.475	1	191	.011
3	.937	.889	.678	.396	.026	11.712	1	191	.043

The coefficient of the moderating influence of compliance with legal framework on the relationship between project initiation process and monitoring and evaluation team capacity and building project success was shown in Table 4.54.

Table 4. 54: Regression coefficients to test for moderation

		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	1.896	0.308		6.156	.000
	M&E team capacity*project initiation process	0.614	0.293	0.712	2.096	.037
2	(Constant)	3.452	0.312		11.064	.000
	M&E team capacity*project initiation process	0.878	0.046	0.716	19.087	.000
	Compliance with legal framework	0.812	0.293	0.672	2.771	.008
3	(Constant)	2.312	0.312		7.410	.000
	M&E team capacity*project initiation process	0.811	0.046	0.816	18.326	.000
	Compliance with legal framework	0.843	0.293	0.912	2.877	.004
	(M&E team capacity*project initiation process) *Compliance with legal framework	0.787	0.144	0.897	2.910	.012

The findings showed that compliance with legal framework significantly moderated the relationship between project initiation process and monitoring and evaluation team

capacity and building project success (p=0.00). The relationship was also positive an indication that the impact of compliance with legal framework was to get the project designs approved and adhered to, adherence to standard specifications of building and guidelines on quality of building materials.

The hypothesis that compliance with legal framework moderated the relationship between project initiation process and monitoring and evaluation team capacity and building project success was accepted. The findings concurred with Jenkins and Anderson (2011) who had also noted that what an urban resident considers to be an adequate and suitable home space may not meet the standards of planning officials. As a result, those standards become irrelevant and destructive as people struggle to survive in the city. It has been argued that housing professionals involved in the design and approvals in development in Nairobi have adopted a top –down approval to housing design, resulting in regular and formed aesthetics, but designs which do not adequately address user's needs.

The researcher finally concluded that the relationship between project initiation process and monitoring and evaluation team capacity and building project success was significantly moderated by compliance with legal framework. This implied that for building projects to be successful, project initiation process as well as monitoring and evaluation needed to be carried out under guidance of the set rules and regulations.

Table 4. 55: Summary of hypothesis testing

Objective	hypotheses	Model for hypothesis testing	Remarks
To establish the influence of project initiation process on building project success in Roysambu Constituency, Nairobi	H_1; Project initiation process significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a+\beta, x, +e$ Y = Building Project success a = Constant B_1 = Beta coefficient X_1 = Building project initiation processes E = error term	Accepted
To determine the influence of Monitoring and evaluation team capacity on building project success in Roysambu Constituency, Nairobi	Hypothesis 2: H_2: Monitoring and evaluation team capacity significantly influences building project success in Roysambu Constituency, Nairobi	$Y = a +\beta_2 X_2+e$ Y = Building project success a = Constant β = Beta coefficient X_2 = Monitoring and evaluation team capacity e = error ter	Accepted
To assess the influence of Compliance with legal framework on building project success in Roysambu Constituency, Nairobi	Hypothesis 3: H_{o3}: Compliance with legal framework significantly influences building project success in Roysambu Constituency, Nairobi.	$Y = a+\beta_3X_3+e$ Y = Building project success a = Constant β = Beta coefficient X_3 = Compliance with legal framework E – error	Accepted
To examine the moderating Compliance with legal framework on relationship between building project initiation process, Monitoring and evaluation team capacity on building project success in	Hypotheses 4: H_o; Moderating compliance with legal framework, relationship between building project initiation process, Monitoring and evaluation team capacity significantly influences building project success in	$a + \beta_1X_1 + \beta_2X_2 + \beta2 (X_1X_2) + e$ where: Y = Building Project success a = Constant β = Coefficient X_1 = Project Initiation process X_2 =Compliance with legal framework (X_1X_2) = Interaction term (Product of X_1X_2)	Accepted

Roysambu Constituency, Nairobi.	Roysambu Constituency, Nairobi	e = error term	
To establish the influence of moderating Compliance with legal framework and project initiation process on building project success in Roysambu Constituency, Nairobi	Hypothesis 5: H_5; Moderating compliance with legal framework and project initiation process significantly influences building project success in Roysambu Constituency, Nairobi.	$Y = a + \beta_1X_1 + \beta_2X_2 + \beta2 (X_1X_2) + e$ where: Y = Building Project success a = Constant β = Coefficient X_1 = Monitoring and Evaluation Team Capacity X_2 =Compliance with legal framework (X_1X_2) = Interaction term (Product of X_1X_2) e = error term	Accepted
To establish the influence of moderating Compliance with legal framework, Monitoring and evaluation team capacity on building project success in Roysambu Constituency, Nairobi	Hypothesis 6: H_6; Moderating compliance with legal framework, monitoring and evaluation team capacity significantly moderates building project success in Roysambu Constituency, Nairobi	$Y = a + \beta_1X_1 + \beta_2X_2 + \beta2 (X_1X_2) + e$ where: Y = Building Project success a = Constant β = Coefficient X_1 = Project Initiation Process and Monitoring and Evaluation Team Capacity X_2 = Compliance with legal framework (X_1X_2) = Interaction term (Product of X_1X_2) e = error term	Accepted

CHAPTER FIVE
SUMMARY, CONCLUSIONS OF FINDINGS AND RECOMMENDATIONS

5.1 Introduction

Summary of the findings, conclusions and recommendations are presented in this chapter. The purpose of this study was to determine the moderating influence of compliance with legal framework on relationship between project initiation process and monitoring and evaluation team capacity on building project success, moderating influence of compliance with legal framework on relationship between project initiation process and building project success and moderating influence of compliance with legal framework on relationship between monitoring and evaluation capacity and building project success. Specifically, the study sought to establish the influence of project initiation process, influence of monitoring and evaluation team capacity and influence of compliance with legal framework on building projects success.

5.2 Summary of findings

This section presented the summary of the major findings of the study variables that the researcher came up with in chapter four concerning the influence of project initiation process, monitoring and evaluation team capacity and compliance with legal framework on building projects success.

5.2.1 Project initiation process and building projects success

The study aimed at establishing the influence of project initiation process on building projects success. The study revealed that the strength of the correlation between the project initiation process and building projects success was 0.808 and coefficient of determination was 0.652 which was significant (sig. F change of 0.000). The F change was 10.526 while standard error was 1.340. The results showed that 65.2% of variation in building project success was accounted for by project initiation process. These included project formulation, project strategy, project histories and product description. Moreover, it was found that development of systems with repositories database that contain project details establishment and application, project past experience information its access and application and project assessment of market, technology and competition affect building

projects success. This supported Verzuh (2015) findings that project performance is enhanced through setting goals and objectives and how these can be achieved. The initial phase principles are series of activities setting out standards in aiding the project team to deliver within quality standards, cost and time specification. Moreover, it was found out that development of systems with repositories database that contain project details establishment and application, project past experience information its access and application and project assessment of market, technology and competition affect building projects success.

The study also found a statistically significant relationship between project initiation process and building projects success with F-value of 10.526 and $p < 0.05$ at 95% level of significance. The study also established that the coefficient for project initiation process were positive and significant (0.843). This showed that there was a significant positive relationship between the project initiation process and building projects success such that if there was a unit change in project initiation process, building project success changed by 0.843. The study found that project initiation process was very important if the building projects were to be successful. This was attributed to the fact that identification of the project ideas, project feasibility studies, project assessment and evaluation, project classification and preliminary selection were very important for any building project. Therefore, it was clear that project initiation process significantly influenced building projects success. The results disagreed with Skaates *et al*. (2002) who opined that finding the right methods for stakeholder identification, involvement and integration seems to be challenging. In Kenya, public participation is entrenched in the constitution for all projects as a way of enhancing ownership transparency, accountability and sustainability of every type of development.

5.2.2 Monitoring and evaluation team capacity and building project success

The study aimed at establishing the influence of monitoring and evaluation team capacity on building projects success. The study also established that the strength of the correlation between the monitoring and evaluation team capacity and building projects success was 0.813 and coefficient of determination was 0.649 which was significant (sig. F change of 0.020). The study also revealed that 64.9% of variation in building project success is

accounted for by monitoring and evaluation team capacity. These findings agreed with those of Singh, Murty, Gupta and Dikshit (2009) who pointed out that the resources allowed for use in Monitoring and evaluation may be categorized into three; financial capacity to do Monitoring and evaluation, human capacity to do Monitoring and evaluation (People skills and knowledge) and physical capacity to do Monitoring and evaluation (Equipment, technology and machinery) (UNAIDS 2008). The results validate findings by Taylor- Powell and Boyd (2008) who asserted that professionalism is seen in activities aimed at building knowledge, beliefs, and skills of individuals in evaluation. This could be the motivation which should be behind trainings at all levels in Monitoring and evaluation cycle. Since evaluation competence could be determined by factors such as skills, knowledge and attitudes of individuals towards Monitoring and evaluation, training of individuals in these factors is key.

The study established a statistically significant relationship between monitoring and evaluation team capacity and building projects success with F-value of 12.782 and $p<0.05$ at 95% level of significance. The study also found that the regression coefficient for monitoring and evaluation team capacity on building project success of 0.882 which implied that there is a significant positive relationship between the monitoring and evaluation team capacity and building projects success such that if there is a unit change in monitoring and evaluation team capacity, building project success changes by 0.882. This is an indication that monitoring and evaluation team capacity is very significant in success of any building projects. It entails financial capacity, human capacity and physical capacity. These findings were same as those of Shamp (2017) who argues that critical for any work to be undertaken. Credibility of information gathered from Monitoring and evaluation system that is underfunded would be questioned more especially the quality of that information. A functional and effective monitoring and evaluation team is the engine that will steer the project to attain it objectives and goals. The team should get necessary support from all the stakeholders who formed it.

5.2.3 Compliance with legal framework and building project success

The study sought to establish the influence of compliance with legal framework on building projects success. The strength of the correlation between the compliance with legal framework and building projects success was 0.819 and coefficient of determination was 0.670 which was significant (sig. F change of 0.031). It was clear that 67% of variation in building project success is accounted for by compliance with legal framework. The regression relationship was highly significant in predicting how the compliance with legal framework affected building project success in Roysambu Constituency. The F calculated at 5 per cent level of significance was 396.282 Since F calculated is greater than the F critical (value = 3.8906), this shows that the overall model was significant. These findings contradicted with findings by Jenkins and Anderson (2011) who noted that what an urban resident considers to be an adequate and suitable home space may not meet the standards of planning officials. As a result, those standards became irrelevant and destructive as people struggled to survive in the city. It has been argued that housing professionals involved in the design and approvals in development in Nairobi have adopted a top –down approval to housing design, resulting in regular and formed aesthetics, but designs which do not adequately address user's needs.

The regression coefficient for compliance with legal framework on building project success was 0.931. This was indication that showed that there was a significant positive relationship between the compliance with legal framework and building projects success such that if there was a unit change in compliance with legal framework, building project success changed by 0.931. The study revealed that compliance with legal framework was very significant in success of any building projects. Compliance with legal framework entails adherence to standard specifications of building and guidelines on quality of building materials, technical designs approval and issuance of work construction permit by County Government. This was an implication that compliance with legal framework significantly influenced building projects success. These findings also validated findings by Kassel (2016) that legal aspects are an indispensable part in the construction industry. Legal aspects ensure that projects are functioning as per the statutory framework. Every construction project must consider the legal set up while framing the basic aims and

objectives of the project. Compliance with legal framework is key for sustainable development.

5.2.4 Compliance with legal framework, project initiation process and building project success

The study sought to establish the moderating influence of compliance with legal framework on the relationship between project initiation process and building project success. The strength of correlation between the project initiation process and building project success was 0.808 and coefficient of determination was 0.652 with a sig F change $p < 0.05$ of 13.785. Based on the model, 65.2% of building project success was accounted for by project initiation process while the remaining 34.8% of building project success was attributed to other variables outside the study. The study also found that the R^2 increase of 20.2% was accounted by the moderating variable introduced in the second model which is significant since $p < 0.05$. These findings supported Khang and Moe (2008) who pointed out that project initiation should lead to success if during conceptualization there is effectiveness of consultation with stakeholders, competency of project team, alignment with development priorities, adequate resource support, and compatibility of regulations for project management.

The study established that compliance with legal framework moderated the relationship between the project initiation process and building project success. The study revealed that the relationship was also positive an indication that the impact of of compliance with legal framework is to get the project designs approved and adherence to, adherence to standard specifications of building and guidelines on quality of building materials. This is in line with Seifoddini (1986) also outlines the stages of the preparation phase as follows; definition of the objectives and scope of the project, formulation of the alternative course of action and preliminary screening of the alternatives in terms of contribution to objectives, costs and degree of feasibility. In the goal setting phase, development goals, targets and priorities are also formulated according to the needs of the people.

5.2.5 Compliance with legal framework, monitoring and evaluation team capacity and building project success

Further the study sought to establish the moderating influence of compliance with legal

framework on the relationship between monitoring and evaluation team capacity and building project success. The strength of correlation between monitoring and evaluation team capacity and building project success was 0.813 and coefficient of determination was 0.649 with a sig F change $p < 0.05$ of 42.186. This meant that 64.9% of building project success was accounted for by monitoring and evaluation team capacity while the remaining 35.1% of building project success was attributed to other variables outside the study. This was in line with Watson (2009) who points out that land use regulations that accompany master plans usually demand standards of construction and forms of land use which are unachievable and inappropriate for the poor in cities such standards have sometimes led to forced evictions from unplanned areas and demolitions of un-authorized development.

The study also established that R^2 increase of 20.7% was accounted by the moderating variable introduced in the second model which is significant since $p < 0.05$. This is an indication that compliance with legal framework moderates the relationship between the monitoring and evaluation team capacity and building project success. The relationship was also positive an indication that the impact of compliance with legal framework is to get the project designs approved and adherence to adherence to standard specifications of building and guidelines on quality of building materials. This is in line with Windapo and Cattell (2013) who found the following challenges in South Africa; increases in costs of building materials, high rate of enterprise failure, delivery capacity and performance, mismatch between available skills and required skills, external influences such as government legislation, procurement practices, capacity for sustainable empowerment and technology among others.

5.2.6 Compliance with legal framework, project initiation process and monitoring and evaluation team capacity and building project success

The study also sought to establish the moderating influence of compliance with legal framework on the relationship between project initiation process and monitoring and evaluation team capacity and building project success. The strength of correlation between project initiation process and monitoring and evaluation team capacity and building project success was 0.798 and coefficient of determination was 0.635 with a sig F change $p<0.05$ of 63.475. Based on the model, 63.5% of building project success was

accounted for by project initiation process and monitoring and evaluation team capacity while the remaining 36.5% of building project success was attributed to other variables outside the study. The R^2 increase of 22.6% was accounted by the moderating variable introduced in the second model which is significant since $p < 0.05$. The study revealed that compliance with legal framework moderates the relationship between the project initiation process and monitoring and evaluation team capacity and building project success. The relationship was also positive an indication that the impact of of compliance with legal framework is to get the project designs approved and adherence to adherence to standard specifications of building and guidelines on quality of building materials. The findings concurred with Jenkins and Anderson (2011) who have also noted that what an urban resident considers to be an adequate and suitable home space may not meet the standards of planning officials. As a result, those standards become irrelevant and destructive as people struggle to survive in the city. It has been argued that housing professionals involved in the design and approvals in development in Nairobi have adopted a top –down approval to housing design, resulting in regular and formed aesthetics, but designs which do not adequately address user's needs.

5.3 Optimal model depicting relationships among variables

From the results of the study, all the variables used in analysis were found to have a positive and significant contribution towards building project success. The first null hypothesis of this study was that project initiation process has no significant influence on building project success and was rejected since *p* – value was 0.000. The second hypothesis stated that, monitoring and evaluation team capacity have no significant influence on building project success, was also rejected since the *p* – value was 0.000. Similarly, the third null hypothesis that there is no relationship between Compliance with Legal Framework and building project success in Roysambu Constituency was also rejected since the *p* – value was 0.000. Further the fourth hypothesis that compliance with legal framework has no moderating effect on the relationship between project initiation process and building project success and fifth hypothesis that compliance with legal framework has no moderating effect on the relationship between monitoring and evaluation team capacity and building project success were also rejected since there was a significant difference in R^2 and F-calculated between the moderated and un moderated models. Lastly, the null hypothesis that compliance with

legal framework has no moderating effect on influence of Monitoring and evaluation team capacity and project initiation process project initiation process on building project success was rejected since there was a significant difference in R^2 and F-calculated between the moderated and un moderated models. These findings agreed with findings by Jenkins and Anderson (2011) who noted that what an urban resident considers to be an adequate and suitable home space may not meet the standards of planning officials. As a result, those standards became irrelevant and destructive as people struggled to survive in the city. It has been argued that housing professionals involved in the design and approvals in development in Nairobi have adopted a top –down approval to housing design, resulting in regular and formed aesthetics, but designs which do not adequately address user's needs.

Therefore, from the inferential analysis used in this study to test the initial hypotheses statements of the study constructs and their relationships, the optimal hypothetical model was as illustrated in Figure 5.1.

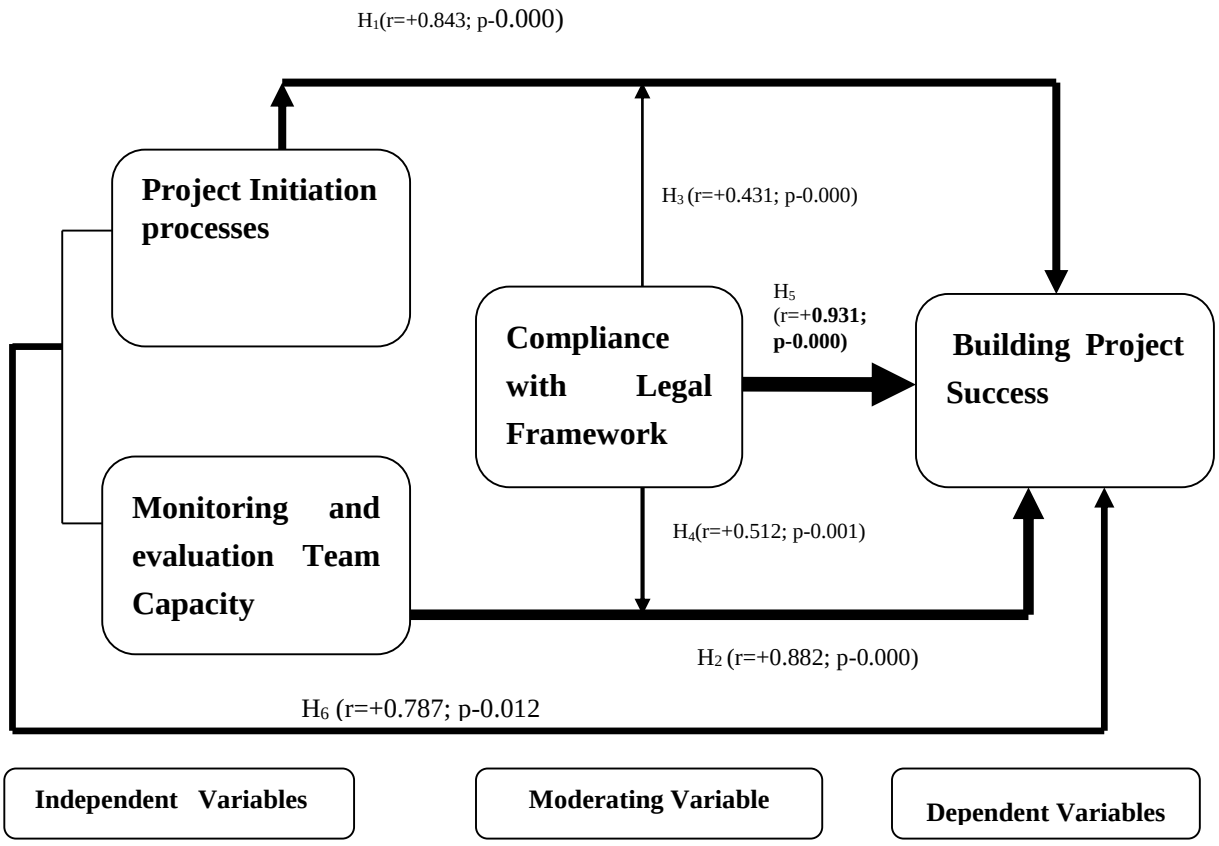


Figure 2: Optimal model

The optimal model indicates that for success of building projects, project developers need to adhere to county by laws to prevent closure of some projects as well as avoiding building demolitions. The monitoring and evaluation team should also have adequate capacity. There is also a need for identification of the project ideas and development of project strategic plan leading to successful building projects. This concured with studies by Fleming *et al*. (2016) and Monghasemi, Nikoo, Fasaee and Adamowski (2017) who noted that optimal model may be used to measure the significance of various aspects of project initiation process in improving the performance of projects.

The study findings pointed to a new project success model which if embraced, may significantly positively influence building construction industry in the county by reducing collapsing of buildings, reduction in demolitions and destruction of properties and many citizen's livelihood, economic loss and loss of life. This will eventually increase the GDP of the country as building construction industry is one of the key economic drivers. The new project success model may also contribute significantly in achievement of global goal of sustainable development.

5.4 Conclusions

Referring to the findings derived on the influence of project initiation process, monitoring and evaluation team capacity and compliance with legal framework on building projects success. This section discusses conclusions that were derived.

Project initiation process

The study findings concluded that project initiation process affects building projects success significantly and positively. In this case building projects success was found to be affected by identification of the project ideas, project classification as well as project assessment. In addition, it was deduced that project preliminary selection, doing feasibility studies on a project and project evaluation being fairly done affect building projects success. Developing project strategic plan, examining project ideas into alternative concepts, determining project goals and establishing project objectives affects the success of building projects. Moreover, it was concluded that development of systems with repositories database that contain project details establishment and application, accessing

and application of project past experience information and project assessment of market, technology and competition affect building projects success. Involvement of currently practicing engineers' professionals in project detailed design, involvement of currently practicing engineers' professionals in the definition of the product, determining project scope, examining project ideas generated and involvement of currently practicing professionals in the project technical specifications affect building projects success. Project initiation process contributes a lot to the achievement of most of the building project success.

Monitoring and evaluation team capacity

The study findings further concluded that monitoring and evaluation team capacity affects building project success significantly and positively. Budgetary allocation for project monitoring and evaluation team and having adequate funds allocated for the monitoring and evaluation team affect the success of building projects. The success of building projects was found to be affected by project monitoring and evaluation team possessing communication skills, project monitoring and evaluation team applying the right methodology in performing their work and project monitoring and evaluation team possessing relevant skills towards their work. It was deduced that project monitoring and evaluation team believing in their work, project monitoring and evaluation team being knowledgeable in their work and project monitoring and evaluation team possessing interpersonal relations affect building projects success. In addition, the success of building projects is affected also by project monitoring and evaluation team having the right attitudes towards their work, project monitoring and evaluation team being competent in information technology for their work and project monitoring and evaluation team being analytical in their work. Finally, equipment, technology and machinery availability for project monitoring and evaluation team to perform their work affect building projects success. Monitoring and evaluation team capacity contributes to the achievement of most of the building project success.

Compliance with legal framework

The findings finally concluded that building project success is affected by compliance with legal framework significantly and positively. Guidelines on quality of building materials

being available and adhering to them in the building project and having standard specifications of building and adhering to them in building project affect building project success. It was concluded that work construction permit being issued by County Government for the building project, technical designs being approved by County public health department for the building project and technical designs being approved by County physical planning department for the building project affect success of building project. Further it was deduced that project issuance with NEMA License and project issuance with NCA construction permit affect building project success.

5.6 Recommendations

This section presents the recommendations deduced from the findings on how project initiation processes monitoring and evaluation team capacity and legal framework influence building project success in Roysambu Constituency, Nairobi County, Kenya. Recommendations were made to project managers, contractors.

5.6.1 Project initiation process

The study recommends that strategies could be formulated to sensitize and create awareness on Roysambu community citizens on the need to focus on project initiation process in order to get value for money in their building projects investments.

The study further recommends that competent and experienced project managers should be hired to ensure that the right project leadership team is hired to lead a process of construction of buildings project.

5.6.2 Monitoring and evaluation team capacity

The study also recommends that there is need to increase training and awareness on monitoring and evaluation processes and procedures to all building stakeholders. The monitoring and evaluation team should have the skills and knowledge as well as undergo in-service training to keep them updated in the field. Further, Monitoring and evaluation team capacity should be facilitated with adequate financial, materials and equipment for their work. Cooperation of stakeholders should also be encouraged. A Monitoring and evaluation program for every new building project should be established by the developer in conjunction with relevant authorities in order to enhance its success.

5.6.3 Compliance with legal framework

Finally, the study recommended that there was a need to continuously create awareness by the relevant regulatory authorities to citizens on the entire existing legal framework in the built environment. Indeed, it could be necessary to issue certificates of attendance of such forums by developers or their representatives as precondition for construction permit. This could safe wastage and agony of future demolitions and loss of lives due to collapse of poorly build structures.

5.6.4 Policy Makers

A policy framework to sensitize stakeholders on building project success model consisting of; Project initiation process, monitoring and evaluation team capacity and compliance with legal framework could be introduced and promoted as a good practice in the built environment in order to enhance safety, quality and health living in Nairobi County. This may be replicated to other Counties in the Country. It could improve quality and standard of lives to the citizens, as envisioned in Kenya vision 203

5.7 Suggestions for Further Studies

This particular study focused on influence of project initiation process, monitoring and evaluation team capacity and compliance with legal framework on building projects success in Roysambu constituency.

Suggestions for further research may be to replicate the building success model to other projects such as roads, water among others.

5.8 Contribution to body of knowledge

This study investigated how project initiation processes, Monitoring and evaluation team capacity and legal framework may influence building project success in Roysambu Constituency, Nairobi County, Kenya. Little information exists beyond establishing a significant association between individual independent variables and building project success in Roysambu Constituency, Nairobi County, Kenya from previous studies. The findings of this study thus provided significant contributions to the body of knowledge.

Objective	Contribution to body of Knowledge
To establish the influence of project initiation process on building projects success	The success of a building project is determined by the initiation stages. These form a strong foundation for the project when all the stages are taken into consideration. These include project formulation, project histories, project strategy and product description.
To determine the influence of Monitoring and evaluation team capacity on building projects success	Success of most of the building projects is significantly affected by monitoring and evaluation team capacity. This prompts a need for the project stakeholders to ensure that the team for monitoring and evaluation consist of skilled and qualified individuals. The projects managers should also make sure that there is adequate equipment, technology and machinery to ensure that monitoring and evaluation team do their job effectively. The team should also be adequately financially facilitated.
To assess the influence of compliance with legal framework on building projects success	The study found that compliance with legal framework is very significant in success of any building projects. Compliance with legal framework entails adherence to standard specifications of building and guidelines on quality of building materials, technical designs approval and issuance of work construction permit by County Government and adherence with regulatory bodies' regulations.
To eestablish the moderating influence of compliance with legal framework on relationship between project initiation process and building project success	The study also found that the relationship between project initiation process and building project success is significantly moderated by compliance with legal framework. This is an indication that before the start of any building project, projects designs have to be approved and work permit given to the project managers. This will ensure smooth and effective operations during implementation of the projects.
To establish the moderating influence of compliance with legal framework on relationship between Monitoring and	The study revealed that relationship between the monitoring and evaluation team capacity and building project success is significantly moderated by compliance with legal framework. This means that monitoring and evaluation team must be capable of carrying the projects monitoring and evaluations under the set guidelines and

evaluation capacity and building project success	regulations in a bid to ensure that the building projects are successfully completed.
To examine the moderating influence of compliance with legal framework on relationship between project initiation process and Monitoring and evaluation team capacity on building project success	The study found that the relationship between project initiation process and monitoring and evaluation team capacity and building project success is significantly moderated by compliance with legal framework. This implies that for building projects to be successful, project initiation process as well as monitoring and evaluation need to be carried out under guidance of the set rules and regulations.

The study findings points to a new building project success model which if embraced may significantly positively influence building construction industry.

A policy framework to continuously sensitize and build capacity to potential developers or their representatives on the benefits and significance of project initiation process, monitoring and evaluation team capacity and compliance with legal framework as a building project success model could be introduced and promoted as a good practice in the built environment. This could attempt to address the gap in knowledge of the complex construction processes and requirements, which have often been ignored leading to several instances of poor performance in the industry. This could increase the level of health and safe buildings and thus improve high quality living standards with resultant productive society, reduction in the trend of agony demolitions of unsafe and illegal buildings. It could be replicated to other Counties in Kenya and globally as building project success will be consistent with sustainable cities and communities which are among the 17 sustainable development goals.

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APPENDICES

Appendix I: Transmittal Letter

Anthony Githinji Kihuga
P.O Box 1322-90100 Machakos
0724556113

Dear Sir/ Madam **Date;**

Re: Permission to Conduct a Research

I am a post graduate student at Open Distance E Campus, the University of Nairobi pursuing a PHD in Project Planning and Management. As part of the requirements for the award of this degree I will be conducting a study on Project initiation process, Monitoring and evaluation team capacity and compliance with legal framework on building project success: a Case of Building Projects in Roysambu Constituency, Nairobi County, Kenya.

It's my pleasure to inform you that your building has been selected to be part of the study and am therefor requesting for your authority to collect the required information from yourself and other respondents selected. The data will be collected with willful consent of the respondent and will be treated with the necessary confidentiality. Names or any form of identity will not be included in the research instruments and the information offered will be used solely for this study.

Thanking you in advance

Yours faithfully,

Anthony Githinji Kihuga

Appendix II: Project Manager, Contractor and NCCG, NCA, NEMA Officials

Anthony Githinji Kihuga
P.O, BOX 1322-90100
Machakos
Tel; 0724556113

Dear Sir/ Madam

RE: Request to fill Questionnaires for research purpose; Building owner, Project manager, Contractor, and NCCG, NCA, NEMA officials

I am a post graduate student at the University of Nairobi pursuing a PHD in Project Planning and Management at Open Distance E Campus and carrying out a research on Project initiation process, Monitoring and evaluation team capacity and Compliance with legal framework on Building project success: a Case of Building Projects in Roysambu Constituency, Nairobi County, Kenya.

It's my pleasure to inform you have been identified as one of the respondents for the research and that the information gathered will be treated as confidential and will be for the sole purpose of this study. Kindly respond to the items in the attached questionnaire to the best of your knowledge.

Thank you
Yours faithfully
Anthony Githinji Kihuga

Appendix III: NACCOSTI Permit Letter

THIS IS TO CERTIFY THAT:
MR. ANTHONY GITHINJI KIHUGA
of UNIVERSITY OF NAIROBI, 0-90100
Machakos,has been permitted to
conduct research in *Nairobi County*

on the topic: *PROJECT INITIATION PROCESS, MONITORING AND EVALUATION TEAM CAPACITY, COMPLIANCE WITH LEGAL FRAMEWORK AND BUILDING PROJECTS SUCCESS: THE CASE OF BUILDING CONSTRUCTION PROJECTS IN ROYSAMBU CONSTITUENCY, NAIROBI COUNTY, KENYA.*

for the period ending:
21st February,2019

.....
Applicant's Signature

Permit No : NACOSTI/P/18/5479/21499
Date Of Issue : 21st February,2018
Fee Recieved :Ksh 2000

.....
Director General
National Commission for Science, Technology & Innovation

Appendix IV: Research Questionnaire for Project Developer, Project Managers and Contractors.

The purpose of this study is to investigate how project initiation processes, Monitoring and evaluation team capacity and legal framework may influence building project success in Roysambu Constituency, Nairobi County, Kenya. Please answer truthfully following instructions for each question. Thank you in advance.

Section A: Background Information

1.0 Building Characteristics: Building project developer as respondent

Please provide the following details regarding your building.

Sub County_____ Ward _____

1.2 Type of Ownership of the Building: Building project developer as respondent

Type of Building Ownership		
Family		Members Group
Individual		Government Department
Cooperative Society		Public Through Shares
Others (Specify)		

1.3 Please indicate your gender

Male		Female

1.4 Age category of respondent: All respondents

18-29 years		50-59 years
30-39 years		60 years and above
40-49 years		

1.5 What position do you hold in the current building project

Project developer	Project Manager	Contractor

1.6 State the Highest Attained Education Level: All respondents

KCPE		Bachelor's Degree
KCSE/EACE		Master's Degree
Diploma		PHD

Others (Name of Certificate)

1.7 Category Classification of the Firm by NCA: Project Contactor as respondent

Category 1	Category 6
Category 2	Category 7
Category 3	Category 8
Category 4	Skilled Supervisor
Category 5	

1.8 State the status of your Profession: Project Manager as respondent

Graduate
Registered Professional by relevant body
Current Practising License

Section B: Project initiation process

Please indicate your level of agreement with the following statements on initiation process on your building project success

No	Project initiation process and statements.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	(a) Project formulation					
1	There was identification of the project ideas.					
2	Project feasibility studies were done.					
3	Project assessment was done.					
4	Project evaluation was done.					
5	There was project classification.					
6	There was project preliminary selection.					

(b) Project strategy						
7	Project objectives were established.					
8	Project goals were determined.					
9	Project ideas into alternative concepts were examined.					
10	Project strategic plan was developed.					
(c) Project histories						
11	Project past experience information was accessed and applied.					
12	Development of systems with repositories database that contain project details were established and applied.					
(d) Product description						
13	Project ideas generation were examined.					
14	There was project assessment of market, technology and competition.					
15	There was involvement of currently practicing engineers' professionals in the definition of the product.					

16	There was involvement of currently practicing engineers' professionals in project detailed design.					
17	There was involvement of currently practicing professionals in the project technical specifications.					
18	Project scope was determined.					

19. How do you rate project initiation process contribution to your building project success?

No contribution at all to my building project success.	Contributed to some extent to the achievement of most of my building project success.	Contributed to the achievement of most of my building project success.	Contributed to achievement of all my building project success.	Don't know.
1	2	3	4	5

Section C: Monitoring and evaluation team capacity

Please tick the most appropriate response regarding Monitoring and evaluation team capacity on your building project success

No	Monitoring and evaluation team capacity statements.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	(a) Financial Capacity					
20	There was budgetary allocation for project monitoring and evaluation team.					

21	The funds allocated for the monitoring and evaluation were adequate					
	(b) Human capacity					
21	Project Monitoring and evaluation team possessed relevant skills towards their work.					
22	Project Monitoring and evaluation team believed in their work.					
23	Project Monitoring and evaluation team had the right attitudes towards their work.					
24	Project Monitoring and evaluation team was Knowledgeable in their work.					
25	Project Monitoring and evaluation team was analytical in their work.					
26	Project Monitoring and evaluation team was competent in information technology for their work.					
27	Project Monitoring and evaluation team applied the right methodology in performing their work.					

28	Project Monitoring and evaluation team possessed interpersonal relations.					
30	Project Monitoring and evaluation team possessed communication skills.					
(c) Physical capacity						
31	Equipment's were available for project Monitoring and evaluation team to perform their work.					
32	Technology and machinery were available for project Monitoring and evaluation team to perform their work.					

33. How do you rate Monitoring and evaluation team capacity contribution to your building project success?

No contribution at all to my building project success	Contributed to some extent to the achievement of most of my building project success	Contributed to the achievement of most of my building project success	Contributed to achievement of all my building project success	Don't know
1	2	3	4	5

Section D: Compliance with Legal framework

Please indicate your level of agreement with the following statements on compliance with legal framework on your building project success

No	Legal framework statements.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	(a) Adherence to Building Code.					
34	Standard specifications of building were available and adhered to in my building project.					
35	Guidelines on quality of building materials were available and adhered to in the building project.					
	(b) Adherence to County by- laws					
36	Technical designs were approved by County Physical planning department for the building project.					
37	Technical designs were approved by County Public health department for the building project.					
38	Work construction permit was issued by County Government for the building project.					
(c) Adherence to regulatory bodies requirements						
39	The project had been issued with NEMA License.					

40	The project had been issued with NCA construction permit.					

Section H: Building Project Success

No	Building project success statements.	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
(a) Management success						
65 `	The building project objectives were timely met					
66	Services provided were adequate					
67	Projects progressively set up better contract					
68	The project encounter very fewer changes due to some avoidable circumstances					
(b) Approved houses for occupancy						
69	The project attained health and safety requirements					
70	Building in completion had a safe access					
71	Project functionality was reliable and designed in relation to cost					
72	Buildings attained a pleasant aesthetic value					
73	Building location had a reliable security					
(c) Developer Satisfaction						

74	The entire project did not encounter any legal claims					
75	Delivery of building project was reliable and efficient					
76	Zero defects were experienced on building handover					
77	The project had minimal Schedule Over-runs					
78	A good community relationship was established at end of the project					

79. How do you rate your building project success?

Not at all	To some extent there was building project success	To a great extent there was building project success	To a very great extent there was building project success	Don't know
1	2	3	4	5

Appendix V: Interview Schedule for Sub- County, NEMA and NCA officials

PROJECT INITIATION PROCESSES, MONITORING AND EVALUATION TEAM CAPACITY AND LEGAL FRAMEWORK MAY INFLUENCE BUILDING PROJECT SUCCESS IN ROYSAMBU CONSTITUENCY, NAIROBI COUNTY, KENYA.

Project initiation process and building project success

1. What is your view on how projects are formulated in Roysambu Constituency?
2. According to the project guidelines in the county, in which areas are project managers repeatedly failed in project strategy formulation?
3. How frequent do project managers consult you in relation to a project they want to undertake?
4. Do you think involvement of currently practicing professionals in the project technical specifications has been a major cause of failure of projects?
5. In what ways do you readily avail the relevant guideline information to assist in project formulation?
6. How are you involved in collaboration with project managers in project scope identification?

Monitoring and evaluation team capacity and building project success

7. How often do you closely engage with monitoring and evaluation team?
8. In your opinion, how does monitoring and evaluation team affect completion of projects?
9. Which are the arrangements that the county makes to ensure funds allocated for the monitoring and evaluation are adequate?
10. In what ways are you involved recruitment of competent project monitoring and evaluation team?
11. How do you put into use the recommendations from project monitoring and evaluation team?

12. What is your view on adoption of appropriate technology and machinery for project monitoring and evaluation team to perform their work?

Compliance with Legal framework and building project success

13. In what ways do building projects adherence to building code?
14. Is it true that most of the building that are incomplete is as a result of failure to adherence to building code? Explain.
15. Explain how standard specifications of building are adhered to in building project?
16. Are there guideline on how building project adhere to county by- laws? Explain.
17. Under which circumstances do you issue work construction permit for the building project?
18. In what ways did the project qualify to be issued with NEMA License?
19. Which actions do you take in a situation where project was issued with NCA construction permit illegally?

Moderating influence of Legal framework on influence of project initiation process and Monitoring and evaluation team capacity on building project success

20. Why do some projects fail to adherence to regulatory bodies requirement?
21. How often do you check that buildings meet standard specifications?
22. What role did the guidelines on quality of building materials available and adhered to, affect project initiation process, Monitoring and evaluation team capacity?
23. Do you have any information on how County Physical planning department approve projects in Roysambu Constituency?
24. Are there limitations posed by government regulations on how you supervise projects?

25. How does project issued with NEMA license, carry out its project initiation process and Monitoring and evaluation team capacity?

Building Project Success

26. What has caused incompletion of buildings in Roysambu Constituency in time?
27. How well do you think that entire building projects in Roysambu Constituency meet the need of the residents?
28. Have there been cases of buildings collapsing in the area? If yes, what causes them?
29. In your own experience, what do you find to be the limitations in ensuring efficiency of projects?
30. What strategy guides project managers to minimize schedule over-runs?
31. In what ways are you involved in handling the legal claims encountered?

Appendix VI: Observation Check List

Please use visual observations on the sampled buildings for predetermined features as per the Likert guide scale schedule tabulated here below;

No.	Observation features	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1.	The building did not have any cracks					
2.	The building did not have any leakages					
3.	The building did not have adequate lighting					
4.	The building did not have adequate waste disposal					
5.	The building did not have adequate toilets per floor					
6.	The building did not have adequate showers per floor					
7.	The building did not have safe electrical wiring					
8.	The building did not have firefighting equipment					

9.	The building did not have a good drainage system					
10.	The building did not have proper fire exit labelling					
11.	The building did not have facilities for physically challenged					
12.	The building floors and wall were not in level					
13.	The building stair cases had protective barriers					
14.	The building environment was untidy and had stagnant water					
15.	The building was attractive from a distance					

Appendix VII: Component Matrix for Factor Analysis

	Component										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
There was identification of the project ideas	**.804**	.458	-.004	.162	.028	.047	.026	.035	.212	.079	.004
Project feasibility studies were done	.348	.122	**.868**	.052	.157	.025	.037	.067	.080	.066	.147
Project assessment was done.	**.673**	.584	.098	.332	.098	.025	.048	.140	.134	.026	.039
Project evaluation was done	**.849**	.454	.132	.123	.106	.056	.042	.053	.048	.051	.011
There was project classification	.214	.056	.314	.260	.116	**.609**	.380	.289	.172	.060	.240
There was project preliminary selection.	.184	.118	.214	.251	.152	.084	.100	.162	**.709**	.096	.005
Project objectives were established	**.878**	.268	.221	.083	.077	.078	.052	.195	.018	.093	.048
Project goals were determined	**.884**	.118	.214	.251	.152	.084	.100	.162	.009	.096	.005
Project ideas into alternative concepts were examined	**.575**	.522	.196	.182	.016	.196	.423	.190	.044	.037	.229
Project strategic plan was developed.	**.926**	.046	.072	.024	.050	.034	.161	.235	.007	.052	.143
Project past experience information was accessed and applied	.070	.300	.007	.191	.196	.407	.232	.153	.128	**.653**	.143
Development of systems with repositories database that contain project details were established and applied.	**.855**	.375	.158	.053	.197	.126	.022	.037	.086	.107	.009
Project ideas generation were examined.	.480	.161	.517	.157	**.570**	.031	.417	.092	.204	.239	.045
There was project assessment of market, technology and competition.	**.863**	.392	.044	.092	.007	.076	.137	.025	.014	.007	.171
There was involvement of currently practicing engineers' professionals in the definition of the product.	**.675**	.474	.149	.347	.256	.131	.091	.202	.005	.063	.043
There was involvement of currently practicing engineers' professionals in project detailed design.	.375	.474	.149	.347	.256	.131	.091	.202	.005	.063	**.643**
There was involvement of currently practicing professionals in the project technical specifications.	.340	.075	**.860**	.137	.013	.014	.027	.132	.152	.007	.151
Project scope was determined	**.843**	.395	.049	.027	.060	.061	.193	.071	.011	.006	.252
How do you rate project initiation process contribution to your building project success	**.719**	.515	.337	.174	.051	.043	.009	.164	.049	.007	.050
There was budgetary allocation for project monitoring and evaluation team.	.255	.375	.158	.053	.197	**.726**	.022	.037	.086	.107	.009
The funds allocated for the monitoring and evaluation were adequate	.109	.416	.078	.302	**.682**	.021	.182	.059	.199	.022	.238
Project Monitoring and evaluation team possessed relevant skills towards their work.	**.667**	.316	.433	.188	.124	.033	.067	.265	.185	.129	.015
Project Monitoring and evaluation team believed in their work.	**.835**	.338	.219	.133	.025	.191	.045	.145	.050	.049	.012
Project Monitoring and evaluation team had the right attitudes towards their work.	.343	.038	.003	.184	**.633**	.042	.060	.034	.099	.051	.097
Project Monitoring and evaluation team was Knowledgeable in their work.	**.856**	.033	.158	.432	.113	.073	.032	.051	.084	.058	.053
Project Monitoring and evaluation team was analytical in their work.	**.854**	.287	.200	.297	.021	.013	.045	.034	.080	.161	.108
Project Monitoring and evaluation team was competent in information technology for their work.	.252	**.588**	.452	.014	.065	.195	.063	.043	.139	.340	.074
Project Monitoring and evaluation team applied the right methodology in performing their work.	.345	.103	.151	.189	.018	.153	.081	**.778**	.023	.015	.030

Project Monitoring and evaluation team possessed interpersonal relations.	**.951**	.092	.177	-.082	-.050	.064	.106	.065	.018	.023	.046
Project Monitoring and evaluation team possessed communication skills.	.122	.289	.674	**.466**	.002	.074	.177	.191	.103	.247	.096
Equipment's were available for project Monitoring and evaluation team to perform their work.	**.745**	.527	.069	.128	.089	.085	.058	.009	.114	.165	.249
Technology and machinery were available for project Monitoring and evaluation team to perform their work.	**.**317	.495	.056	.039	.071	.036	.103	.038	.029	**.726**	.053
How do you rate Monitoring and evaluation team capacity contribution to your building project success?	**.852**	.257	.431	.021	.008	.047	.067	.033	.005	.043	.003
Standard specifications of building were available and adhered to in my building project.	**.**240	.180	.004	.109	**.539**	.042	.167	.112	.084	.059	.056
Guidelines on quality of building materials were available and adhered to in the building project.	**.862**	.438	.026	.025	.131	.138	.029	.027	.122	.073	.002
Technical designs were approved by County Physical planning department for the building project.	**.896**	.337	.175	.014	.066	.009	.046	.138	.083	.096	.046
Technical designs were approved by County Public health department for the building project.	**.**197	.304	.108	**.792**	.059	.057	.083	.108	.009	.006	.127
Work construction permit was issued by County Government for the building project.	.067	.058	.153	**.618**	.239	.384	.186	.244	.071	.140	.168
The project had been issued with NEMA License.	**.880**	.403	.016	.027	.023	.004	.111	.050	.111	.100	.095
The project had been issued with NCA construction permit.	.223	.092	.129	.270	.074	.141	.092	.012	.045	**.724**	.056
Standard specifications of building were available and adhered to in my building project.	**.745**	.527	.069	.128	.089	.085	.058	.009	.114	.165	.249
Guidelines on quality of building materials were available and adhered to in the building project.	.021	.027	.380	.316	.285	.424	**.444**	.105	.074	.095	.174
Technical designs were approved by County Physical planning department for the building project.	**.852**	.257	.431	.021	.008	.047	.067	.033	.005	.043	.003
Technical designs were approved by County Public health department for the building project.	.164	.312	.382	.375	.317	.079	.099	.112	**.598**	.022	.137
Work construction permit was issued by County Government for the building project.	**.862**	.438	.026	.025	.131	.138	.029	.027	.122	.073	.002
The project had been issued with NEMA License.	**.896**	.337	.175	.014	.066	.009	.046	.138	.083	.096	.046
The project had been issued with NCA construction permit.	**.897**	.304	.108	.092	.059	.057	.083	.108	.009	.006	.127
Standard specifications of building were available and adhered to, and there was project initiation process and Monitoring and evaluation team capacity.	.341	.206	**.489**	.148	.194	.256	.170	.393	.130	.025	.230

Guidelines on quality of building materials were available and adhered to, and there was project initiation process, Monitoring and evaluation team capacity.	**.880**	.403	.016	.027	.023	.004	.111	.050	.111	.100	.095
County Physical planning department approved the project designs, there was project initiation process and Monitoring and evaluation team capacity.	.423	.092	.129	.270	**.674**	.141	.092	.012	.045	.024	.056
County Public health department approved project designs, there was project initiation process and Monitoring and evaluation team capacity.	**.471**	.066	.622	.265	.134	.198	.058	.331	.079	.165	.167
Construction permit was granted by County Government, and there was project initiation process and Monitoring and evaluation team capacity.	.175	**.600**	.157	.306	.321	.055	.423	.115	.295	.038	.188
Project had been issued with NEMA license, there was project initiation process and Monitoring and evaluation team capacity.	.089	.012	.148	.450	**.545**	.021	.256	.037	.518	.167	.031
Project had been issued with NCA construction permit, there was project initiation process and Monitoring and evaluation team capacity.	.295	.103	.183	.447	.184	.137	.175	**.536**	.056	.318	.131
How do you rate the contribution of legal framework relationship between project initiation process and Monitoring and evaluation team capacity on your building project success?	.198	.038	.067	.064	.492	**.722**	.276	.077	.130	.014	.162
There was project initiation process and adherence to standard specifications of building.	.374	.263	**.516**	.286	.243	.226	.291	.233	.203	.158	.181
There was project initiation process and adherence to guidelines on quality of building materials.	.112	**.683**	.115	.148	.048	.158	.147	.423	.171	.293	.306
There was project initiation process and approval of technical designs by County Physical planning department.	.350	.064	.094	.361	**.627**	.479	.148	.023	.110	.086	.169
There was project initiation process and approval of technical designs by County Public health department.	.268	.408	.021	.272	**.619**	.093	.160	.361	.087	.102	.155
There was project initiation process and construction permit issued by County Government	.002	.252	.069	.228	.356	.227	**.609**	.189	.366	.179	.117
There was project initiation process and NEMA license for the project.	**.892**	.310	.078	.046	.086	.170	.020	.160	.051	.041	.066
There was project initiation process and NCA construction permit for the project.	**.**134	.206	.002	.143	.045	.062	.150	**.821**	.009	.040	.112
How do you rate the contribution of moderating Compliance with Legal framework and Project initiation process and your building project success?	**.896**	.337	.175	.014	.066	.009	.046	.138	.083	.096	.046
The project adhered to standard specifications of building and there was Monitoring and evaluation team capacity.	**.**143	.089	.032	.082	.169	**.750**	.097	.012	.021	.071	.102

The project adhered to guidelines on quality of building materials and there was Monitoring and evaluation team capacity.	**.935**	.206	.013	.087	.132	.163	.123	.076	.009	.029	.037
There was NEMA license for the project and Monitoring and evaluation team capacity	**.931**	.031	.097	.002	.087	.006	.047	.042	.210	.049	.074
There was NCA construction permit for the project and Monitoring and evaluation team capacity	**.**127	.077	.049	.182	.108	.085	.021	**.656**	.012	.037	.033
How do you rate the contribution of moderating influence of compliance with legal framework and Monitoring and evaluation team capacity and building project success?	**.843**	.395	.049	.027	.060	.061	.193	.071	.011	.006	.252
Extraction Method: Principal Component Analysis.											
a. 11 components extracted.											