

**INTERNAL ORGANIZATION ENVIRONMENT AND PROJECT PERFORMANCE  
IN CONSTRUCTION FIRMS WITHIN NAIROBI CITY COUNTY, KENYA**

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**DECLARATION**

This research project is my original work and has not been presented for award of a degree in any other University.

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This research project has been presented for examination with my approval as the University Supervisor.

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## **DEDICATION**

I dedicate this research work to my family and friends for their moral support and words of encouragement that made the work successful.

## **ACKNOWLEDGEMENT**

I acknowledge the almighty God for guiding me throughout my research work and ensuring that this journey in life has been success. I also acknowledge the great support have received from my supervisor through reading all the draft proposals and guiding me through the process. Further I acknowledge all the people who made this project work a success.

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## **OPERATIONAL DEFINITION OF TERMS**

<b>Employee Competency</b>	The capabilities and skills that employees within the organization possess
<b>Internal Organization Environment</b>	These are the conditions, events and aspects of the organization that affect the firm's choices, activities and performance.
<b>Organization Culture</b>	These are the common qualities and convictions inside an association
<b>Organisational structure</b>	The formal system of task and authority that guides personnel towards achieving organization objectives.
<b>Project performance</b>	This is the attainment of the set goals and objectives of a project within its lifetime
<b>Resource capability</b>	The ability of the organization to have access to the necessary resources needed to support its operations

## **ABBREVIATIONS AND ACRONYMS**

<b>IT</b>	Information Technology
<b>KENHA</b>	Kenya National Highways Authority
<b>NCA</b>	National Construction Authority
<b>PM</b>	Performance Measurement
<b>SPSS</b>	Statistical Package for Social Sciences
<b>US</b>	United States

## ABSTRACT

The internal environment of organizations is one of the main factors that determine project performance in different industries. The study specifically examined how various variables such as the structure, culture, resource capability and employee competency affect projects success. The resource dependency theory, resource-based view, and the open systems theories were used with a descriptive research design. The research targeted responses from 49 registered local construction firms. The study further adopted census survey, obtaining a response of 98 employees from Nairobi. Secondary and primary data was used. The research used means and standard deviation in the descriptive analysis while for the inferential statistics the research utilized correlation and regression tests. A response rate of 80% was obtained. The research results showed that internal organization environment determined ( $R^2=.794$ ) project success. The study showed that there was significant effect of organization structures, organization culture, resource capability and employee competency on project performance. The study concluded that leadership skills, enhanced employee competency and better resource mobilization and utilization were key predictors of project performance. It was the researcher's recommendation that the management equips the employees with better technical skills will lead to project results. Further, organization should adopt an elaborate rewards and recognition system. The study also recommends that organizations should implement a robust internal structure that will foster coordination within the firm.

# CHAPTER ONE

## INTRODUCTION

### **1.1 Background of the Study**

Determination of project performance is key since it determines the return on investment and hence its liquidity levels and potential to perform (Kululanga & Kuotcha, 2010). Auma (2014) claims that construction organizations are characterized by poor project performance occasioned by time and cost escalations to the magnitude of over 50%. Construction organizations aid in developing and achieving societal goals. Their contribution to national development in developing economies has received wide attention by governments, investors and practitioners (Ofori, 2015). Their activities are significant to the achievement of national goals of infrastructural development, provision of shelter and job creation (Stasiak-Betlejewska & Potkany, 2015).

The construction sector is especially considered a crucial sector for of strategic economic significance in developing nations due to the macroeconomic role it plays in fixed capital formation and linkages across sectors (K' Akumu, 2007). Documented studies reveal that the sector accounts for close to 10 % of developed countries' GDP and over 4 percent of the GDP of emerging economies (Gwaya, Masu, & Oyawa, 2014). The importance of construction organizations in enhancing the prosperity of a nation thus cannot be gainsaid (Callistus, Anzagira, Kissi, Balaara, & Anzagira, 2014).

The industry that construction organizations operate in is complex (Ofori, 2015). This is because the business of construction involves different stakeholders including clients, contractors, consultants, shareholders and regulators (Ribeiro, Paiva, Varajao, & Domingez,

2013). The business involves diverse sectors and attracts the interest of many stakeholders, from environmentalists, to politicians and members of the public. Consequently, construction organizations frequently encounter challenges which that affect their effectiveness in terms of cost overruns and delays in project completions (Gwaya et al., 2014).

### **1.1.1 Concept of Project Performance**

Extreme undertaking execution is accomplished through restricting cost runaway, adhering to time periods, structure, improving item quality and measures for ecological assurance (Mungai, 2014). The formulation of project performance indicators has been a common field of review for decades (DETR, 2006). Traditionally the performance indicators were mainly focussed on meeting the fiscal aspect of the business such as sales and increasing profitability, Fox et al (2008); however, these measures are limited as they utilize past records and easy to compute metrics.

Performance indicators are key components that can be utilized in assessing a complex program in small understandable and comparable units than can help in decision making. Traditional performance indicators have been the project cost, execution time and product quality (Wadugodapitiya et al., 2010). However, the main issue in measuring the project performance is not merely evaluating the cost, time and quality in isolation; but also examine the business success in terms of whether the project is justifiable in terms of the risk to the business and the effort put into undertaking the project (Akanni, Oke, & Akpomiemie, 2015).

The inadequacy of these measures has been reviewed by numerous contemporary researchers (Arditi & Mochtar, 2006). This led to the review and culmination of key performance indicators which overcame the limitations of financial measures (Lindhard & Larsen, 2016). They (KPIs) assure clients the firm is performing as they expect, and as the best companies

do (Muchai, 2012). The KPIs framework is composed of business performance of the firm, cost incurred, time spent, product quality, satisfaction levels, health and safety (DETR, 2006).

Project performance is defined as achieving set objectives and planned outcomes according to foreordained states of time, cost and execution (Beleiu, Crisan, & Nistor, 2015). Customarily, the performance of a venture was estimated in wording of the iron triangle which describes project success as the completion of defined scope of work to specification and meeting the time and budget goals (Serrador & Turner, 2014). It has been noted that measuring success using the Iron Triangle is no longer enough (Beleiu, Crisan, & Nistor, 2015). Turner and Zolin (2012) state that the stakeholder's perspective matters. Project success can be measured by its usability and the level of satisfaction attained by the various stakeholders.

As indicated by Yeung, Chan, Chan, Chiang, and Yang (2012), researchers have led examination on venture execution assessment and benchmarking in the development the executive's discipline and recognizing proportions of execution is essential. Wadugodapitiya, Sandanayake, and Thurairajah (2010) clarify execution estimation (PM) as a key piece of the executives and characterizes it as a procedure of assessing the task activities against the laid principles and goals. Moreover, PM is significant for associations gauge their competitive positioning in the markets. The study measured venture execution utilizing on-time fulfilment, on-spending culmination, work execution, cost proficiency and the customer fulfilment.

In executing projects, the administration consistently looks to amplify the achievement of the tasks being embraced. In any case, the task execution procedure is a sensitive activity which can be effectively be influenced by either inward factors, outside variables or a blend of both (Kululanga and Kuotcha, 2010). As indicated by Galbreath and Galvins (2008) the inner association, the earth is one of the key parts of the firm and it incorporates the administration

of workers, hierarchical culture, structure and different perspectives that control and characterize representative conduct (Yazdanfar, 2013).

Employee competency also, company magnitude are profoundly connected with the association execution (Dogan, 2013), influence inward structures, board size, corporate culture, firm age, and liquidity (Vafeas, 2009). Researchers have separated perspectives with notable writers concluding that firm factors play the key role in strategy execution (Galbreath and Galvins, 2008) while others contend that industry qualities are the ones affecting firm performance (Porter, 1980).

Claver-Cortés, Pertusa-Ortega and Molina-Azorín (2012) ascertained that resources are key to project success and for the accomplishment of organizational objectives. The effectiveness of the resources plays a role in the efficiency of the firm in reaching its goals and objectives. Businesses aim to generate profits by providing certain services or products according to consumer demand. To become profitable, businesses adopt new technology, lay off redundant employees, hire qualified and skilled staff, and adopt new policies aimed at guiding the firm forward. All these require adequate financial resources. Organization structure determines a firm's effectiveness in attaining its goals (Beleiu, Crisan, & Nistor, 2015). Michael, Duane, and Robert (2011) posit that organization structure conforms to its way of operations and enhancing their performance. He also ascertained that the strategies that an organization adopts to attain its goals determines its structure.

Organization structure has an impact on the effectiveness of a firm's ability to achieve their goals (Beleiu, Crisan, & Nistor, 2015). Michael, Duane, and Robert (2011) organization structure of an organization conforms to its way of operations and enhancing their performance. He further noticed that the association structure embraced by an association is

significantly affected by the techniques received by the firm towards accomplishing organizational goals.

The corporate culture of the organization depicts the shared values that govern how people interact and behave within the organization. The organization culture will be assessed using rewards and recognition, employee training and recruitment and the communications strategy (Yazdanfar, 2013). It is necessary to manage the cultural aspects of the organization since though it may not be a key requirement, competency among the management teams and the adopted culture is an indicator of the potential success of an organization (Chang & Tharenou, 2004). Determining the most appropriate culture and when to change this culture is a key challenge to managers worldwide (Chaudhry, Yuan, & Cooke 2016).

Empirical proof has after some time prompted distinguishing proof of some accomplishment factors, present in high performing firms. These components are known to add to over 80% of an association's exhibition (Niaga, 2012). The components have been started firm-unequivocal qualities since all high performing affiliations have them in some mix. These elements incorporate the manpower, resource capability, leadership and firm structure (Mungai, 2014). McKinsey's asserts that internal factors include the firm strategy, organization structure, employee skills and competencies, culture and the leadership style and all these have significant effects on organizational return (Gyepi-Garbrah & Binfor, 2013).

Reichelt and Lyneis (2009) were of the view that the three main dynamics affecting the project performance was the work structure, the organization feedback system and the work quality in the project process. Musa (2012) conducted a study on total quality management and the performance of projects at Interbuild construction firm. The researcher indicated that poor human resource management practices and poor resource allocation and utilization were the main factor leading to poor project performance.

Bundi (2011) examined the challenges faced by Kenya Rural Roads Authority in the procurement management process and indicated that undue political influence and inadequate resource utilization hindered the full implementation of the authority projects. Nyamwaro (2011) examined the challenges within Ministry of Roads that affected the project implementation and concluded that lack of effective communication, poor organization structure and overhead costs lead to failures in the project performance. Despite the above studies elucidating information on the main factors affecting construction projects none of the studies specifically examined how the firm's internal environment affects project productivity among Nairobi based firms charged with construction activities.

This study aims to solve this by examining the internal environment. The performance of the project was measured using key performance indicators such as; client satisfaction, cost-efficiency, on-time completion, quality work performance and timely completion.

### **1.1.3 Construction Firms in Nairobi County**

The Kenya Economic Survey (2018) reported that the construction sector growth has risen from 13.8% to 14.1% between 2016-17. Despite this, the sector reported a marginal growth rate of 6.1%, lower than the 8.8% growth rate which was recorded in 2016. This lag can be explained by the increasingly unfavorable environmental conditions after the elections and the low credit growth rate in the private sector which is a result of the interest rates capping law which started operating in 2016. The KNBS, 2012 reports that the construction industry in Kenya is experiencing robust performance and this has made the region a desirable destination for foreign investment. This has made Nairobi to witness increasing booms in construction projects. These projects may be initiated by the government, private corporations, individuals or institutions, and foreign investors. The industry generates employment opportunities to many Kenyans therefore improving their standards of living.

Nairobi City County is the regional hub within Eastern Africa which makes the infrastructural agenda of the city the main hotspot of the regions' construction activities. The National Construction Authority (2017) registered 49 category 1 construction firms in Nairobi. Further, some firms have not become as effective to qualify for enrolment. Thus, the examination focussed on firm's key to infrastructural advancement inside the capital city.

## **1.2 Statement of the Problem**

Construction business is on the verge of a boom after an increased investment by the government in the construction industry to provide better transport and infrastructure such as expanded roads and railway networks for a more effective and productive economy. In the last 5 years, the construction industry has been the key driver for growth and development of the Kenyan economy. According to a recent industry survey, an accelerated growth of 13% was recorded in the year 2014 up from 5.8% in the year 2013 (Kanjumba, Njuguna & Achoki, 2016). The construction industry is responsible for 7% of Kenya's GDP (Oxford Business Group, 2018). The sector is recognized as a key contributor to the achievement of Kenya's vision 2030. However, despite the accelerated growth in the industry, little examination has been carried out on how the firm's internal setup its performance.

The construction industry within the capital City of Nairobi has been experiencing an upsurge in demand owing to the high appetite for office spaces, better road infrastructure and other social amenities (Oxford Business Group, 2018). The performance within this sector has been varying from quality completion of the projects to dismal and at times catastrophic projects. In spite of these variations there has minimal evaluation of the underlying causes to the disparities in project performance within construction firms (Kemei & Nyerere, 2016). The aim was examining the effect of internal organization environment on performance of projects within these firms.

Kemei and Nyerere, (2016) attested that the ineptitude of development firms was vital to the proceeding with calamities in the structure area in the city. The study however did not take into consideration project performance thus creating a knowledge gap. Generally, studies by Mwaniki, Wamuchiru, Mwau, Opiyo, and Mwaniki, (2015); Auma (2014) shows that there is a distinction in the inner components across development firms as there is a fluctuation in the venture execution. Further Ngacho and Das, (2014) noted with profound worry that there was helpless undertaking usage in the development business to a great extent ascribed to the helpless association culture and wastage of assets apportioned to the venture. The above studies were not conducted within Nairobi City County thus creating an empirical gap the study will seek to fill. Choge and Muturi, (2014) indicated that poor employee competency and lack of policy guidelines led to wastage of funds which contributed to poor project performance. Ondari and Gekara, (2013) noted that poor workmanship, unreliable structures, poor communication and insufficient funding hinder project completion. This study aimed to examine how internal organization factors influence project performance of Nairobi-based construction firms.

### **1.3 Research Objective**

#### **1.3.1 General Objective**

- i. Effect of organization structure on project performance among construction firms in NCC
- ii. To examine the association between organization culture and project performance among construction firms in NCC
- iii. To find out the relationship between resource capability and project performance among construction firms in NCC
- iv. Effect of employee competency on project performance among construction firms in NCC

#### **1.4 Research Questions**

The study answered the following;

- i. How does the organization structure affect project performance among construction firms in NCC?
- ii. What is the effect of organization culture on the project performance among construction firms in NCC?
- iii. How does resource capability affect the project performance among construction firms in Nairobi City County?
- iv. How does employee competency influence project performance among construction firms in Nairobi City County?

#### **1.5 Significance of the Study**

Effective and efficient implementation of projects would result into more developments, better income being generated; however, a few studies have reported the challenges faced by construction firms in attaining their goals. The findings contained in this study may therefore be important in forming the effective design implementation and continuous improvement of built industry. The findings will be essential to construction firms in guiding the implementation of projects thus guaranteeing improved productivity. The findings will benefit the county government and the national construction authority in designing and formulating policy changes that will be core to supporting better construction projects management. Academicians and scholars researching on how firm-specific factors influence different operations within the firm.

#### **1.6 Scope of the Study**

This was a review of internal organization environment and project performance and forms its basis on firms registered by the National Construction Authority as of 2017. The study geographical scope was limited only to firms that operate in Nairobi. The inclusion criteria

was limited to the registered category 1 construction firms based within Nairobi City County with their main offices situated within the City. The study excluded construction firms operating in Nairobi City County but with their main offices not registered and located in the city. Firms which had not been in operation for 3 years prior to the research were also excluded.

### **1.7 Limitations of the Study**

It was difficult to access respondents who had previous history in construction projects outside of the city. The study also faced limitation in getting responses from sample respondents who may not be inclined to offer any information they deem sensitive to the firm. The study also experienced limitations in accessing secondary data since regulations do not require them to formally report their performance statistics.

### **1.8 Organization of the Study**

This proposal is divided into five main chapters. The first includes the introduction section, chapter two dealt with literature review on the study topic showing what the previous researchers have found out in the area under study. It also contained a conceptual framework and the research gaps that the study is premised upon. Chapter three contained the research methodology. The fourth chapter presented the data analysis and the results of the study. The fifth chapter of the research mainly focussed on the interpretation of the findings, the research conclusions and the study recommendations that were drawn.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter presents the review of the literature available on the study themes and the gaps the study filled and conceptualization.

#### 2.2 Theoretical Review

##### 2.2.1 Resource Based View Theory

Pearce and Robinson (2011) are of the view that this theory is an analytical model that assists with inspecting the one firm capability that can be influence for vital preferred position over the contenders. These exceptional capacities can incorporate worker abilities, the association resources and other impalpable parts of the firm. This theory looks at the internal competencies of the firm and how they affect execution, sorting the firm as a heap of assets which can be used in making inside abilities that will offer the association an upper hand (Grant, 1991). All organizations create capabilities from these assets, which later become a source of competitive edge.

The organization is seen to be heterogeneous and that they possess a combination of unique capabilities and assets that are responsible of giving them an upper hand in competition that could enable them to achieve superior performance. Wernerfelt (1984) who was the earlier supporter of the resource based view theory did not get much attention at that time but was later revisited by other scholars like Grant (1991); Stalk, Evans and Schulman (1992) who found that companies with particular set of skills and capabilities outperformed their rivals. Critics of this theory claim that researchers mostly focus on intangible resources when examining firm productivity (Kapelko, 2006). This theory will be key in providing an explanation for the variations that occur in productivity of single industry firms since it tends to firm-explicit variables rather than industry-wide factors. Representatives are a basic asset

to the firm with one of a kind abilities that the firm can use on to cultivate profitability and execution inside the association. The hypothesis was instrumental in supporting worker competency as a secret weapon of the association.

### **2.2.2 Resource Dependency Theory**

Developed by Williamson (1985), he argued that it is necessary to link the internal functioning of the firm to resources that cannot be acquired internally. Proper utilization of these resources could result in reduced costs of transacting business deals due to environmental interdependency (Williamson, 1985). These environmental resources vary in the level of dependence depending on their importance, availability and method of acquisition from the environment (Yusoff & Alhaji, 2012).

The resource dependence theory suggests that firms with more resources perform better than firms which have less valuable resources since they can link better with the external environment hence becoming more competitive. Lawler, Finegold, Benson and Conger (2002) argue that adequate resources will enable the management to form strategic linkages and leverage on outside wellsprings of information to improve firm execution. Subsequently when all is said in done the accessibility of adequate budgetary and non-money related assets is basic in advancing the exhibition of a firm. Hence the asset reliance hypothesis was significant in inspecting how asset ability can be a predecessor to better execution inside an association.

### **2.2.3 Open Systems Theory and Deal and Kennedy Framework**

The open system theory views the organization as a network of systems (Barnes, 2004). This tenet shows that a change in one of the systems will lead to a chain reaction in other systems thus leading to better performance within the firm (Scott, 1987). The theory posits that an organization internal system does not operate in isolation, but is open to interact with the external environment and form linkages, as well as integrate internally between different sub-systems. Thus changes internally can affect other areas and have an influence on the external

environment and the vice-versa (Bastedo, 2004). The open systems theory is directed towards ensuring that an organization operates within some structural framework that will lead to better coordination and interdependence in the pursuit of organization objectives. The theory supported the ideology of creating holistic synergies that can optimize performance; hence the theory will be key to linking organization structure.

On the other hand, Deal and Kennedy (1982) framework defined organizational culture as the interaction between different elements in the organization. They argued that common values affect organizational performance and go about as a casual control framework that notify people what is anticipated of them. This model concentrates on how rapidly the organization gets response, the way individuals are remunerated and the level of perils taken. The framework further highlights that shared values and organization targets can enhance the attainment of organization performance. The framework was used to underpin organization culture.

## **2.3 Empirical Review**

### **2.3.1 Organization Structure**

Organizational structure shows the interactions which occur within an organization, whether laterally or horizontally, showing the flow of instructions and task allocation (Zheng, Yang, & McLean, 2010). Observations by Ashkenas et al. (2015) states that organizational structure refers to the arrangement of individuals by task category in order to attain organizational goals. Organizational structure is a necessary component to ensure that directions are given to employees and knowledge is shared across the work place to ensure successful strategy implementation (Adeleke, Bahaudin, & Kamaruddeen, 2017).

Menoka, (2014) studied impact of partner contribution on supportability of construction projects. With results showing stakeholder perception on their roles and the strategy of the firm influenced the maintainability of development ventures. Be that as it may, the above investigation didn't contemplate the impact of the internal organizational setup on construction firm performance. Guo, Chang-Richards, Wilkinson, and Li, (2014) examined structures of project governance and management of risks associated with construction projects. The study utilized data from China and New Zealand using comparative data for two infrastructural projects. Findings showed that lack of elaborate and effective structures within the implementing organizations were the major risks. Internal coordination within the firm was key to fostering better project performance.

Akanni, Oke, and Akpomiemie, (2015) conducted a study how the environment affects performance of Nigerian forms in Delta state. It found that financial, economic and political factors mainly influenced the structure business venture execution. Be that as it may, the examination further demonstrated that association structures that didn't consider broad partner contribution additionally restricted performance. The study only considered external factors while this study is based on internal factors.

In another study Oladirin, Olatunji, and Hamza, (2013) examined how procurement systems affect construction firms in Nigeria. The study analysed the data obtained using descriptive statistics, concluding that poor leadership within the construction firms had resulted in stagnation of firms in traditional procurement systems which limited the project performance. The study however utilized structured questionnaires whereas the current study employed both semi-structured questionnaires and secondary data for the analysis.

Nyandika and Ngugi, (2014) examined how stakeholder participation affects KENHA road projects in Kenya. The results showed that top management support was a key component to ensuring positive road projects performance in KeNHA. The study however considered a single state parastatal whereas the current study sampled all construction firms registered to operate in the county of Nairobi County.

### **2.3.2 Organization Culture**

The shared values that govern how people interact and behave within the organization depict the culture. The organization culture will be assessed using rewards and recognition, employee training and recruitment and the communications strategy. Essential to driving the strategy implementation process within an organization is the availability of adequate resources (Ashkenas, Ulrich, Jick, & Kerr, 2015).

Gu, Hoffman, Cao, and Schniederjans, (2014) examined four dimensions of organization culture; institutional cooperation, results direction, positive workplace, authority hazard resilience with discoveries demonstrating the presence of a positive connection between authoritative culture and execution of IT project, but with moderation from environmental factors. The study however considered IT projects whereas current study focussed on construction projects in Kenya. In their research Mok, Shen, and Yang, (2015) examined stakeholder management in mega construction projects. The study reviewed major reports on mega construction projects between the periods 1997 to 2014. The findings of the results indicated that stakeholder management was heavily reliant on the organization culture as the driving force of the project implementation process. The above study however did not examine the project performance in mega construction projects.

Akomah and Jackson, (2016) assessed the Ghanaian construction industry in a bid to determine factors that influence firm results. Findings showed that the resource allocation, utilization the representative preparing, gatherings and evaluation impact the exhibition of tasks. The paper stated that innovation and learning factors were the group factors affecting the level of productivity of these firms. The above study failed to consider how other internal organization factors affect performance of contractors. Further the study only relied on structured questionnaires.

Idris and Kolawole, (2016) adopted the structural equation modelling to examine how knowledge management affects success of Nigerian-based construction firms and found out that organization culture was a key factor in enhancing knowledge management and it fostered organization performance. The above study however only considered management competency while the current study will access several internal factors which affect performance in construction firms. Chipulu, et al., (2014) using multi-group, structural equation modelling indicated that there were minimal variations on the influence of cultural values on success of projects across the 8 countries surveyed in his research. The study was however conducted across 8 countries whereas the current study is focussed on a single devolved unit of governance in Kenya.

Ngacho and Das, (2014) examined the development of CDF projects in Kenya for the period 2003-2011 in Kenya and adopted the performance evaluation framework. Findings showed that improved communication reduced time of carrying out projects. This makes it the main factor for measuring project performance followed by the cost and quality of the work. The above framework however did not consider any influence of internal organization on the construction projects. Ondari and Gekara (2013) examined factors that influence road project performance in Kenya with findings showing that management was key in the success of Kenyan road projects. Additionally, financial support and employee competency influenced

completion of road projects. The study however was conducted across the country whereas current research was limited to Nairobi City County.

### **2.3.3 Resource Capability**

The study by Tan and Thai (2014) state that the competitiveness of any organization is widely related to the organization's ability to exercise and maintain control over its resources and more so to organize the resources in a unique and easy to imitate method. Maritime clusters can foster their competitive advantage based on effective strategy implementation as well as efficient resource utilization. Firm resources consist of tangible, financial resources, human resources, capital resources (Wang, Liang, Zhong, Xue, & Xiao, 2012). Weerasinghe and De Silva, (2017) examined the factors that contribute to the successful implementation of Sri Lankan-based construction projects with findings showing that project control systems were statistically significant to the successful implementation as they helped reduce the costs of the project and utilization of raw materials.

Lindhard and Larsen, (2016) carried out studies to examine key factors determining productivity among construction firms. The study was conducted across Denmark construction firms. The study adopted a structured questionnaire divided into 5 categories. The findings confirmed that the main factor influencing performance is the financing capability of the firm implementing the change. Mahamid (2016) studied factors leading to poor performance of Saudi Arabian construction firms employing a descriptive survey design. From the respondents in the questionnaires used in the study, correlation analysis and descriptive statistics were carried out as part of the analysis. Results showed that expenses and payment delays to contractors had significant effects on how Saudi Arabian construction firms performed.

Sinesilassie, Tabish, and Jha, (2017) investigated serious issues determining performance of construction firms in Ethiopia and the findings of the statistical analysis presented that the owner's capacity to finance the projects was highly correlated with the performance schedule. Findings also indicated that disagreements among the participants', poor management of human resources and ignorance from the managers affected project completion. The above study however considered state-sponsored construction firms whereas current study considered private firms.

Muchai (2012) indicates that it is the accountability of project managers to follow up on resource utilization and ensure strict adherence to the budgetary allocations. This should also include adequate project cost forecasting for projects that will last more than 5 years. The project finance manager's main task is ensuring effective resource allocation to guarantee optimal achievement of project goals. Munyao (2013) indicates that the three main aspects of project cost management; estimation, budgeting and cost control should be upheld through the project duration. Poor oversight could lead to irreversible consequences on the allocated budget. The above studies examine resource allocation and utilization in isolation and did not examine the contribution of other internal organization factors towards better performance.

#### **2.3.4 Employee Competency**

Management skills are essential in the development and deployment of the right personnel within the organization. Competent managers will be able to identify the available skills and where they are necessary and the gaps in skills management within the organization (Okwach, 2015). In an increasingly competitive world, projects are as successful as their managers. Managers have to learn more about themselves and how to manage others and the

project they are working on. Managers need to be able to assess the environment and be ready for any challenges and possibilities in the ever-evolving world; they should be able to adapt and deal with challenges expeditiously to ensure better project performance (Mungai, 2014).

Abuazoom, Hanafi, and Ahmad, (2017) examined how HRM influences Project Performance. The study utilized data collected across gulf states and Libya. The study employed inferential statistics to estimate the magnitude of influence. Results showed that increasing the level of training leads to improved profitability and productivity over the undertaking units which means positive task execution. Alashwal and Ng, (2016) analyzed information use and dynamic in development ventures in Malaysia. This is proof that competent employees were better at knowledge utilization which resulted in efficiency and better decision making.

Adeleke, Bahaudin, and Kamaruddeen, (2017) studied Internal Factors and Risk Management in Nigerian firms. The research employed a descriptive design with a mixed methodology utilized. Analysis was carried out using the least squares structural equation modelling analysis with findings showing that internal factors and risk management positively influence firm productivity in the construction industry. Employee conformity to the rules and regulations was one of the key aspects that enhanced risk management. The current study however did not consider construction project performance. Nkuruziza, Kasekende, Otengei, Mujabi, and Ntayi, (2016) in his study utilized self-administered questionnaires and his results showed that adequate management of acquired knowledge is a valuable way of positively influencing productivity of agricultural projects. The study however considered agricultural projects whereas current study evaluated construction projects.

Njeri and Were, (2017) examined factors determining productivity of Kenyan NGOs. Employing a descriptive research design, questionnaires adopted revealed that commitment from the project team significantly influence project performance of NGOs in Kenya ( $\beta_1=0.781$ ,  $p\text{-value}=0.000$ ) support from the management also has significant effects on project performance in the NGO ( $\beta_1=0.811$ ,  $p\text{-value}=0.000$ ). The study was based on the performance of one project only.

## 2.4 Research Gaps

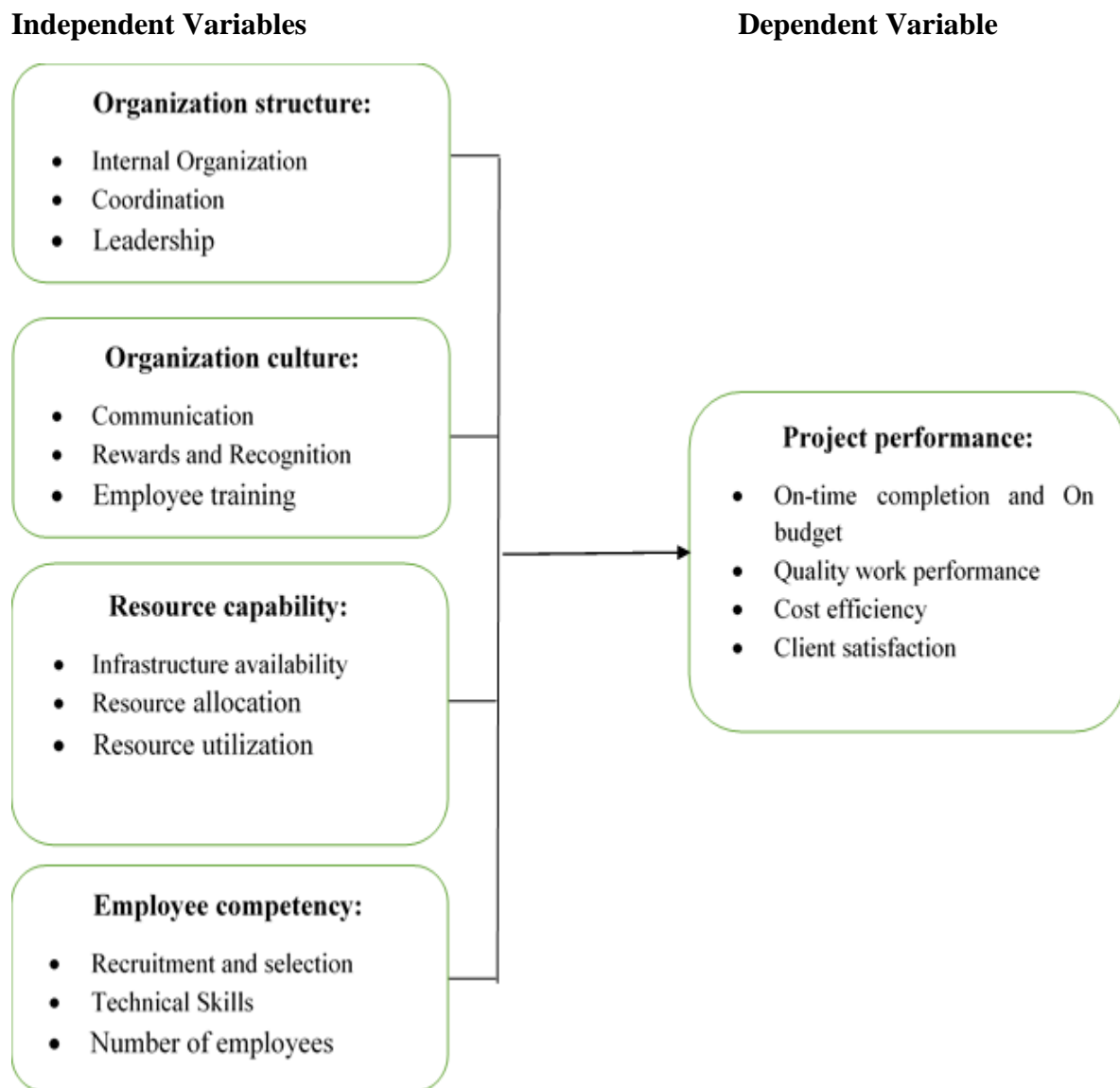
**Table 2.1 Literature Gaps**

<b>Author</b>	<b>Topic</b>	<b>Methodology</b>	<b>Key Findings</b>	<b>Research Gap</b>
Akanni, Oke, and Akpomiemie, (2015)	Examined environmental factors affecting building projects	The study used correlation analysis.	Financial, economic and political factors manly affected the building industry project performance.	This study failed to analyze internal organization factors.
Nyandika and Ngugi, (2014)	How partners' investment influences Performance of Road Projects at KENHA	A descriptive research was adopted with both a qualitative and quantitative approach being adopted	The findings indicated that top management was key to performance.	It did not test resource capability, organization culture and employee competency which this study will address.
Akomah and Jackson, (2016)	Components that influence execution of contractual workers on building development ventures: central region, Ghana	The study utilized a census survey methodology	The study indicated that innovation and personnel learning enhanced project performance	The study failed to consider inferential statistics.
Abuazoom, Hanafi, and Ahmad, (2017)	Impact of HRM Practices on Project Performance: Conceptual Framework.	A comparative causal research design	Deployment of training predicts the productivity levels and speed of service across branches,	The examination just thought to be human asset rehearses and didn't consider other inward association factors.

**Source:** Researcher (2017)

## 2.5 Conceptual Framework

The study comprised of five variables that were conceptualized as below;



**Figure 2.1 Conceptual Framework**

Source: Researcher (2017)

From the above conceptual framework, the study indicated that there is an interaction between the independent and dependent variables. The study hypothesized that there was a direct positive relationship between the variables. The study variables were assessed using both qualitative and quantitative measures.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

The chapter contains the procedures and steps applied in the study.

#### 3.2 Research Design

The descriptive design was used and Cooper and Schindler (2014) suggested that it aims to describe study population and findings without any alteration to the environment. The research was able to utilize a mixed research methodology.

#### 3.3 Target Population

This comprises all the factors that interest a researcher (Creswell, 2013). This research targeted 49 main Nairobi based firms in charge of construction activities as per the National Construction Authority 2017 register. The study specifically focused on 49 NCA Category 1 local firms. The study did not take into consideration foreign firms which have a larger capacity than local firms and hence were not considered within the current research scope.

#### 3.4 Sampling Design

Consists all individuals that qualify to be selected from the population to represent the whole (Cox & Hassard, 2010). The sampling frame for the study was drawn from the National Construction Authority report of 2017. The research relied on random sampling in choosing two respondents from each of the construction organizations (Saunders, 2011). The study selected 2 respondents from each of the firms'; the managing director, project manager and operations managers working in the 49 main Nairobi based firms.

**Table 3.1 Sample Respondents**

Category	Number of Firms	Percentage of Population
Managing Director	49	50%
Project/operations Managers	49	50%

**Total**

**98**

**100%**

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**Source:** Research Data (2019)

### **3.5 Data Collection Instruments**

Both data sources were useful in the study. A questionnaire allowed the respondents to answer both the structured questions and offer their opinions in the open-ended questions (Creswell, 2013) while obtained from journals, reports and other publications were sources of secondary data. The utilization of both data sources fostered the quality of the research data collected.

### **3.6 Data Collection Procedures**

The researcher contacted NACOSTI for a research permit before drafting the data collection tools. The study utilized convenience method in collecting data from personnel. The research also ensured that personnel were contacted before embarking on the data collection process, appointments were made with all the directors of the firm to ensure that they are not inconvenienced within their hours of work. This also fostered the efficiency of the data collection process.

### **3.7 Pilot Test**

Before embarking on the main data collection process, the study conducted a pilot test of the research instrument with a select of construction firms within Kiambu County. Due to the two counties proximity and similarity in the socioeconomic aspects the county was deemed appropriate for the pilot testing. The research focussed on 10% of the sample population. The pilot test was expected to enable the reliability and validity testing of the research instrument. This was expected to enhance the completeness and accuracy of the research instrument.

### 3.7.1 Validity Tests

The research employed construct and content validity. A peer expert reviewed the questionnaire. The researcher adopted content validity by seeking the help of the supervisor in drawing up the research instrument. Further the construct validity was upheld by ensuring that all the study variables were captured in the research instrument.

### 3.7.2 Reliability Tests

Reliability is the degree of consistency of the research instrument (Joppe, 2008). The research relied on the Cronbach Alpha to assess the reliability scores. Any construct with a .7 or higher score was adopted.

**Table 3.2 Reliability Statistics**

Construct	Cronbach's Alpha	N of Items
Project Performance	.074	5
Organization structure	0.85	5
Organization culture	0.93	5
Resource capability	0.86	5
Employee competency	0.84	5

**Source:** Research Data (2019)

All the research constructs had a Cronbach Alpha score which was above 0.7.

## 3.8 Data Analysis and Presentation

### 3.8.1 Test for Linear Regression Assumptions

The study conducted a series of diagnostic tests before interpretation of the model. Normality Tests were carried out to evaluate the data's distribution pattern (Holland & Campbell, 2005). The Shapiro-Wilk test was useful in determination of normality of the data to be used in the study. Multicollinearity tests were also carried out. Multicollinearity is a result of high linear relation between two or more explanatory variables. VIF and Tolerance factor values were used for collinearity of the research instrument.

### 3.8.2 Data Analysis

This is summarizing obtained data into meaningful themes by use of statistical tools (Cox & Hassard, 2010). Data was analysed using SPSS and presented as frequencies. Meanwhile, inferential statistics was also analyzed for correlation and regressions.

This equation was adopted;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

Y = Project performance

$\beta_1$ -  $\beta_4$  = coefficient of the determination for independent constructs

$X_i$  for;

$X_1$  = structure

$X_2$  = culture

$X_3$  = Resource capability

$X_4$  = employee competency

The research further used the ANOVA model at a 5% significance level to ascertain the statistical significance of the research model.

### 3.9 Ethical Considerations

Saunders, Lewis and Thornhill (2015) indicates that ethics are the standards or norms that are adopted and guide the research. Prior to undertaking the examination, the researcher looked for the approval of the supervisors and the graduate school of Kenyatta University. The research further sought research clearance from NACOSTI. The study also utilized an introduction letter that guided the respondents. The study also ensured that all the data that was sourced from the field adhered to confidentiality and anonymity measures.

## CHAPTER FOUR

### DATA ANALYSIS AND FINDINGS

#### 4.1 Introduction

The current chapter sought to present the results of the research that was undertaken within construction firms. An 80% response rate was attained. This is in accordance with Kaplowitz, Hadlock, and Levine, (2004) who concluded that within a research study 60% response rate is adequate for statistical tests.

#### 4.2 Demographics Characteristics

The demographics of the study focussed on the respondents' age, gender, education level, position within the firm and the level of experience within the organization.

**Table 4.1 Demographic Information**

Category	Measurement	% Response	Frequencies
<b>Age of respondents</b>	Below 25 years	13%	10
	25-35 years	53%	41
	36 years and above	34%	27
<b>Gender of respondents</b>	Male	76%	59
	Female	24%	19
<b>Education Level of respondents</b>	O-level	2%	1
	Diploma	22%	17
	Graduate	64%	50
	Postgraduate	12%	10
<b>Position in the Organization</b>	Operations Manager	15%	12
	Project Manager	67%	52
	General Manager	18%	14
<b>Number of years in the Organization</b>	Less than 5 years	44%	34
	5-9 years	51%	40
	10-15 years	5%	4

**Source:** Researcher (2019)

53% of the research respondents were of 25-35 years. This showed that the construction sector is largely populated by middle age personnel. 76% of the responses came from men as

shown in Table 4.1 above. This indicated that the construction sector has more male personnel than female personnel within the industry.

64% of the responses were from graduates, 22% diploma qualifications, 12% were at postgraduate level. These discoveries showed that development firms have been encountering radical move from incompetent calling to a full gifted calling; with the ongoing guideline by National Construction Authority expecting workers to be enlisted with the endless supply of their investigations.

68% were venture supervisors, 17% were the firm directors while just 15% were the activities chief. This is steady with NCA (2016) report that showed development firms the nation over had changed their association structures and corporate administration systems. The research findings indicated that 51% of the respondents had 5-9 years of experience while 44% of the respondents had less than 5 years of experience showing that most of the respondents within the construction firms did have moderate work experience within the sector.

### 4.3 Descriptive Analysis

The results of the analysis were presented using tabulated sample responses, means and standard deviation. The following criterion was utilized in interpretation of the means; **0-1.50**; neither agree nor disagree **1.51-2.50**; strongly disagree **2.51-3.50**; disagree **3.51-4.50**; agree and **4.51-5.00** strongly agree.

#### 4.3.1 Organization Performance

Responses were assessed using means and standard deviation. This assisted in examining the level of agreement among respondents.

**Table 4.2 Organization Performance of Construction Firms**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
On time completion of the project	78	4.3846	.58622

Completion of the project within the budgeted limits	78	4.4615	.55109
Quality work performance on completion of project	78	4.3462	.47882
Enhanced cost efficiency on completion of project	78	4.5000	.52841
Better client satisfaction on completion of project	78	4.5256	.52778

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**Source:** Research Data (2019)

As shown on Table 4.2, with regard to timely project completion, a 4.3846 mean indicated agreement. Further, there was an indication that satisfaction levels among clients was increasing as per the 4.5256 mean. Respondents showed that project performance within construction firms in the county were assessed based on compliance to construction standards, technical capacity of the firm to handle major construction projects as well as on-budget completion of projects within the sector.

The above discoveries resound with Wadugodapitiya et al., (2010) who showed that the primary task execution pointers were the cost efficiency, timeliness of project completion and quality of completed work; this was as reported by Akanni, Oke, and Akpomiemie (2015) who showed that the dangers and advantages of the undertaking to the customer likewise fill in as proportions of the exhibition in a task.

#### **4.3.2 Influence of Organization Structure on Project Performance**

The research first objective examined effect of organization structure on project performance.

**Table 4.3 Organization Structure Descriptive**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Enhanced coordination within the firm fosters cost efficiency	78	4.4359	.61559
Effective leadership ensures on-time completion of project	78	4.3462	.73550
Internal coordination within the organization improves the quality of work in the project	78	4.2692	.78415
Improved leadership qualities fosters client satisfaction.	78	4.5000	.61896
Delegation of duties promotes on-time completion of project	78	4.4231	.65504

**Source:** Research Data (2019)

Regarding the effect of enhanced coordination on cost efficiency, a 4.4359 mean showed agreement. Having elaborate coordination and control within the firm led to harmonization of work duties which enhanced the project performance. Respondents also indicated that management support of personnel enhanced career development programmes which fostered work performance.

This is as concluded by Nyandika and Ngugi, (2014) who indicated that management support was essential for positive performance in projects. The findings resonate with Oladirin, Olatunji, and Hamza, (2013) conclusions that for performance to be sustained there is need for effective leadership to be put in place within the organization. The above results are supported by Guo, Chang-Richards, Wilkinson, and Li, (2014) who also concluded that improving coordination improves performance of projects. The researches further indicated that employee involvement in decision making enhanced performance.

### 4.3.3 Influence of Organization Culture on Project Performance

The researcher wanted to determine how the existing culture in the organization influences performance.

**Table 4.4 Organization Culture Descriptive**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Effective communication within the firm promotes client satisfaction	78	4.3205	.76436
Better communication within the firm promotes on-time project completion	78	4.1667	.69163
Increased rewards promote quality work performance in the project	78	4.3077	.79459
Employee training fosters cost efficiency in the project	78	4.2821	.68181
Better employee recognition enhances the work performance	78	4.4487	.65757
Effective employee training enhances client satisfaction in the project	78	4.2308	.71936

**Source:** Research Data (2019)

Regarding the effect of effective communication on client satisfaction, a 4.3205 mean indicated agreement. Improved communication improves project completion time rate according to the 4.1667 mean. Concerning the effect of rewarding systems on employee performance in the project, a 4.3077 mean showed agreement.

Respondents agreed that when the employees are well trained, then their output increases as per the 4.2308 mean. Respondents also pointed out that elaborate feedback systems and performance management systems improved project performance. Employee motivation through better remuneration enhanced the work performance.

Similarly, Akomah and Jackson, (2016) made the conclusion that effective employee training, meetings and assessment improved performance among construction firms. This is also in agreement with Ondari and Gekara (2013) who pointed out that sufficient human

capacity, rewards and recognition system and financial stability enhanced performance of projects.

#### 4.3.4 Influence of Resource Capability on Project Performance

On determining how resource capability influences project performance, the findings are represented below.

**Table 4.5 Resource Capability Descriptive**

	N	Mean	Std. Deviation
Availability of necessary infrastructure promotes on-time completion of project	78	4.3077	.72627
Better resource allocation promotes on-time completion of project	78	4.3846	.64929
Efficiency in resource utilization ensures on-budget completion of project	78	4.2179	.80012
Optimal provision of infrastructure ensures cost efficiency in the project	78	4.1923	.75692
Better resource utilization fosters client satisfaction	78	4.1410	.78499

**Source:** Research Data (2019)

With regard to effect infrastructural access on project performance, a 4.3077 mean showed agreement. The research data also showed that more efficient allocation of resources results in better performance as shown by the 4.3846 mean. This is as suggested by Lindhard and Larsen, (2016) who indicated that financial capability was the top-ranked key success factor of project performance. Regarding the effect of efficiency in resource utilization in ensuring that there us on-budget completion of projects, a 4.2179 mean and a .80012 deviation showed agreement. Similarly, Mahamid (2016) posited that financial utilization and budgetary controls enhance project performance.

Concerning the effect of optimal provision of infrastructure on project cost efficiency, a 4.1923 mean showed agreement. With regard to better resource utilization fosters client satisfaction the results showed a mean value of 4.141. These results are in agreement with Munyao (2013) who concluded that project cost management; estimation, budgeting and cost control fostered project performance. Further, respondents also indicated that adequate resources ensured there is continuous availability of materials in construction sites which enhances project completion. Respondents also indicated resource capability was key to ensuring there is on-time payment to suppliers and also workers which was key to project performance.

#### 4.3.5 Influence of Employee Competency on Project Performance

Table 4.6 outlines the responses analysed on the influence of organization structure on project performance.

**Table 4.6 Employee Competency Descriptive**

	N	Mean	Std. Deviation
Effective recruitment and section enhance quality work performance in the project	78	4.1923	.72179
Increased technical skills of employees fosters cost-efficiency in the project	78	4.1026	.84653
Sufficient number of employees promote on-time completion of project	78	4.2821	.73674
Employee competency supports efficiency which ensures on budget project completion	78	4.2179	.69595
Enhanced employee skills and training fosters client satisfaction	78	4.3333	.67740

**Source:** Research Data (2019)

Regarding the effect of effective recruitment and section enhance on project work performance, a 4.1923 mean showed agreement. This is as posited by Njeri and Were, (2017)

who showed that administration support in enrollment and determination advances venture execution. As to expanded specialized aptitudes of workers cultivates cost-proficiency in the venture, a 4.1026 mean indicated agreement, as posited by Adeleke, Bahaudin, and Kamaruddeen, (2017) who inferred that worker capacity improves productivity inside the association.

The study findings also showed that sufficient number of employees promote on-time completion of project according to the 4.2821 mean. Concerning employee competency improves efficiency thus on budget project completion, a 4.2179 mean and .69595 deviation showed agreement. Regarding enhanced employee skills and training fosters client satisfaction, a 4.3333 mean and .67740 deviation indicated agreement, just as posited by Abuazoom, Hanafi, and Ahmad, (2017) who concluded that employee training enhances productivity and efficiency which has positive influence on project performance.

Respondents also pointed out that registration by national construction authority improved employee work performance due to the stringent guidelines on employee training. The respondents also indicated that increase in vocational training institute had enhanced the competency and capabilities of the workforce in the construction sector which improved project performance.

#### **4.4 Inferential Analysis**

##### **4.4.1 Diagnostic Tests**

The study adopted both Multicollinearity and Normality tests.

**Table 4.7 Collinearity Test Results**

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	structure	.720	1.388
	culture	.720	1.389
	Resource Capability	.845	1.425
	Employee Competency	.995	1.005

**Source:** Research Data (2019)

The research relied on both tolerance and VIF values as the measures of collinearity statistics. The results on the table above indicated that the VIF factors were below 10 which is an indicator of lack of collinearity in the research. Tolerance values for the current study were higher than 0.1 showing no collinearity problems.

**Table 4.8 Normality Test Results**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Organization Structure	.105	78	.007	.937	78	.009
Organization Culture	.176	78	.000	.842	78	.008
Resource Capability	.170	78	.000	.959	78	.006
Employee competency	.174	78	.001	.984	78	.007

a. Lilliefors Significance Correction

**Source:** Research Data (2019)

The research findings showed sig. value of above 0.05 which is in line with critical assumption that under normality the Shapiro-Wilk test should yield a sig-value of 0.05 and above; indicating normality.

#### 4.4.2 Correlation Analysis

The study adopted Pearson correlation.

**Table 4.9 Correlation Matrix**

		<b>Project performance</b>
Organization structure	Pearson Correlation	.865**
	Sig. (2-tailed)	.000
	N	77
Organization culture	Pearson Correlation	.677**
	Sig. (2-tailed)	.000
	N	77
Resource capability	Pearson Correlation	.670**
	Sig. (2-tailed)	.000
	N	77
Employee competency	Pearson Correlation	.689**
	Sig. (2-tailed)	.000
	N	77

**Source:** Research Data (2019)

The correlation analysis showed that organization structure and organization performance were strongly and positively related as indicated by  $p = .865$ ,  $sig = .000$ . The results also showed that organization culture has a strong and positive effect on firm productivity as shown by  $p = .677$ ,  $sig = .000$ . The findings in Table 4.9 above also indicated that there was a strong positive association between resource capability and firm results as indicated by  $p = .67$ ,  $sig = .000$ . Further, employee competency significantly improves firm results as shown by  $p = .689$ ,  $sig = .000$ . From the above results findings the research indicates that the internal organization environment metrics are positively correlated to constructions firm performance.

#### **4.4.3 Regression Summary**

The research further undertook a regression analysis to determine how internal organization environment affects organization performance of construction firms.

**Table 4.10 Regression Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.891 <sup>a</sup>	.794	.783	3.76168

- a. Predictors: (Constant), Employee competency, Organization structure, Resource capability, Organization culture
- b. Dependent Variable: Project performance

**Source:** Research Data (2019)

The above generalized model aimed was developed to determine how internal organization environment relates to project completion. Results showed a strong positive association between internal OE and PP as indicated by coefficient of determination  $R^2 = .794$ , showing 79.4% changes in project performance are determined by the internal organization environment. This is as posited by (Adeleke, Bahaudin, & Kamaruddeen, 2017; Okwach, 2015; Njeri & Were, 2017) who indicated that internal organization practices psitively affected project performance.

#### **4.4.4 ANOVA Model Summary**

This was carried out to determine statistical significance of the research model by undertaking an ANOVA test.

**Table 4.11 ANOVA Summary**

		Sum of				
Model		Squares	df	Mean Square	F	Sig.
1	Regression	3936.611	4	984.153	69.550	.000 <sup>b</sup>
	Residual	1018.818	72	14.150		
	Total	4955.429	76			

a. Dependent Variable: Project Performance

a. Predictors: (Constant), Employee competency, Organization structure, Resource capability, Organization culture

**Source:** Research Data (2019)

The results generated a *F-value of 69.55*, indicating the statistically significance of the research instruments; hence the regression model can be utilized in predicting the relationship between IO and PP.

#### 4.4.5 Regression Coefficients

The following regression coefficients were used;

**Table 4.12 Regression Coefficients**

Model		Unstandardized		Standardize		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.223	.797		.280	.001
	Organization structure	.845	.080	.928	10.581	.000
	Organization culture	.861	.234	1.248	3.686	.000
	Resource capability	.632	.258	.146	.510	.002
	Employee competency	.938	.278	1.072	3.370	.001

a. Dependent Variable: Project performance

**Source:** Research Data (2019)

Hence the following regression equation;

$$Y = .223 + .845X_1 + .861X_2 + .632X_3 + .938X_4 + e$$

On examining the relationship between organization structure and project completion, the coefficients of the regression ( $\beta$ ), the intercept of the model ( $\alpha$ ) and the significance of all the coefficients were tested further. The results in table 4.13 indicate a constant  $\alpha = .223$  is not 0 since the p-value  $.001 < .05$ . The beta value ( $\beta$ ) =  $.845$  is not 0 since the p-value  $.000 < .05$  indicating that organization structure positively affects project performance. This indicates that changing one unit in organization structure results in a  $.845$  change in firm results as posited by (Akanni, Oke, & Akpomiemie, 2015; Gyepi-Garbrah & Binfor, 2013); who all indicated that organization structure is positively correlated to the performance construction firms.

On examining how organization culture relates to project completion, the coefficients of the regression ( $\beta$ ), the intercept of the model ( $\alpha$ ) and the significance of all the coefficients were subjected to further t-tests. The results in table 4.13 indicate a constant  $\alpha = .223$  is not 0 since the p-value  $.001 < .05$ . The beta value ( $\beta$ ) =  $.861$  is not 0 since the p-value  $.000 < .05$  showing that organization culture significantly affects project performance. The model concludes that changing one unit of organization culture leads to a  $.861$  change in project performance as posited by (Guo, Chang-Richards, Wilkinson, & Li, 2014; Okwach, 2015) who determined that shared values in the firm promoted firm culture building which positively influenced performance of projects.

Upon examining the relationship between resource capability and performance of projects, the coefficients of the regression ( $\beta$ ), the intercept of the model ( $\alpha$ ) and the significance of all the coefficients were further tested. The results in table 4.13 indicate a constant  $\alpha = .223$  is not 0 since the p-value  $.001 < .05$ . The beta value ( $\beta$ ) =  $.632$  is not 0 since the p-value

.002<.05 showing that resource capability significantly affects project performance. Changing one unit of resource capability will lead to a .632 change in project performance. This agrees with Ngacho and Das (2014) who submitted that availability of resources was essential in enhancing the success of projects.

On examining the relationship between employee competency and project performance, the coefficients of the regression ( $\beta$ ), the intercept of the model ( $\alpha$ ) and the significance of all the coefficients were subjected to further t-tests. The results in table 4.13 indicate a constant  $\alpha = .223$  is not 0 since the p-value .001<.05. The beta value ( $\beta$ ) = .938 is not 0 since the p-value .000<.05. This indicates that resource capability positively and significantly affects project performance. Findings showed that changing a unit of employee competency leads to a .938 change in performance of projects. This is supported by Abuazoom, Hanafi, and Ahmad, (2017) who attested to the importance of effective human resource management as a strategy for improving firm productivity.

## CHAPTER FIVE

### SUMMARY CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The current research chapter present the summary of the findings of the study; the research conclusions and recommendations based on the findings. The results per each section will be arranged in line with the research premises.

#### 5.2 Summary

This research examined the effect of internal environment on performance of construction firms. Different theories were used and random sampling was selected as a determinant of who will respond to the questionnaires. Questionnaires were the main research instruments. SPSS was used for analysis. Study results showed that the construction industry within Nairobi City County was recording positive performance as shown by the responses obtained. The research respondents agreed that the quality of work had led to improvement in construction project performance. Respondents also agreed that most firms had enhanced their quality standards to conform to best international practices in order to fight off competition from global construction firms. Results indicated that firms have employed budgetary controls that have enhanced cost-efficiency and timely completion of projects.

The study findings indicated that coordination within the organization was key to timely completion of projects and efficiency which are key performance indicators. The results of the study also effective leadership within the firm was a key predictor of performance. The responses of the research also showed that delegation of duty by the management fostered employee productivity which was essential for better performance.

Findings indicated that implementing an effective communication and feedback system was essential for promoting project deliverables. The respondents also acknowledged that communicating the project goals/objectives to the personnel enhanced their work commitment and productivity. Findings indicated that employing a rewards and recognition

system improves performance. Findings showed that employee training can foster client satisfaction and project performance.

Regarding effect of resource capability on project performance, results indicated that availability of adequate infrastructure enhanced performance. The research results showed that optimal resource utilization enhanced the cost-efficiency of the projects. Concerning the resource allocation, allocation of adequate resources contributed to on-time completion of projects within construction firms.

With regard to employee competency, technical skills of employees positively influenced project performance. Results indicated that adequate personnel contributed to on-time completion of projects. Findings indicated that employee training fosters client satisfaction and the acquired technical skills enhance cost-efficiency in the projects.

### **5.3 Conclusions**

The research aimed to examine the relationship between construction firm's internal environment and its productivity in Nairobi and the findings showed that internal organization environments and project performance are positively and significantly related. Specifically, 79.4% changes in project performance can be attributed to factors associated/determined by the internal organization environment.

Conclusions were that firm structure is linked to project outcome. Changing one unit of organization structure leads to a .845 difference in productivity levels and was shown by the effective coordination within the firms, enhanced leadership within the firms, delegation of duties and improved management of projects within the construction firms.

The study concluded that firm culture influences levels of productivity in a firm. Changing one unit of organization structure leads to a .861 change in project performance. Elaborate

communication systems, increased rewards and recognition systems, employee training, employee recognition and enhanced client satisfaction.

The study concluded that the quantity of resources amassed by a firm impact the rate of success of projects. Changing one unit of organization structure leads to a .632 change in project performance. Availability of necessary infrastructure resources, resource allocation, efficient resource utilization, optimal provision of resources were key constructs that predicted project performance.

The study concluded that competency is linked to firm results. Changing one unit of organization structure leads to a .938 change in project performance. Employee competency can be achieved through effective recruitment and selection, increased technical skills, having adequate personnel and employee training fostered the attainment of project success.

## **5.4 Recommendations**

### **5.4.1 Organization Structure**

The study further recommends that the administration should actualize a hearty inner association structure that obliges the perspectives on representatives and other outer partners as secret weapons that can be bridled for better task execution. The study also recommended that effective communication and feedback systems should be adopted in order to enhance customer satisfaction and employee productivity.

### **5.4.2 Organization Culture**

The research further suggests that development firms ought to receive better rewards, compensation and acknowledgment frameworks that will improve worker profitability and at last the task execution. It was the study's recommendation that construction firms look for ways to improve their financing channels to reduce the frequency of stalled projects. This can be conducted in collaboration with the clients and local financial lenders as this will held in improving the construction sector performance.

### **5.4.3 Resource Capability**

The study further recommends that financing of construction projects should be adequate throughout the project cycle to ensure sustainable performance is achieved. The study further indicates that construction firms should implement effective policies to guide firms in sourcing for finances that will enable the firms to undertake large construction projects. The study also recommended that construction firms should enhance their supplier relationship which is a key resource for ensuring constant availability of raw materials within the construction sector.

### **5.4.4 Employee Competency**

The concentrate further suggests that the administration ought to guarantee the specialized aptitudes and abilities of the workers are maintained inside the firm as it is a primary indicator of task execution. With powerful human asset strategies, the association will have the option to upgrade the abilities and skills of faculty which will cultivate efficiency and work execution. The examination further recommends that construction firms should encourage personnel to pursue training and professional development programmes that will enhance their technical skills and competencies as tools of fostering project performance.

### **5.5 Suggestions for Further Research**

Future research can examine the influence of licencing and regulations on construction projects safety within Nairobi County. Uptake of real estate projects and the financial performance of construction firms within Nairobi County.

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## APPENDICES

### Appendix I: Questionnaire

Kindly in the below statements tick on the appropriate box that corresponds to the response meant for each of the categories.

#### PART A: GENERAL INFORMATION

1) Age Bracket

Below 25 years [ ]

25 – 35 years [ ]

36 and above [ ]

2) Gender

Male [ ]

Female [ ]

3) Education Level

O- Level [ ]

Diploma [ ]

Graduate [ ]

Post graduate [ ]

Others (Specify).....

4) Your position in the organization

General Manager [ ]

Project Manager [ ]

Operations Manager [ ]

5) Number of years in this department/position

Less than 5 [ ]      5-9 [ ]      10-15 [ ]      Over 15 [ ]

#### PART B: INTERNAL ORGANIZATION FACTORS AND PROJECT PERFORMANCE

Please tick the level of agreement on the following statements.

Please indicate in the table with a tick (√) or a cross (×) with a scale of

5= strongly agree 4= Agree 3= Moderate Agree 2= Disagree 1= Strongly Disagree

**6. On a 1-5 scale, do you agree with.**

No	Project Performance	1	2	3	4	5
1.	On time completion of the project					
2.	Completion of the project within the budgeted limits					
3.	Quality work performance on completion of project					
4.	Enhanced cost efficiency on completion of project					
5.	Better client satisfaction on completion of project					

**6b. From your own experience what other key performance indicators would you utilize in measuring the project performance within your firm?**

.....

.....

.....

**7. On a 1-5 scale, do you agree with;**

No	Organization Structure and Project Performance	1	2	3	4	5
1.	Coordination improves financial management					
2.	Leadership qualities determine timeliness of project completion					
3.	Internal coordination improves work quality					
4.	Improved leadership increases satisfaction levels among customers.					
5.	Management of human resources improves project timeliness					

**7b. How else do u think organization structure impacts the level of productivity within the firm?**

.....  
 .....  
 .....

**8. On a 1-5 scale, do you agree with;**

No	Organization culture and Project Performance	1	2	3	4	5
1.	Clients are more satisfied with an improvement in communication channels					
2.	Better communication within the firm promotes on-time project completion					
3.	Increased rewards promote quality work performance					
4.	Training of staff reduces cost of projects					
5.	Better employee recognition enhances the work performance					
6.	Training leads to improved satisfaction among clients					

**8b. How else does organization culture impact performance results?**

.....  
 .....  
 .....

**9. On a 1-5 scale, do you agree with;**

No	Resource capability and Project Performance	1	2	3	4	5
1.	Infrastructural capability leads to faster completion of projects					
2.	Effective distribution of resources improves project completion time					
3.	Efficient use of resources ensures projects remain within the budget					

4.	Optimal provision of infrastructure ensures cost efficiency					
5.	Better resource utilization fosters client satisfaction					

**9b. Is there any other way that resource capability influences productivity within the firm?**

.....  
 .....  
 .....

**10. On a 1-5 scale, do you agree with;**

No	Employee Qualification and Project Results	1	2	3	4	5
1.	Better recruitment and improves work quality					
2.	Acquisition of technical skills among employees reduces expected costs of projects					
3.	Adequate employees lead to faster project completion					
4.	Employee competency supports efficiency ensuring that the budget limit is not exceeded					
5.	Enhanced employee skills and training fosters client satisfaction					

**10b. How else does employee competency impact performance of projects?**

.....  
 .....  
 .....

**11. What other factors from your consideration influence project performance?**

.....  
 .....  
 .....

**12. Based on your experience within the organization what recommendations/strategies would you advocate for to enhance project performance within the sector?**

.....  
.....  
.....

## Appendix II: Graduate School Letter



KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)  
Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 8710901 Ext. 57530

Our Ref: D53/NYI/PT/21937/2012

DATE: 16<sup>th</sup> January, 2018

Director General,  
National Commission for Science, Technology  
and Innovation  
P.O. Box 30623-00100  
NAIROBI

Dear Sir/Madam,


RE: RESEARCH AUTHORIZATION FOR ESTHER WANGARI KURIA – REG. NO.  
D53/NYI/PT/21937/2012.

I write to introduce Ms. Esther Wangari Kuria who is a Postgraduate Student of this University. She is registered for M.B.A degree programme in the Department of Management Science.

Ms. Esther Wangari intends to conduct research for a M.B.A Project Proposal entitled, "Internal Organization Environment and Project Performance in Construction Firms within Nairobi City County, Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,

*for*   
MRS. LUCY N. MBAABU  
FOR: DEAN, GRADUATE SCHOOL

KM/Inn

## Appendix III: NACOSTI Letter



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/77542/21198**

Date: **2<sup>nd</sup> March, 2018**


Esther Wangari Kuria  
Kenyatta University  
P.O. Box 43844-00100  
**NAIROBI.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Organization environment and project performance in construction firms within Nairobi City County, Kenya,”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **2<sup>nd</sup> March, 2019.**

You are advised to report to **the Directors of selected construction firms, the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

  
**GODFREY P. KALERWA MSc., MBA, MKIM**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The Directors  
Selected construction firms.

The County Commissioner  
Nairobi County.

*National Commission for Science, Technology and Innovation is ISO9001:2008 Certified*

## **Appendix IV: Turnitin Originality Report**

INTERNAL ORGANIZATION ENVIRONMENT AND PROJECT PERFORMANCE IN  
CONSTRUCTION FIRMS WITHIN NAIROBI CITY COUNTY, KENYA by Esther  
KURIA

From MBA PROPOSALS AND PROJECTS (MBA PROJECT SUPERVISION)

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