

**EFFECT OF STRATEGIC AGILITY ON PERFORMANCE OF  
CONSTRUCTION  
FIRMS IN NAIROBI**

**MARY WAIRIMU MUCHOKI**

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## DECLARATION

I thus attest that this study is all my own and has not been previously submitted, in whole or in part, to any other educational institution.



Signature: .....

Date: .....30/10/2022.....

**Mary Wairimu Muchoki**

**D61/69313/2013**

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

Signature:  .....

Date: 1/11/2022.....

**DR. WINNIE NJERU**

**Lecturer, Department of Business Administration**

**Faculty of Business and management sciences, University of Nairobi**

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God bless you all.

## **DEDICATION**

This study project is dedicated to my late father Muchoki, my mother Njeri, and my darling kids Jeevan, Jyeon, and Jaleel for setting the tone and for their support, prayers, and words of encouragement in helping me finish this project. May God bless them all.

## **ABSTRACT**

There is a growing need for firms to be agile in their activities in order to be able to effectively adapt to an ever turbulent environment. This in turn determines how quickly organizations can recognize opportunities in the midst of crisis and fluidly mobilize their resources to enhance their performance. The study's aim was to establish how Nairobi's construction firms performed and how their strategic agility affected that performance. Organization, human resource, technology, and planning agility are some of the predictor factors that examined strategic agility. Dynamic capability theory and contingency theory served as the guides for the study. All Class One construction businesses with offices in Nairobi made up the study's population, which was studied using a descriptive research approach. There were 84 construction enterprises in all, and a census was taken. Nine firms, however, were not taken into account for the research since they had just been added to that category of firms. A questionnaire was used to collect data from the intended responder. The research included descriptive and inferential metrics such as mean, standard deviation, and regression equation, and tables were used to present the results. The findings indicate that there is a large positive relationship between strategic agility and the performance of Kenyan construction businesses, and that the four strategic agility elements analysed account for a considerable percentage of that performance. According to the regression coefficient components, organizational agility, human agility, and technological agility seem to have had a positive and significant influence on performance. However, planning agility was found to have no statistical significance in affecting performance of the construction firms. These findings imply that the performance of the construction firms with high strategic agility will be higher than those with low strategic agility. Thus, managers should consider strategic agility in developing and protecting existing market shares, increasing shareholders value and enhancing firm performance. Construction firms contribute significantly towards improved infrastructure and policies should be created that steer firms to be agile. Since this study investigated only four dimensions, there is a need for further research to determine how other agility variables affect organizational performance.

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## **ABBREVIATIONS AND ACRONYMS**

BSC	-	Balance Score Card
DC	-	Dynamic Capability
GDP	-	Gross Domestic Product
IT	-	Information Technology
KIPPRA	-	Kenya Institute of Policy Planning and Research Authority
NCA	-	National Construction Authority
ROE	-	Return on Equity
ROI	-	Return on Investment

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

It is not just one aspect that determines an organization's performance; rather, it is the multitude of tactics that the business implements. This suggests that it is necessary for an organization to have the capacity to recognize its present position and objectives with the intention of pursuing successful strategies that will boost the company's ability to achieve its long term strategic goals. The ability of an organization to implement speedy decisions, process quality information from the changing market, raw material inputs, leadership and company flexibility is essential (Lewis, Andriopoulos & Smith 2014).

Strategic agility in the corporate structure provides firms with the ability to respond quickly to change and take steps to help manage business risk and volatility and in the process improve its performance (Tallon & Pinsonneault, 2011). This is due to the fact that an agile business should be able to adjust its culture in response to shifts in the market, acquire knowledge of those shifts in a timely manner, and be able to profit from those changes. In order to swiftly respond to the shifts that take place in the market, an organization has to have the ability to quickly modify via its available resources. This, in turn, may impact how well the organization performs in response to the dynamic shifts.

An investigation into the ways in which strategic agility affects the performance of construction enterprises begins with a foundation in the Dynamic Capability Theory and the Contingency Theory. These two theories serve as the basis for the

investigation. According to Teece and Pisano's dynamic capability (**DC**) theory, organizational dynamic capabilities pertain to an organization's ability to reorganize its internal resources in order to cope with a situation that is anticipated to undergo quick change. Specifically, the theory focuses on an organization's capacity to deal with a scenario that is predicted to experience rapid change. As a result, in continually changing business settings, dynamic capabilities emphasize the crucial role that dynamic capabilities play in describing a firm's competitiveness. The contingency theory was advanced by Otley (1980) and is founded on the assumption that there is no uniformly applicable performance control framework that extends similarly to all companies under all circumstances. Instead, the qualities and efficacy of the organizational structure would depend on particular operational and contextual variables.

In order to achieve the government's Big 4 Agenda and the Vision 2030 plan, which intends to convert Kenya into a newly industrialized middle income nation capable of providing its population with a high standard of living, the construction industry in Kenya is a crucial sector. In order to achieve the economic pillar, it is envisaged that the transportation, building and construction sectors are to play an important role in closing the infrastructure deficit that is currently witnessed. According to the World Bank, Kenya requires infrastructure development of not less than USD 4 billion over the next decade in order to achieve this goal. Indeed in the last decade, the Kenya government has invested heavily in road, airport, maritime, rail infrastructure and coupled with commercial construction by the private sector, commercial infrastructure, the country has registered an average growth of 9.4% in both the public and private sector. Among important determinants of growth in the sector are the

construction firms who need to deliver projects that meet client specifications and considering the ever changing global construction industry in terms of quality specification, cost management, risk and customer demands, it is important that Kenyan construction firms be agile to cope with these demands and therefore improve their performance. Therefore, understanding the role of organization agility in the construction firms' performance will be of importance towards realization of the overall national economic, social and political development.

### **1.1.1 Strategic Agility**

Organizational strategic agility has been defined differently by numerous scholars. Kumkale (2016) indicates that strategic agility relates to the uninterrupted preservation of stability, awareness and situational resilience of management in both the internal and external contexts. All these are aimed at adapting an organization culture to be able to learn about the market swiftly and in the process benefit from these changes according to the management selection.

According to Ieri and Soylu (2010), strategic agility is the use of an organization's distinctive qualities, such as high quality, the ability to quickly adapt to new ideas, flexibility, and low production costs, in order to gain an edge in a highly competitive environment. Azzam et al. (2017) contend that strategic agility is related to a company's ability to quickly review or rediscover the organization and its strategy in response to changes in the market environment. As a result, it can be inferred that strategic agility is specifically connected to focused improvements in the human efficiency, procedures and technology of the enterprise with a view to improving the results of the organization.

In an organizational context, strategic agility according to Doz and Kosonen (2018) can be undertaken through the presence of three internal capacities, namely; resource fluidity, strategic sensitivity and leadership unity, with a view to making the organization more agile. Further, the organization strategic agility requires that there is capacity to predict external and internal business environment, perceptions, strategic sensitivity and flexibility without losing focus on speed (Kumkale, 2016). The dimensions along which strategic agility is measured in an organization include, organization, people, technology and planning, upon which if they are able to respond to the market quickly is expected to result in improved performance. This implies that strategic agility is knowledge-based and need to be proactive and therefore should move away from being reactive –based. To be able to achieve the same, the top management need to be courageous to make difficult and unpopular decision when it is needed.

### **1.1.2 Organization Performance**

According to Nicolescu and Nicolescu (2012), a firm's performance may be defined as a record of the consequences of the actions that are carried out inside the organization. These activities include creating objectives and goals over a specified time period and comparing them to the actual outcomes achieved during that time period. Financial performance; overall product performance; and shareholder return are the three key factors that Pavlou and El Sawy (2011) identify as being essential to organizational success (economic added value and total shareholder return). Pavlou and El Sawy (2011) argued that these aspects make up organizational performance. Because of this, these three concepts are taken into consideration while determining the proper measurements of organizational performance.

In recent years, a great number of businesses have attempted to evaluate their performance by using a structured scorecard strategy. This plan calls for tracking and assessing success in a number of areas, including as customer satisfaction, social responsibility, and human capital management. Examples of these areas include economic efficiency (such as return on shareholders' investment), customer assistance, and community involvement (Breschi and Malerba 2011). Performance contracting, also known as **PC**, serves a dual purpose of assessing performance as well as determining standards (including outputs, operations and attributes) and the necessary knowledge for outcomes. Additionally, **PC** describes the procedures that are utilized for performance monitoring, analysis, and evaluation (Zizlavsky, 2013).

Lumpkin and Dess (1996) used growth in revenue, market share, profitability and overall performance to evaluate and measure firm performance. On his part, Keelson (2014) used four dimensions; consumer engagement efficiency, new product progress, revenue growth and return on investment to measure business orientation and firm performance. The present study will employ the metrics from the efficiency analysis of the balance score card. Kaplan and Norton created a model for assessing the organization's strategic performance (1992). This model's main goal is to convert the organization's strategy and purpose into concrete patterns of organizational behavior. The Balance Scorecard (BSC) indicators of the financial, internal practices, learning and development, and customer viewpoint will be used in the current study to assess how well construction businesses are performing.

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

The Construction sector in Kenya is regulated under the National Construction Authority (NCA) Act No 41 Of 2011 As Revised In 2012. The regulating body is the

National Construction Authority (NCA) that is tasked with regulating contractors by coming up with stipulated conditions required and the behaviour of the main players. Contractors are involved in varied activities that range from, extension, dismantling, or demolition of any building installation, repair and maintenance. In the performance of their function, **NCA** has made progress in facilitating the construction firms contribute to the National **GDP**, enhanced capacity development, provision of superior infrastructure services and improvement on the regulation of contractors. For instance, the contribution of the construction companies to the actual **GDP** grew from 133 billion to 232 billion over the period of six years that is from 2010-2016 (**KIPPRA**, 2018) and with the government increased budgeting of funds towards the affordable housing, the construction industry contribution to the real **GDP** is expected to increase. Therefore, the construction industry could be said to be a significant driver in Kenyan's economic growth.

The construction industry in Kenya faces several challenges that affect their operations and quality of services offered. According to Cytonn Investment (2019) report on the state of the construction industry in Kenya, construction industries are faced with low competition rates of projects, long procurement processes, a lack of affordable project funding and discrepancy in rules, laws and regulation. Also, **KIPPRA** (2018) identify a low technological adoption and experience levels of stakeholders to global practices, use of sub-standard construction materials and inadequate skilled and competent workforce. Despite the challenges, construction firms in Kenya have opportunities in the flourishing housing sub-sector, roads, emerging industries, donor-funded sewerage and rehabilitation works as well as government-driven policy projects.

## **1.2 Research Problem**

Over time, it has been clear that the performance of an organization is impacted by a variety of factors. This includes the management style of a company as well as its capacity to react to new elements arising from the surrounding business environment. Indeed from the present day turbulent business environment, an organization's internal organisation should be responsive to the external market conditions. For this to happen, the firm's structures as represented by its human resource, technology capabilities, people, planning and organization capacity should be able to respond to the emerging environmental changes (Yılmaz, 2013). The performance of an organization has been found to be dependent upon the way it responds to the challenges and opportunities brought about by business challenges and through the same gain appropriate competitive advantage.

According to Tzokas, Kim, Akbar and Al-Dajani, (2015) strategic agility capability helps an organization meander through changes in customer focus, need to steer through business networks, intelligent data management and electronic commerce transaction based with customers. It is therefore expected that the various forms of strategic agility in an organization should have an impact on its final outcome. Similarly, it is acknowledged that the performance of an organization is determined by its culture, leadership style employed alliances, structure and how the firm places itself in the organization value chain within the competitive business environment.

The need for organizational agility is important in the Kenyan construction firms due to the increased demand of their services that has come about from the country's quest to become a middle income country by the year 2030. With the same goal, there has been need for construction companies to adapt to the changing environment in the



sector from the new technologies coming from competing firms from developed countries such as China, India and European countries that employ far better technologies in the construction industry. At the same time, in response to the ever changing competitive landscape in the industry as well as stringent condition set by the regulators, there has been need for construction companies to ensure that it employs organization structures, technology and planning resources to fast adapt to the market demands if better performance is to be realized.

A number of researchers and have taken an interest in the topic as a result of the significance placed on strategic agility in relation to organizational success. The researchers Kale, Aknar, and Başar (2019) investigated the impacts of absorption potential on the efficiency of housing facilities in Turkey by investigating the function that strategic agility plays as a mediator. According to the findings, both strategic agility and company efficiency are positively impacted by the collection and application of measurements. Appelbaum, Calla, Desautels, and Hasan (2017) set out to investigate the difficulties that businesses have while putting their strategic agility shift into practice. The findings show that organizational leadership, interpersonal relationships, and organizational structure all had an impact on how well agility was implemented.

Salih and Alnaji (2014) examined the relationship between strategic analysis and strategic resilience in the Jordanian insurance industry. The findings show that businesses must adopt innovative thinking at numerous operational levels in order to gain and keep a competitive edge in a volatile and dynamic market. In a related line of research, Ofoegbu and Akanbi (2012) looked at the effect that strategic agility has on the level of profitability that manufacturing enterprises in Nigeria experience. The

study's findings, gained from the analysis of the data collected through the use of a questionnaire as a data collection instrument, suggest that proactive management, as opposed to reactive management, is necessary for the organization to swiftly adapt to changes brought on by the environment in which it performs its operations.

Muema (2019) looked at how the private hospitals in Nairobi County fared in terms of their competitive advantage when strategic agility was taken into consideration. Indicators of strategic agility, according to the study's findings, included resource flexibility, operational dexterity, and inventive organizational practices. The results show that private hospitals in Nairobi County's absolute quality control resilience significantly affects their overall productivity levels. Insurance brokerage businesses demonstrate significant worker skills, attitudes, knowledge, and competence, according to Waweru (2016)'s examination of the impact of strategic agility enablers on the results of Kenya's insurance brokerage market. However, the study adopted variables to proxy strategic alignment different from that this current research will adopt, namely; organization, people, technology and planning dimensions. The goal of Haggai's (2017) study was to determine how the small- and medium-sized firms (SMEs) in Nairobi's CBD (Central Business District) responded to strategic agility in terms of organizational performance. The following agility traits in particular caught the researcher's attention: human resources, Organizational structure, innovation, and support and managerial commitment. According to the results, the adaptability of the organizational structure had a sizeable and beneficial impact on the performance. The contextual framework of the study, on the other hand, is distinct from the one that is currently being conducted, which is centred on construction companies in Nairobi.

The studies that have been done so far make it evident that there have been several investigations into the impact that strategic agility has on the functionality of companies. Nevertheless, the studies varied in both the strategic agility parameters and the setting in which they were conducted; what is the effect of strategic agility on the performance of construction firms in Nairobi, Kenya?

### **1.3 Research Objective**

The objective of the study was to determine the effect of strategic agility on the performance of construction firms in Nairobi Kenya

### **1.4 Value of the Study**

The study on the relationship between strategic agility and performance contributes to the advancement of management theory, particularly the requirement for businesses to be flexible in their day-to-day operations. By investigating the four possible segments of agility, the study enabled the identifications of the most responsive dimensions in the construction sector. The provisions of dynamic capability theory is used to help businesses become more effective by allowing them to adapt to new situations as they arise. The notion of dynamic capability recognizes the importance of both internal and external influences in determining an organization's success or failure.

Construction firms in Kenya might benefit from this research since it suggests strategies for meeting environmental requirements, which could ultimately boost the businesses' productivity. By being agile in their operations and capable of seizing opportunities as they arise, this helps firms increase their degree of preparation in a dynamic business environment. The managers will also be able to determine the response strategies dimensions that significantly affect their performance.

The results of the research also would be helpful to policymakers in helping them gain an understanding of how strategic agility of the construction firms put in place influence their performance. This influences the form of incentives that the government can extend to these firms. The policymakers like the National Construction Authority of Kenya as well as the Ministry of Infrastructure and planning would be able to develop appropriate policy guidelines on the sector that encourages the adoption of flexible organizations, the speed of decision making and the costs associated with instituting the changes.

The results of this study would be beneficial to scholars and researchers since it contributes to the current body of information that is related to an organization working in a dynamic business environment and how an organization is able to adjust its operation to the needs of the market. The study also shares suggestions on areas that require further research on the subject of change management.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The literature pertaining to the study topic is discussed in this chapter. The purpose of the research is to investigate the influence that strategic agility has on the performance of construction firms in Nairobi, Kenya. The section discusses the theories that served as the basis for the study, in addition to the empirical investigations that are pertinent to the research topic.

#### **2.2 Theoretical Foundation**

In this section, the studies explore theories that are pertinent to the objectives of the study. Both the dynamic capacity theory and the contingency theory served as the foundation for the discussions that revolve around how strategic agility influences the performance of construction firms. This section examines the two theories and explains how they are pertinent to the study at hand.

##### **2.2.1 Dynamic Capability Theory**

Teece and Pisano (1994) made contributions to the development of the dynamic capability theory (DCT). This theory came forth as a result of the shortcomings of the resource-based theory, which was unable to adequately explain how an organization may remain competitive in an ever-evolving commercial market. The resources that a firm may use to integrate, adapt, and rearrange its assets and processes in order to improve performance in environments that are changing quickly are referred to as its dynamic capabilities. According to Dubey, Gunasekaran, and Childe (2018), an organization's dynamic capability is its capacity to detect and shape opportunities that

are provided in the market while also retaining its competitiveness by identifying and repurposing its resources.

The dynamic capability theory is of the view that the difference in company competitiveness is rooted in how their asset position is reconfigured according to the market demands and this means that the firm's internal structures such as governance, culture and leadership will determine the success of its adaptability and agility. The dynamic capability perspective is an effort to describe how the resources that a company now has may be aligned to deal with the rapidly changing environment and, as a result, seek new possibilities in new ways that have the potential to be productive (Zahra, Sapienza & Davidson, 2012).

Reconfiguration capacity is therefore regarded to be a main dynamic capacity to monitor developments in the economy and technology and to respond promptly by transforming resources. Similarly, the policy change (Zhou and Wu 2010) that addresses diversity in resource use and reconfiguration reinforces the beneficial impacts of technologic capacity and increases company efficiency. Therefore, companies must respond rapidly to the market and competitors who are dynamic in their operations, in order to deal with the fast changing business environments. A company may fall into a pit of achievement or a trap of expertise, which strengthens existing practices that allow better use of the existing skills and less discovery of fresh skills (Sitkin et al. 2011). Organizations whose strategic objectives and disruptive capability are well matched will also be less vulnerable to environmental change and therefore continue to maintain a strategic market place (Kearns & Lederer, 2003) and they may therefore generate value for shareholders.

The capacity of a firm to reconfigure its resources – both tangible and intangible assets, will define its agility and capacity to meander itself in the current relentless competitive business environment. Therefore, when construction firms extend their activities and business in a region, their success and performance will not only be dependent on the portfolio of resources that they have, but rather how they can modify the same quickly based on the existing market opportunities and challenges. This therefore calls upon an organization resources represented by people, information technology and processes to be agile as manifested through resource fluidity, strategic sensitivity and leadership unity (Teece, 2014). However, the dynamic capabilities theory does not factor in the need to configure these resources in a seamless manner to gain the needed competitive advantage. This is because, though the existence of internal and external resources in a firm might lead to improved performance, there is need to align these resources in a way that it will not cause sub-optimality in the organization (Williamson, 2016).

### **2.2.2 Contingency Theory**

Otley (1980) made a contribution to the development of contingency theory, which recognizes the dynamic operational environments that commercial organizations today face. These circumstances are characterized by fresh forms of international rivalry, volatile price wars, fickle customers, and other comparable elements. The question of how quickly and easily an organization can adjust to these environmental changes is brought up by this. The contingency theory states that for an organization to successfully compete in a particular market, organizational and contextual elements must be matched appropriately and the organization must also be sufficiently nimble to handle the challenges and opportunities that occur. One of the cornerstones of the contingency theory is this (Aghina, De Smet, & Weerda, 2016). Various external

circumstances, strategy, organizational structure, technology, culture, and size were mentioned as prominent internal elements that might affect how a company responds to external environment. These internal elements are believed to have an impact on an organization's performance through influencing the control system under which it functions.

At the foundation of the organizational agility concept is its capacity to do something on the face of the threats and opportunities that an operating environment presents. According to Teece et al. (2016) it is important that firms establish their agility capability irrespective of the cost implication that come with the adaptation of the IT capabilities that brings about the agility, not considering the fact that investment in IT system is bought expensive and risky. As a result, it should be put in mind that since the IT system is a significant determinant of how organisation agility is achieved, it is important to establish which IT capabilities will result in improved agility.

The contingency theory, according to (Aghina et al., (2016) explains that rather than encourage a firm to be agile in all its operational activities, it is important to pick the most relevant aspects of their operations which need to be agile and contains necessary allowance since it is necessary to balance between its commitment to agility and flexibility. For example, a firm that aims to achieve operational excellence and customer loyalty will need to make its processes agile while for a business entity that pursues a multi-focused strategy, it likewise needs to pursue a multi-pronged agility in the areas of operation, marketing and financial undertaking (Coltman & Devinney, 2013). As a result, the essential tenet of the theory of contingency is that it is essential for business organizations to be flexible and to adjust their procedures in order to be able to deal with new developments in the business environment.



However, the central tenet of the Contingency Theory has been criticized for having both technical and intellectual shortcomings in the setting of an unpredictable market. Limited variables, a specification model, and a measurement inaccuracy that produces contradictory results are some of these issues (Ferreira & Otley, 2010). In a similar manner, the contingency theory concentrates on one or two variables by selecting fit and concentrating on interaction outcomes. This is troublesome due to the mutual familiarity between the contingency variables. Despite this, the contingency theory is still applicable, especially when one takes into account the limitations of the theory, acknowledges the relationship between structural factors and operational performance, and considers the more volatile market environment.

### **2.3 Empirical Review and Knowledge Gap**

Consensus among different scholars is that organizational agility is concerned about sensing and responding to the business environmental changes and that it involves the interaction with customers through the interaction of internal processes and cooperating with stakeholders to achieve competitiveness (Liang et al.2017). However, other researchers have assessed firm agility to be related with the speed to which an organization adopts information technology in its processes to be able to respond to alter business processes to respond to threats in their markets. Consequently, it can be claimed that organization agility is concerned with the ability to respond with ease and speed threats and opportunities that present themselves in the market. Similarly, different dimensions or practices have been identified as being the antecedents or enablers of organization agility. The common dimensions of organizational agility that has been adopted by different scholars include organization

dimension, people, technology and planning dimension (Oyedijo, 2012; Tallon, et al. 2019).

An organization is made up of different layers that are represented by the degree of operational decentralization, the extent to which formal structure is observed, the leadership support to innovation and creativity, or by the strength or soundness of the company's market research system. According to Bouwman et al. (2018), top level concerns like strategic orientation, decentralized decision making, business model selection, and the stage at which environmental monitoring and control is to be accomplished will all be affected by how an organization is formed.

The capacity of an organization to acquire real-time information that is going to be batched and aggregated before being presented for leadership decision making is critical to the strategic agility of the business. Therefore, if there is a rigid organization structure present, there may be a delay in sending information to the top management, and yet agility needs immediacy in decision processing free of bureaucracy, which may result in managers overlooking information that is accessible (Seo & La Paz, 2008). An organization application of IT system can help in the exchange of information between the business unit and organization decision makers and therefore increases the speed of critical decision or resolving conflicts. This has led to what Teoh and Chen (2013) has called governance for agility procedure as a way of overcoming organization structure obstacles.

The agility of organizational human resource is important in faster decision making and also ensuring that the staffs are motivated in what they are doing. Oyedijo (2012) identified several human resource developments and management attributes in an

organization that affects the state of agility. These include the level of employee involvement in design and planning, the level of employee interaction with suppliers and customers, employee education and training, active suggestion system.

In addition, there is need for the organization to put in place an active suggestion system and employee autonomy. These factors are considered significant in influencing the ability and capacity of an organization's employee to handle challenges resulting from the business environmental (Anderson, 2015).

Agility of an organization IT system enhances its performance and can be achieved from four different architectural business positions namely; hardware and systems infrastructure, capacity to manage individual businesses, appropriate governance system and IT application software ( Lee et al. 2015). The capacity of an organization to modify existing IT resources, while at the same time experimenting with new one ones, defines business ambidexterity. This stance is in line with Ravichandran's (2018) finding that greater organizational resilience is correlated with digital network capability and that this relationship is moderated by creativity ability that is better accomplished by risk-taking, error-making tolerance, and openness to innovation.

The IT agility in a firm is measured by the innovation programmes, new technology adopted and the research and development intensity in a firm. (Anderson, 2015). A company's IT agility is supposed to affect its order processing cycle time, service delivery capacity, decrease paper work, and minimize cycle times for new product or service growth. Similarly, costs are projected to decline in all internal processes as a result of IT resilience and subsequent management forecasting ability.

The planning agility of a firm is manifested through having higher capacity to develop long-term organizational objectives, developing the ability to sense external factors that might affect firm operational performance and also setting of actions plans and short-term objectives (Oyedijo, 2012).

The ability of an organization to modify its IT portfolio through a process of buying and retiring existing application was investigated by Queiroz, Tallon, Sharma and Coltman (2018). The researchers conducted a survey with the chief information officers of the market business units and distributed questionnaires to 141 firms' chief information officers. The impact of agility and strategic direction on company performance was one of the factors examined. The results show that strategic orientation mediates this link and that IT capabilities coordinated adjustments have a substantial impact on performance. This point of view is similar to that of Weill et al. (2012), who assert that high-performing businesses should be the best examples of how information technology capabilities, such as the ability to manage data, facilitate intra-firm communications, and manage channels, should positively affect a firm's competitiveness.

Organizational agility through human resource adaptability and its effect on the employee performance was investigated by Goodarzi, Shakeri, Ghaniyoun and Heidari (2018). The target respondents were business leaders that use business intelligence in their day-to-day operational activities with an annual turnover of at least 20 million dollars. The study found that real business IT infrastructure lies on the organization interaction between IT infrastructure and its organizational context. This position supports the position arrived by Orojloo, Feizi and Najafabadi (2016) who while researching on the effect of strategic agility capabilities on organizational

performance found that agile organization are able to combine available business processes and human capital with IT capabilities to satisfy clients through provision of customised and sustainable services and products within a short time.

Chen and Siau (2011) evaluated the impact of business intelligence and the flexibility of IT infrastructure on the competitiveness of an organization's overall performance. It was concluded, with the help of the views of firm leaders, that companies would depend more on business intelligence and the agility of their IT infrastructure in order to make the most of possibilities and avoid risks when faced with chaotic situations. It was discovered that company organizations that had used BI and IT in their operations performed better than those that had utilized conventional management strategies. This was contrasted to the performance of firms that had utilized conventional management strategies. Empirical study on the influence of supply chain agility on organizational operational performance was undertaken by Nazempour, Yang, and Waheed (2020). They concluded that one advantage of IT agility is increased resource planning, internet working, and advanced manufacturing that is able to integrate the contemporary supply chain management related technologies.

Kamau, Senaji, Eng, and Nzioki (2019) conducted a study to investigate the influence that the capability of information technology has on the overall performance of commercial banks in Kenya. They used the descriptive research technique and a total of 259 questionnaires to reach their conclusion, which was that the competency of an organization's information technology has a positive and substantial influence on the competitive advantage of commercial banks in Kenya. This knowledge was gained from the observation that Kenyan commercial banks' performance was influenced by their ability to use information technology. Bharadwaj (2000) arrived at a similar

conclusion, discovering that a resource-based potential for information technology has a beneficial impact on business efficiency. In a similar vein, Okotoh (2015) discovered that the use of information technology encouraged the introduction of better management skills and strategic choices in an earlier study that attempted to evaluate the effects of organizational agility on Trademark East Africa's operational efficiency. This study was conducted in an effort to evaluate the effects of organizational agility on Trademark East Africa's operational efficiency.

The researchers Gerald, Obianuju, and Chukwunonso (2020) investigated the impact that strategic agility had on the operational efficiency of small and medium firms in the state of Anabra during the outbreak of the Covid-19 virus. Through the use of a questionnaire and adopting the survey design, the researchers found that strategic agility facilitated the business managers to have a foresight and gaze into the future and project what is possible to occur as a result of the changes taking place. This study lends credence to that of Akhigbe and Onuoha (2019), who discovered that an organization's ability to withstand adversity is directly correlated to the degree to which its strategic agility has been enhanced. In a separate but related study, Govuzela and Mafini (2019) investigated the extent to which there is a correlation between organizational agility and the level of success attained by small and medium-sized enterprises (SMEs) in South Africa. The study made use of a quantitative approach and a study design known as cross-sectional. A standardized questionnaire was sent to 564 owner-managers of SMEs that had been selected at random. The theories were examined with the use of a technology known as structural equation simulation. According to the findings of the study, technical capability, collective innovation,

organizational growth, and internal cooperation are the four firm best practices that have the most significant beneficial impact on operational agility.

## **2.4 Summary of the Literature**

Agility in the face of external risks and possibilities is more critical in today's business world, which is experiencing greater change and volatility from more and larger sources (Weber & Tarba, 2014). As a result of rapid and disruptive technical advancement, deregulation, and the mass-customization and globalization of production and consumption (D'Aveni, 1999; D'Aveni, Dagnino, & Smith 2010), hypercompetitive corporate settings have emerged, in which competitive advantages are transient. Significant obstacles are presented to businesses on a worldwide scale by factors such as climate change, severe weather, and global pandemics (Nijssen & Paauwe, 2012; Steyer & Gilbert, 2013). The development of strategic agility may be beneficial to organizations as a means of better managing the risks and uncertainties of the market (Sherehiy, Karwowski, & Layer, 2007). To remain competitive in today's market, companies must be able to swiftly assess and react to new information, modify their offerings in light of customer feedback, and revise their internal processes to accommodate new ways of doing business (Braunscheidel & Suresh, 2009).

At the same time, if the company's structure and strategy are reworked in a responsive manner, it may be possible to turn the external changes into opportunities (Shin, Lee, Kim, & Rhim, 2015). To be strategically agile, a company must be able to swiftly adapt to changing market circumstances by keeping a close eye on both internal and external factors (Kumkale, 2016). Strategic agility may enhance an organization's

success by allowing it to better adapt to shifting market conditions and a more competitive landscape (Tallon & Pinsonneault, 2011).

From the literature and empirical studies, the phrase "strategic agility" has been used in several studies to characterize an organization's capacity to "immediately perceive and grab opportunities, alter course, and avoid collisions" (McCann, 2004: 47) or "move swiftly, decisively, and effectively in predicting, initiating, and taking advantage of change" (Jamrog, Vickers, & Bear, 2006: 5). Besides research at the organizational level, specialized fields of study on agility in contexts like knowledge-intensive firms and the manufacturing industry have emerged. Early studies of agility tended to focus on the association between agility and high-end technology like computer-integrated manufacturing, which has led to the development of a distinct body of literature on agility in the context of manufacturing (Sherehiy et al., 2007). However, the role that HRM plays in facilitating strategic adaptability is still little understood.

Management of human resources is crucial to strategic flexibility. D'Aveni et al. (2010) note that a combination of factors including technological innovation, globalization, and deregulation have created an extremely competitive market. With so many obstacles to overcome, it's no surprise that CEOs and HR professionals place a premium on agility. Despite the rising volume of research on strategic agility (for example, Kale, Aknar, & Başar, 2019), the link between strategic agility and HRM has received less study. Strategic agility is crucial for construction companies to successfully and efficiently renew and modify their business models. To achieve this goal, significant human skills must be cultivated (Bock, Opsahl, George, & Gann, 2012).



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

In this chapter, the study discusses the study technique that was used in order to accomplish the desired outcome of the research. The study's research design, the population that was intended to be studied, and the methods that were followed in order to gather data are the topics that was also discussed in this chapter. In addition, the chapter expounds on the technique of statistical data analysis as well as the strategy for conducting statistical data analysis.

#### **3.2 Research Design**

A study design gives information on the various methods that the study might use to accomplish its goals and purposes, which are specified in the aims and objectives. It is recognized as a guide, a master plan containing methods, procedures, and strategies for acquiring and interpreting the analysed data, or simply a framework or action plan for research (Collis & Hussey, 2017).

This study used a descriptive research technique. The findings are consequently evaluated in the context of the unit(s) to which the data belongs, which is why this study technique was chosen. Descriptive research is primarily concerned with reporting the outcomes of the data without necessarily drawing conclusions. Additionally, this strategy would help in the process of developing a clear knowledge of the value provided as a consequence of the use of strategic agility in business.

### **3.3 Population of the Study**

According to Hancock and Algozzine (2016), a study population is a group of study components—either living or non-living—that a researcher has formed an interest in examining in relation to a specific hypothesis. The target population for this research is decided by a number of variables, such as the study's geographic borders, its scope, its availability, and its timeline.

The targeted population in the study were all the construction firms (NCA1 category) registered in Nairobi. According to the National Construction Authority (2019), the registered construction firms that operate in Nairobi were 84. These are firms that undertake projects with unlimited value. Hence the research was a census.

### **3.4 Data Collection**

In this research, which relied on primary data, the major method of data collection was a semi-structured questionnaire. The questionnaire had a mix of questions with closed and open-ended items. The purpose of the closed-ended questions was to urge respondents to give responses as quickly as possible. On the other hand, the open-ended questions were meant to encourage respondents to offer remarks that showed some level of reflection in respect to their own views. The demographic information of respondents and the target groups was addressed in Section A of the questionnaire, while Section B intended to determine the strategic agility components that is used by construction companies in Kenya. In Section C, we investigated the impact that tactical adaptability had on the overall performance of the organization. According to Mugenda (2008), the use of the questionnaire allows for the preservation of anonymity, the saving of time, and the simplicity of its administration.

Those working in construction companies as business development managers or in roles functionally identical to those job cadres were asked to participate in the survey. It was required that the respondents fill out the questionnaires, and then they were collected after a week. For those respondents who attended various trainings organized by National Construction authority, the filled and the questionnaires were collected at the end of each session. The respondents provided their responses in a questionnaire containing a five point Likert scale points.

### 3.5 Data Analysis

The questionnaires were cleaned up after the data had been collected by eliminating those that had inconsistent responses or omitted crucial details. The descriptive measurements of mean and standard deviation served as the primary analytical tools for the data entry and analysis in the Spss software. In particular, the mean and the standard deviation were used to summarize and provide information that could be interpreted. Tables were used to present the data analysis's results. A model of regression was created to establish the nature of the connection between the dependent and independent variables. The regression equation took the form,

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

Where Y	=	Performance
$\beta_0$	=	Constant
$X_1$	=	Organization agility
$X_2$	=	People agility
$X_3$	=	Technology agility
$X_4$	=	Planning agility
$\epsilon$	=	Error term

The regression significance was determined using the F- test whereas  $R^2$  which is the coefficient of determination was used to determine the extent of variation in Y that was explained by X variables. 5% significance level or 95% confidence level was used.

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.1 Introduction

The main objective of the current study was to look at how strategic agility affected organizational performance with emphasis on construction firms within Nairobi. This chapter covers the analysis of the information gathered from the questionnaires that were given out and returned by the respondents physically and by email. The background information, the elements of strategic agility that were looked at, and its impact on the performance of the construction enterprises were all discussed in the sections.

#### 4.2 Response Rate

According to Collis and Hussey (2017), the statistical power of a test may be determined by looking at the response rate. The greater the response rate, the higher the statistical power, and hence the credibility of the research results. In total, the researcher administered 75 questionnaires to each of the Class 1 construction firms to cover for any non-responsive firms. Table 4.1 shows the summary of the response rate obtained.

**Table 4.1: Response Rate**

Questionnaires	Number	Percentage
Filled and collected	54	72
Non-responded	21	28
Total	75	100

From the results in Table 4.1, the response rate was close to three-quarters (72%) of the targeted respondents, a rate that was considered to be adequate and representative. According to Mugenda and Mugenda's (2003) research, an overall response rate of sixty percent or more is regarded as sufficient to draw conclusions from the data about the entire population of interest.

### 4.3 Background Information

The respondents were required to provide information on specific organizational and personal characteristics. The information sought included, the respondent's management level, working experience in the organization and provide information about the organizational size as measured by the number of employees. In addition, the duration in which the construction company had been in operation was sought.

#### 4.3.1 Level of Management

The respondents' managerial positions provide an indication as to the forms of decision-making they are involved in, such as policy/strategic or operational decisions. The findings with regard to the respondents' managerial position are presented in Table 4.2.

**Table 4.2: Level of Management**

		Frequency	Percent	Cumulative Percent
Valid	Top management	12	22.2	22.2
	Middle level management	24	44.4	66.6
	Supervisory Level	18	33.4	100
	Total	54	100	

**Source: Research Data**

From the findings, majority of the respondents (44.4%) were at the middle level management level while slightly over one-third held the supervisory management level. Generally, close to two-thirds of the respondents were from the top management and middle levels, a position that implies that the respondents were members of staff that were versed with strategies and implemented by the respective construction firms with a view to remaining competitive in the turbulent business environment that the sector is going through.

#### **4.3.2 Continuous Length of Service**

The length of service that a respondent had worked in the Construction firm is aimed at evaluating the work experience that he/she will have attained in the firm. When all other factors are held constant, a respondent's level of knowledge of the strategic agility measures that have been implemented increases in direct proportion to the number of years the respondent has been in service. Table 4.3 outlines the findings with reference to the respondents' cumulative years of experience in the industry.

**Table 4. 3: Length of Service**

		Frequency	Percent	Cumulative Percent
Valid	Less than 5 years	10	18.5	18.5
	6-10 years	18	33.3	51.8
	11-15 years	11	20.4	72.2
	Over 15 years	15	27.8	100
Total		54	100	

**Source: Research Data**

The findings in Table 4.3 suggest that of the respondents, one-third (33.3%) (18) had worked in construction firm between 6-10 years, while one-fifth had worked for between 11-15 years. Over 80% of the respondents had collectively spent more than six years working for construction companies, indicating that they are knowledgeable about the tactics that the organizations have used over time and will be a great source of data for the research.

### 4.3.3 Number of Employees

One of the indicators that are used in measuring the size of a company is the number of employees that it has. The new survey employed the same methodology in estimating the size of construction companies based on the number of employees in each company. Table 4.4 presents the results that were obtained.

**Table 4.4: Number of Employees**

	Frequency	Percent	Cumulative Percent
Valid Less than 30	17	31.5	31.5
31-50 Employees	8	14.8	46.3
51-70 Employees	9	16.7	63
Over 71 Employees	20	37.0	100
Total	54	100.0	

**Source: Research Data**

The results indicate that close to two-fifths (37%) of the firms had over 70 employees while around a third of the firms had less than 30 employees. It can be concluded therefore that majority of the construction firms were in the upper medium enterprises since they have more than 30 employees.



#### 4.3.4 Age of the Organization

The age of an organization provides an estimate of how it has been in operation and therefore undertaken different strategic responses with a view to remain competitive and thus been in operations despite the competitive pressures from the other players in the industry. A construction company in Kenya face different competitive challenges from local, international, changing designs and regulatory measures which means that a firm that has operated for a longer period will have adopted appropriate strategies that suit the changing business circumstances. The results with regard to the age of the construction firms is presented in Table 4.5.

**Table 4.5: Age of the Construction Firm**

	Age	Frequency	Percent	Cumulative Percent
Valid	Less than 10 years	3	5.6	5.6
	11-15 years	14	25.9	31.5
	16-20 Years	21	38.9	70.4
	Over 21 years	16	29.6	100.0
	Total	54	100.0	

**Source: Research Data**

The results in Table 4.5 suggest that close to two-fifths of the construction firms had been in operation for between 16 -20 years while close to a third had been in operations for over 21 years. Generally over 95% of the construction firms had operated for over 10 years and therefore being appropriate to understand what strategic agility steps they had undertaken over the period to improve their performance.

#### **4.4 Strategic Agility Practices**

Within this section of the questionnaire, the goal was to establish how four distinct organizational components may be formed in order to react to the changing conditions of the operational environment. If the organization is agile across all pertinent domains, it will be able to recognize and respond to changes in the external business environment by altering its internal procedures. The replies were graded on a five-point Likert scale, with five being "strongly agree," and one being "strongly disagree." While means below 1.5 reflect that the technique has only been used to a very limited extent, values greater than 3.5 indicate that it has been used to a substantial extent. A significant level of response variance on the assertions is indicated by a standard deviation value that is more than 1. The strategic agility dimensions investigated were organization, people, technology and planning.

##### **4.4.1 Organization Agility**

Organizational agility may be defined as an organization's capacity to react quickly and effectively to unforeseen shifts in market conditions and to capitalize on the possibilities presented by these shifts. The organization's agility should be defined by speed, precision, and cost economy in the organization's exploitation of cost economy. The results relating to how construction firms have adapted their organization to the market changes is presented in Table 4.6.

**Table 4.6: Organization Agility**

Statement	N	Mean	Std. Deviation
There are fewer layers in the organization to easily adapt to changes	54	3.75	.427
The firm's production cost is low	54	3.52	.641
The organization has developed a strong linkage with customers and suppliers	54	3.17	.893
There is unity of purpose among the organization leadership with an aim of achieving organizational objectives	54	2.94	1.080
Our organization has the capacity to predict future change in the market environment	54	2.82	1.045
The human capital operates synergistically as a result of IT adoption in processes	54	2.74	.742
The organization has a market research department	54	2.60	.972
The innovative capacity of the firm has increased	54	2.55	.479
<b>Overall mean</b>	<b>54</b>	<b>3.01</b>	

**Source: Research Data**

The results in Table 4.6 suggest that the respondents were in agreement that organization agility in the construction firms is manifested through fewer decision making layers in the firms which makes them to easily adapt to changes arising in the business environment (M= 3.75) as well as having a low human resource production cost (M= 3.52). To a moderate extent, the respondents agreed that there exist a strong linkage with customers and suppliers as a means to facilitate quick adjustment in the market (M=3.17) and that the construction firms leadership were commonly geared towards achieving organization objective (M=2.94, SD = 1.080), with the high standard deviation suggesting that there was higher deviation among the respondents

on the statement. However, there was least agreement among the respondents that they have improved their innovation process ( $M= 2.55$ ) and this might be attributed to the fact that few construction firms had research departments. The results also show that the organizations have tended to reduce the level of bureaucracy that might cause managers miss the insights or sensing opportunities, both in the near and medium term period. Similarly, it was noted that the adoption of the IT system in the organizations has enabled the construction firms to adjust quickly due to the capacity of decision makers to contact the strategic business units.

#### 4.4.2 People Agility

Agile persons seek new challenges and actively seek feedback from colleagues with a view to improve their future performance. It is expected that an organization workforce that is agile is able to quickly seize opportunities that present itself in the business environment. The results with regard to the people agility variant are presented in Table 4.7.

**Table 4.7: People Agility**

Statement	N	Mean	Std. Deviation
Our employees take decisions without fear of retribution	54	4.16	1.094
Our employees relishes in helping other succeed	54	3.92	.816
Our firm encourages and motivates employees for effective service delivery	54	3.85	.830
Our employees are tolerant in diversity and difference in opinion	54	3.64	.654
Employee autonomy is encouraged in the organization	54	3.28	.751

We encourage employees suggestion in the day-to-day management process	54	3.15	1.026
Our employees are politically agile	54	3.05	0.731
Our employees are open-minded and tolerant	54	2.95	0.831
<b>Overall mean</b>	<b>54</b>	<b>3.50</b>	

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**Source: Research Data**

From the results relating to the people agility among the construction firms, there was a strong agreement that employees take decisions without fear of retribution (M = 4.16, SD= 1.094) and similarly are willing to help others in the organization (M= 3.92). Similarly it was agreed that these positive step on the part of the employees was as a result of the organization encouraging and motivating employees with a view to enhancing service delivery. To a moderate extent, it was found that employees were however open-minded and tolerant (M=2.95) as well as being politically agile. In regard to the other people agility that was associated with the employees in the firms, it was pointed that one way was to build high performance teams that can achieve results against the odds as well as having a drive to accomplish tasks. Similarly, the ability of staff to adapt to the environment demands was identified as one other variable that defined people agility in the construction firms.

#### **4.4.3 Technological Agility**

From the fact that agility refers to the capacity to make quick choices about a company's operations, the availability of a technology capability that enables quick access to essential data held by the organization becomes an activity that is of crucial importance. The capacity of an organization to access real time data concerning available inventory or product delivery times, will determine the organizations speed

of reacting to the market demands. The results on the organizations technological agility is presented in Table 4.8.

**Table 4.8: Technological Agility**

Statement	N	Mean	Std. Deviation
The hardware and software infrastructure in my organization is well configured	54	3.52	.591
My organization tolerates making errors as a result of creativity and innovation of new technology	54	3.38	.780
There is appropriate governance system in my organization that supports creativity and innovation	54	3.26	.658
There exist IT linkage with external partners	54	3.15	.741
My organization has in place a IT strategic plan	54	2.75	.655
The innovative capacity within the human resource system is up to standard	54	2.64	.531
Firm technological resources is superior relative to those of competitors	54	2.55	.712
My organization has devoted adequate resources towards research and development	54	2.33	1.023
<b>Overall mean</b>	<b>54</b>	<b>2.95</b>	

**Source: Research Data**

In relation to the technological agility, the results in Table 4.8 reveals that to a moderate extent, the construction firms had put in place a set of hardware and software system infrastructure that is well configured to each other as well as meet their business line (M = 3.52) as well as being tolerant to small errors being made as a result of creativity and innovation of new technology (M= 3.38) as well as having established an appropriate governance system in the organization that support

technological innovation . However, the findings also suggest that the construction firms had put in place limited resources towards research and development programs (M= 2.33) and also to a low extent, the feel that their technological resources is superior relative to those of competitors (M= 2.55). Similarly, it was found that a prominent IT capability requires solid IT infrastructure and the management capacity to efficiently and effectively solve challenges that come about from the application of the old systems.

#### 4.4.4 Planning Agility

Planning is one of the important functions of a manager due to its perceived effect on organizational learning, support for the collaborative climate and at the same time help decision makers go through the present day complex business environment. However, planning can take both a short and long-term perspective and under such a scenario, there is need to introduce an agile planning structure to be able to accommodate the changes in business condition. The results on the state of planning agility on the part of construction companies investigated is presented in Table 4.9.

**Table 4.9: Planning Agility**

Statement	N	Mean	Std. Deviation
The organizations plans are flexible to accommodate any unforeseen changes	54	4.17	.877
The firm has the capacity to develop long term organizational objectives	54	3.84	.873
The firm has set out measures that cushions it from external factors on its operations	54	3.67	.973
The organization sets periodic targets to be met	54	3.39	1.337

My organization is oriented towards short term objective	54	3.36	1.146
Employees and stakeholders are always involved in planning of firm activities	54	3.43	0.690
The organization planning is sensitive to the external environmental	54	3.40	1.006
<b>Overall mean</b>	<b>54</b>	<b>3.61</b>	

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**Source: Research Data**

The results on the planning agility as presented in Table 4.9 suggest that, to a large extent, the constructions firms plans are flexible to accommodate any unforeseen changes in the operations (M= 4.17) and that they are also able to develop long-term organizational objectives that are incorporated with mechanisms of cushion the construction firms from the external shocks (M=3.67). Similarly, to a moderate extent, the findings reveal that the construction firms plans are sensitive enough to the happenings in the external environment (M=3.40) because employees and stakeholders were likewise involved in the planning of the firm’s activities (M=3.43). Similarly, the findings reveal that the respondents appreciate the fact that the capacity to develop an agile plan had enabled the construction companies to see a wider set of possibilities which has enabled them to be more adaptive and anticipatory of many possibilities.

#### **4.5 Organizational Performance**

Depending on the type of output and sector that company works in, multiple metrics are used to assess organizational success. Using a five-point rating scale from 1-not at all to 5-greatly, the following statements in the current study were utilized to reflect the degree to which the strategic agility dimensions explored have effected



organization performance of the construction businesses. The results on the performance of the construction firms are presented in Table 4.10.

**Table 4.10: Organization Performance**

Statement	N	Mean	Std. Deviation
The firm market share has increased	54	3.94	1.038
The sales revenue from new projects has increased	54	3.37	.695
The firm has adopted new technology in its process	54	3.23	.724
The firm's financial strength has improved	54	3.04	.896
The registered customers who left the firm has decreased	54	2.93	.958
Employee morale has improved	54	2.69	.705
The budget for training and development has increased	54	2.49	.794
The firms operations has had social impact	54	2.27	.949
<b>Overall mean</b>	<b>54</b>	<b>2.995</b>	

**Source: Research Data**

The findings on how the performance of the construction firms is manifested under adoption of the strategic agility practice as shown in Table 4.10 suggests that a large extent, the firm market share had increased (M= 3.94, SD= 1.038) which consequently had resulted in increased revenue generated over the period ( M=3.37). To a moderate extent, the firm's performance was evidenced by firm's number of new clients having increased. However, to a low extent, the performance of the construction firms was manifested by its impact on (M=2.27) as well as the budget for training and development having increased (M=2.49).

## 4.6 Regression Analysis

The performance of the construction businesses that were under consideration was examined using a regression analysis to see if there was a relationship between strategic agility and performance. An analysis of variance, a model summary, and the regression coefficients for the predictor variables were used to describe the findings of this investigation. The independent variables that measured various agility dimensions were organization, people, technology and planning agility.

### 4.6.1 Model Summary

The model summary demonstrates how much the predictor variables account for the performance of construction enterprises. The results are presented in Table 4.11

**Table 4.11: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.472 <sup>a</sup>	.222	.179	.862

a. Predictors: (Constant), organization, people, technological, planning

As shown in Table 4.11, there exist a positive correlation between strategic agility pursued by the construction firms and their performance ( $r=0.472$ ) while cumulatively, the four strategic agility measures explain the performance of the firms to the extent of 22.2% - as evidenced by  $R^2 = 0.222$ . From the same results, it means that 77.8% of the construction firms' performance is explained by other factors not considered in the study. This means that 78.9 percent of changes in construction company ' performance is not included in the model. However, the  $R^2$  is not a good measure of the performance, if the  $R^2$  is not above arbitrary criteria, we should not merely dismiss the data and try other pattern details. Therefore the high  $R^2$  value

implies that the model is not rejected, but that other considerations not included in the research add further to the output of the organization. Likewise, the significance of the 0.472 correlation coefficient implies that the primary and the independent variables have medium positive relationship. Variance analysis was carried out to determine the value of the design, as defined in Table 4.12.

#### 4.6.2 ANOVA

Analysis of variance (ANOVA) is a statistical technique that helps explain whether or not a model is good of fit for the data. The F-statistic and the significance value both point in this direction. Table 4.12 summarizes the findings for your perusal.

**Table 4.12: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.519	4	4.380	5.895	.000 <sup>a</sup>
	Residual	65.385	50	.743		
	Total	82.903	54			

a. Predictors: (Constant), organization, people, technological, planning

b. Dependent Variable: performance

The significance of the model is 0.000 less than 0.05 as shown in Table 4.12. This indicates that the model is strongly significant to be used as an estimator of the firm performance as determined by the strategic agility at 95% confidence level. The model coefficients obtained by the study are shown in Table 4.13.

#### 4.6.3 Regression Coefficients

The amount of potential effect that each individual independent variable may have on the variable under consideration is assessed using a regression coefficient. Table 4.13 displays the coefficients of the variables in the regression model. The t-values of each

predictor variable as well as the degree of level of significance are also displayed in this table.

**Table 4.13: Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1.299	.443		2.932	.000
Organization agility	.310	.091	.367	3.416	.001
People agility	.003	.088	.003	.029	.022
Technological agility	.139	.086	.171	1.618	.003
Planning agility	.232	.090	.254	2.573	.076

a. Dependent Variable: performance

Replacing the coefficients in the regression equation,

$$Y=1.299 + .310X_1 + .003X_2 + .139X_3 + .232X_4$$

The above regression equation shows that without the agility practices, the construction firms' performance will stand at 1.299 units while a unit increase in the organizational agility will result in an increase in the organisation performance by 0.310 units. Likewise a unit increase in the people agility, technological agility and planning agilities will result in increase of the organization performance by 0.003, 0.139 and 0,232 units respectively. This implies that there exists a positive effect on the organization performance by the agility dimensions investigated. However, the results from Table 4.13 suggest that the only significant dimensions of strategic agility are organization, people and technology since their p-values of 0.001, 0.022 and 0.003 respectively are < 0.05. On the other hand, the planning agility p-value of

0.076 > 0.05 and therefore being not statistically significant in affecting the performance of the construction firms

#### **4.7 Discussion**

The objective the study was to investigate the effect of strategic agility on the performance of construction firms in Kenya. The strategic agility dimensions were represented by organizational, people, technological and planning. The results shows that the organizational agility was manifested in the firms by having few layers for decision making with the sole purpose to making faster decisions as well as adopting a low production cost. Similarly, in order to improve its performance, the construction firms had established strong linkage with suppliers and customers. The results suggest that for faster decision making, organizations need to establish smaller layers of decision making -a position supported by Richardson et al., (2014). The scholar pointed that smaller layer of decision making help faster identification of opportunities as well as utilization of the IT to rapidly sense and respond to market opportunities through the use of the available internal resources. The utilization of the available resources with a view to increasing the firm performance is also in line with the views of the Resource Based Perspective (Barney, 1991). Smaller layers of organizational decision making process, increases the agility of an organization and thus enabling the firm to align itself easily to the environmental dynamism (Bradley et al. 2012).

People agility in the organizations was manifested through the establishment of a strong agreement with employees such that they can take decisions without fear of retribution and similarly willing to help others in the organization. In addition, it was

also pointed out that the leadership of the organization encouraged and motivated employees with a view to enhancing service delivery.

It was discovered that the people agility variation had a good and substantial influence on the level of performance achieved by the firms under study. The findings that support the requirement for the organization's leadership to delegate decision-making authority to its personnel are consistent with the notion that agile institutions must enable agile workers. Gehler (2005) came to the conclusion that institutions must be agile in order to support agile employees. To foster the development of agile skills, the same requirement should be complemented by training initiatives that are accelerated whenever a demand materializes, and employee deployment should be experience-based. Additionally, Mueller-Hanson et al. (2005) recommended early and routine exposure to training situations that need adaptive reactions.

When it comes to technological agility, the results demonstrate that organizational agility does not exist in a void but rather in a collection of hardware and software system infrastructure that is well configured to each other. This is in contrast to the common misconception that organizational agility can be achieved through a combination of factors. As evidence for this argument, Gary and Wood (2011) point out that it is difficult to comprehend organizational agility without taking into consideration the influence that cognitive aspects have on sensing skills, regardless of the function that IT plays. This is because decision-makers depend on simplified mental models to aid in the organization of their thoughts and the understanding of their environment. Therefore, how effectively a person perceives, processes information, solves problems, makes judgements, learns, and makes choices is influenced by cognitive representations and perceived models of reality (Anderson,

2015). As a result, the implementation of an adequate technical capacity that can be readily aligned will contribute significantly to the enhancement of the organization's overall performance.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1 Introduction**

This chapter presents a summary of the results of the research and, as a direct result of those findings, provides the conclusions to the study. In addition to that, the chapter delves into the suggestions that may be drawn from the results of the research. Further, the chapter discusses the limitations that were imposed on the research and offers recommendations for future research.

#### **5.2 Summary of the Findings**

The objective of the study was to investigate the effect of strategic agility on performance of construction firms in Nairobi. The predictor variables that represented agility dimensions include organization, people, technology and planning. The results shows that the organizational agility in the construction firms was manifested through the presence of several layers of decision making with the sole purpose to making faster decisions as well as adopting a low production cost. Similarly, in order to improve its performance, the construction firms had established strong linkage with suppliers and customers. Further, organizational agility was practiced by the construction firms by improvement of their capacity to sense and seizing opportunities that arise as well as limit the effect of the threats that come about in the course of operations. The results also reveal that organizational agility had the greatest effect on performance with the highest  $\beta = 0.310$ . Similarly, organizational agility had a significant effect on the performance of constructions firms ( $0.01 \leq p \leq 0.05$ ).



People agility was also found to be a significant agility variant that affect the performance of an organization. The agility of staff was found to be dependent upon their capacity to make faster decision under the prevailing circumstance and this required that they take necessary decisions without fear of retribution and similarly willing to help others in the organization. Further, an important enabler to people agility was clearly identified as the organization leadership through encouragement and motivating employees for better service delivery. The people agility variant was found to have a positive and significant effect on the performance of the organizations,  $\beta = 0.003$  and with a significance level of  $p= 0.022$ .

Due to the discovery that organizational agility does exist within an existing system and the adoption of appropriate set of information system hardware and software system infrastructure that is well configured help to actualize organization goals, technological agility has had a positive and significant effect on the performance of the organization. It is essential to use suitable technology in order to assist and enhance staff members' perceptions, information processing, problem solving, judgment, learning, and decision-making abilities. Managers and executives in every organization will face challenges since they cannot function without simple mental models to help them make sense of the world around them. The positive influence of technological agility on the construction industry's performance was also significant.  $p= 0.003$ .

### **5.3 Conclusion**

Based on the results of this research it is concluded that the success of the construction firms in Kenya operating under environmental uncertainty and rapid changes, is significantly affected by the strategic agility of the organization. Since the

impact of strategic agility on performance is significant, it implies that the performance of firms with high strategic agility will be higher than those with low strategic agility. Similarly, it can be concluded that firms that had put in place agility measures, the effect on organization operations would be minimal under global negative effects of Corona virus since such firms will have made provisions and undertake necessary changes to their operations.

The results reinforce the important role of organization structure in facilitating faster decision making and it can be concluded that a lean organizational structure can easily make decisions. Strategic agility is a factor of how the leadership in an organization structures its operations and the partners in the environment. Therefore, the leadership style will be an important enabler to the successful implementation of agility processes in the organization. Similarly, the findings reveal the importance of people and technological agility in an organization in order to achieve a composite strategic agility. Consequently, it is important that an organization pursues different segments of agility and not concentrate on one or two activities since the overall organizational performance is a factor of different combined processes.

#### **5.4 Recommendation for Policy**

Given that we live in a global community, it is advised that construction companies keep an eye out for changes in the business environment that can have an impact on their operations. The success of the company and the protection and expansion of current market shares should be taken into account by managers. Additionally, managers should foster a culture of learning in their construction companies by training employees to be proficient in learning, using, and creating agile solutions. Additionally, it's critical that managers of construction firms develop their human

resources in order to detect and use internal and external information that is crucial to the operation of the organization.

### **5.5 Limitation of the Study**

This study is limited by its scope, methodology and context. The research was done among construction firms in Nairobi, Kenya. This limits the generalizability of the findings to firms in other sectors as well as construction firms operating under a different jurisdiction. Comparing results with other research in poor countries, like Kenya, is also difficult due to the paucity of studies on strategic agility in emerging nations. The use of a single scale—the Likert scale for all—and the collection of information from a single individual at each location are two additional limitations of the research.

### **5.6 Recommendation for Further Studies**

In future studies, strategic agility can be investigated within the construction firms but with a consideration of the other classes – considering that at present only Class 1 firms was considered, to bring about different sampling groups. Similarly, a wider measure of business can be investigated encompassing both financial and non-financial measures. In order to increase the validity of the study, future research should try to use a multi-measure method rather than obtaining data from a single source for each organization. There is a need for new research to clarify concepts linked to agility, distinguish strategic agility from other types of agility, assist institutions in understanding its worth, and fill in any gaps in the literature.

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## APPENDIXES

### Appendix 1: Letter to the Respondents

**Mary Muchoki**

P. O. Box 24807 - 00100

Nairobi, Kenya.

5<sup>th</sup> October, 2020

At the University of Nairobi, where I am now enrolled, I am a student for a Master of Business Administration (MBA) degree, and one of the prerequisites of the program is that I conduct a research project. My research focuses on the relationship between the success of Nairobi, Kenya, construction enterprises and their strategic agility. You have been chosen to participate in this research as responders, and as a result, I would very much appreciate it if you could help me out by responding to the questions that are included in the questionnaire. It is important that you know that your answer will be held in the strictest confidence, and that it will in no way be used for anything other than the project that it was originally intended for.

The results of the study won't be released or made public in any manner that may identify the participants, and all information gathered will be kept absolutely private. All of the information will be compiled into a single set, and then it will be examined without any reference to particular people. In addition, your involvement in this study is entirely optional, and you are free to choose whether or not you would want to take part in the study. If you agree to participate at this time, you are free to leave the data collection process and engagements at any moment without facing any consequences if you change your mind. However, we do hope that you will continue to participate right up to the finish.

You may get in touch with the Principal Investigator at this research by calling 0722267566 for more information.

I am looking forward to your cooperation.

With kind regards,

.....

**Mary Muchoki**

## Appendix II: Questionnaire

### Section A: Background Information

1. Name of the firm (Optional).....

2. What level of management are you?

- |                             |     |                     |
|-----------------------------|-----|---------------------|
| a) Top Level<br>( )         | ( ) | b) Middle level     |
| c) Supervisory Level<br>( ) | ( ) | d) Others (Specify) |

3. For how long have you worked in the organization?

- |                             |     |                       |
|-----------------------------|-----|-----------------------|
| a) Less than 5 years<br>( ) | ( ) | b) 6 -10 years        |
| c) 11 – 15 years<br>( )     | ( ) | d) More than 15 years |

4. How many employees are there in your organization?

- |                        |     |            |
|------------------------|-----|------------|
| a) Less than 30<br>( ) | ( ) | b) 31 – 50 |
| c) 51 - 70<br>( )      | ( ) | d) Over 71 |

5. What is the age of the organization?

- |                             |     |                  |
|-----------------------------|-----|------------------|
| a) Less than 10 year<br>( ) | ( ) | b) 11 – 15       |
| c) 16 - 20<br>( )           | ( ) | d) Over 21 Years |

### SECTION B: Strategic Agility Practices

6. The strategic agility dimensions that your business has chosen are listed below. By checking the box next to the statement that, in your opinion, is the most suitable, please indicate how much you agree with it. A Likert-scale with a maximum of five points is applied to these:

**Key;** 5) Strongly agree; 4) Agree; 3) Neutral; 2) Disagree; 1) Strongly disagree;

**a) Organization agility**

	<b>Statement</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1.	The firm's production cost is low					
2.	The innovative capacity of the firm has increased					
3.	The human capital operates synergistically as a result of IT adoption in processes					
4.	Our organization has the capacity to predict future change in the market environment					
5.	There is unity of purpose among the organization leadership with an aim of achieving organizational objectives					
6.	There are fewer layers in the organization to easily adapt to changes					
7.	The organization has a market research department					
8.	The organization has developed a strong linkage with customers and suppliers					

What other organization agility does your organization implement to achieve greater performance?.....  
 .....

**b) People agility**

	<b>Statement</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1.	Our employees are tolerant in diversity and difference in opinion					
2.	Our firm encourages and motivates employees for effective service delivery					
3.	Our employees are politically agile					
4.	Our employees are open-minded and tolerant					
5.	We encourage employees suggestion in the day-to-day management process					

6.	Our employees take decisions without fear of retribution					
7.	Employee autonomy is encouraged in the organization					
8.	Our employees relishes in helping other succeed					

What other people agility strategies and practices does your organization undertake.....  
 .....

**c) Technology agility**

	Statement	5	4	3	2	1
1.	The hardware and system infrastructure in my organization is well configured					
2.	My organization has devoted adequate resources towards research and development					
3.	The innovative capacity within the human resource system is up to standard					
4.	My organization tolerates making errors as a result of creativity and innovation of new technology					
5.	There is appropriate governance system in my organization that supports creativity and innovation					
6.	Firm technological resources is superior relative to those of competitors					
7.	There exist IT linkage with external partners					
8.	My organization has in place a IT strategic plan					

What other technology agility practices does your organization undertake in the current dynamic business environment.....

**d) Planning agility**

	<b>Statement</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1.	My organization is oriented towards short term objective					
2.	My organization is oriented towards long-term objectives					
3.	The organization sets periodic targets to be met					
4.	The firm has set out measures that cushions it from external factors that may affect its normal operations in future					
5.	The firm has the capacity to develop long term organizational objectives					
6.	Employees and stakeholders are always involved in planning of firm activities					
7.	The organization planning is sensitive to the external environmental					
8.	The organizations plans are flexible to accommodate any unforeseen changes					

What other planning agility practices does your organization undertake in the current dynamic business environment.....

**Section C: Organization Performance**

7. Organizational performance indicators are listed below. Please specify how much of these pertain to your company. Where, 5 = Greatly-1= Not at all

<b>Statement</b>					
The firm market share has increased					
The sales revenue from new projects has increased					
The firm's financial strength has improved					
The registered customers who left the firm has decreased					
The firm has adopted new technology in its process					
The employee morale has changed					
The budget for training and development has increased					
The firms activities have a had a positive effect on the society					

**THANK YOU SO MUCH FOR YOUR TIME.**



## UNIVERSITY OF NAIROBI SCHOOL OF BUSINESS

Telephone: 020-8095398  
Telegrams: "Varsity", Nairobi  
Telex: 22095 Varsity  
Our Ref: D61/69313/2013

Tel: 020 8095398  
Nairobi, Kenya

Date: 21<sup>st</sup> November, 2020

### TO WHOM IT MAY CONCERN

The bearer of this letter, **Mary Wairimu Muchoki** of Registration Number **D61/69313/2013** is a Master of Business Administration (MBA) student of the University of Nairobi.

She is required to submit as part of her coursework assessment a research project report. We would like the student to do her project on **Effect of strategic agility on performance of construction firms in Nairobi**. We would, therefore, appreciate if you assist her by allowing her to collect data within your organization for the research.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organization on request.

Thank you.

**PHILIP NGIGI**

**FOR: DEAN, SCHOOL OF BUSINESS**

