DYNAMIC CAPABILITIES, LEADERSHIP BEHAVIOUR AND PERFORMANCE OF MANUFACTURING FIRMS IN NAIROBI, KENYA

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DECLARATION

Declaration by the Candidate:

This research is my original work and has not been presented for a degree in any other University. No part of this research may be reproduced without the prior written permission of the author and/or Moi University.

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DEDICATION

This study is affectionately dedicated to all members of my family - my wife Teresa, son Bernard and daughters Veronica and Lilian. It is their encouragement, understanding and their dedication to undertake more responsibilities and duties while I was studying that kept me going.

ABSTRACT

Globalization of the world economy has brought with it drastic changes to the landscape of manufacturing firms. In many economies, the performance of manufacturing firms has been of great concern. Firms in the manufacturing sector are predominantly small, lack in effective policies and face a high attrition rate. The unstable operating environment has led to their low survival rate. In order to catch up with the turbulent environment, firms have to continuously re-engineer their business models and processes. In unstable environments, ordinary capabilities become unsuitable. The deployment of dynamic capabilities in place of ordinary capabilities becomes a necessary step, to enhance the 'catch-up' efforts by firms. This deployment depends on strategic choices and decisions of the top leadership of the firms. A firm's strategic direction is influenced by the cognitive behaviour of the top leadership, particularly the CEO. However limited empirical evidence exists to show not only the effect of dynamic capabilities on firm performance, but also the role that leadership behaviour plays in this relationship. The general objective of the study was to examine the moderating effect of leadership behaviour on the relationship between dynamic capabilities and firm performance. The study was guided by the Resource-based view theory. A cross-sectional survey was undertaken using explanatory research design. Data was collected from 271 firms, out of a sample of 369. From each of the sampled firms, the CEO and three of his/her direct reports were the respondents. Validity was determined by the use of factor analysis. Reliability test showed that the instrument can be used in future to replicate the study results. Moderated multiple regression analysis was applied to examine the effect of leadership behaviour on the relationship between dynamic capabilities and firm performance. The results of the study revealed that sensing capabilities (B=0.215), seizing capabilities (B=0.194) and reconfiguration capabilities (B=0.182), which are the 3 dimensions of dynamic capabilities, have significant direct effects on firm performance, p<0.001. It was established that transformational leadership behaviour has significant effect on the relationship between firm performance and two of the dimensions of dynamic capabilities, namely: - sensing capabilities (B=-0.061; p<0.05) and seizing capabilities (B=-0.068; p<0.05). It was also established that the interraction of transactional leadership behaviour with seizing capabilities (B=0.088; p<0.001) and reconfiguration capabilities (B=-0.070; p<0.05) has significant effect on firm performance. Laissez faire leadership behaviour has significant effect on the relationship between sensing capabilities and firm performance, B=-0.097; p<0.001. A conclusion was reached that dynamic cpabilities influence firm performance and that leadership behaviour has a significant effect on the relationship between dynamic capabilities and firm performance. The study provides new theoretical insight into the moderating effect of leadership behaviour and recommends that managers and industry practitioners should put more emphasis on, and appreciate the role of, leadership behaviour in the deployment of dynamic capabilities so as to achieve optimal firm performance in the ever changing contemporary operating environment.

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OPERATIONAL DEFINITION OF TERMS

Firm Performance: The effectiveness and efficiency in the achievement of objectives measured in terms of growth of sales, profit margin, ROA, market share, customer satisfaction, employee satisfaction, environmental performance and social performance (Santos and Brito, 2012).

Dynamic Capabilities: Strategic routines by which firms achieve new difficult-to-imitate resource configurations, to meet changing customer demands and competitor strategies as markets evolve (Danneels, 2008; Teece, 2007).

Sensing capabilities: Recognize shifts in the operating environment that could impact its business. This is achieved by regularly scanning the local and distant business environment (Danneels, 2008; Teece, 2007).

Seizing capabilities: Create internal knowledge, acquire external knowledge and to have these assimilated through knowledge sharing (Zahra & George, 2002).

Reconfiguration capabilities: Ability to integrate and transform existing capabilities (Teece, 2007). For example, reviews to distribution channels, technology and even alliances, mergers and acquisitions can transform existing capabilities.

Leadership behaviour: How development of subordinates is accomplished through coaching, training and development, empowerment, participation and delegation. (King, 2010; Abbas & Yaqoob, 2009; Champathes, 2006)

Transformational leadership behaviour: Raising followers' level of consciousness on the importance and value of designated outcomes through motivation - emotional, intellectual and moral engagement, so as to transcend own immediate self-interest for the sake of the the firm's mission and vision, (Rothfelder *et al.,* 2012).

Transactional leadership behaviour: Fairly traditional managerial behaviours where managers or leaders gain compliance and performance by either offering rewards or punishment for deviations from standards (Muenjohn & Armstrong, 2008).

Laissez-faire leadership behaviour: Avoids clarifying expectations, addressing conflicts or making decisions. Tends to offer little in terms of direction or support (Erkutlu, 2008).

Firm ownership type: Categories of firm ownership based on funding sources (investors), organizational goals, structural complexity, extent of liability for its owners and restrictions on the transfer of ownership (Cuervo-Cazurra *et al.*, 2014).

State-owned Firms: Those firms owned by the state. Their source of financing is the government (Lopez-Morales and Vargas-Hernandez, 2014). In Kenya, the government owns at least 50% plus 1 shareholding thereby allowing it control rights. They are created and regulated through the state-corporations Act of parliament. They pay more attention to public, county / municipal, and national interests.

Public Limited Firms: Firms that have at least 1 shareholder, with no limit on maximum number of shareholders (Lopez-Morales and Vargas-Hernandez, 2014). In Kenya they are governed by the Companies Act 2015 and are listed in the Nairobi Securities Exchange where their shares are traded and these shares are transferrable to anyone who can buy.

Private Firms: Firms that have atleat I shareholder, are not listed in the NSE, shareholders' right to transfer shares is restricted and there is a prohibition on any invitation to the public to subscribe for shares or debentures. In Kenya, they are governed by the Companies Act 2015. They are generally owned by family groups, have few resources for research and development (R & D), but they are very market-oriented (Lopez-Morales and Vargas-Hernandez, 2014).

Foreign Owned Firms: Subsidiaries of multinational corporations (MNCs) and strategic alliances operating within the country. They have registered head offices outside of the country. They are either fully owned or controlled by foreigners. In Kenya, they are governed by section 366 of the Companies Act. The concepts, mission, vision, goals and strategies are in most cases rooted in the countries of origin or headquarters (Zeng and Luo, 2013).

Size of Firm: Scale of operations, measured using the number of employees (Richard J. Arend, 2014),

Age of Firm: The period the firm has been in operation from date of commencement of business, or the date of registration (Davis and Haltiwanger, 2001).

LIST OF ACRONYMS

CEO	Chief Executive Officer
COO	Chief Operating Officer
GDP	Gross Domestic Product
MNC	Multi-national Corporation
MMR	Multivariate Moderated Regression
MFQ	Multifactor Leadership Questionnaire
RBV	Resource-Based View
SPSS	Statistical Package for Social Sciences
TMT	Top Management Team
USA	United States of America
VRIN	Valuable, Rare, Inimitable and Non-substitutable
KMO	Kaiser-Meyer-Olkin
DCs	Dynamic Capabilities
PTA	Preferential Trade Area
COMESA	Common Market for Eastern and Southern Africa
EAC	East Africa Community
ROA	Return on Assets
ROI	Return on Investment
PCA	Principal Component Analysis

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter covers the background to the study, the statement of the problem, purpose of the study, specific objectives, hypotheses, significance and scope of the study.

1.1 Background of the Study

The concept of firm performance has elicited intellectual debates for many years, with empirical studies showing that firms with poor performance do not survive in the long run (Bridoux, 2004). In today's turbulent business environment, firms are faced with changes in technology, consumer demand, customer expectations, competition, regulations and globalization among many aspects. The competitive environment is changing at an accelerating rate, culminating in a high level of uncertainty. These developments affect competitive advantage and performance of firms (Wilden *et al*., 2013). Only those firms that are able to create and sustain competitive advantage and improve their performance, within a turbulent market, do survive (Zott, 2003; Wilden *et al*., 2013). Studies by Schmalensee (1985) and McGahan (1999) attribute firm performance differentials to either the industry or the environment (referred to as structure-based view), or the firm itself (referred to as the strategy-based view). Whereas the structure-based view of firm performance focuses on structural maneuver (Newbert, 2007), the strategy-based view on the other hand emphasizes on efforts made by a firm in creating competitive advantage through development of internal routines and synergies.

According to the structure-based view, a firm's positioning within an industry structure is viewed to be the primary source of performance heterogeneities. On the other hand, the strategy-based theorists believe that internal configuration of firm resources and capabilities are far more important to firm performance than the macro, structural indicators (Basu *et al*., 2013). This means that those strategic choices made by managers of firms are more important to firm performance than any other structural constraints. Where an appropriate strategy is lacking, a firm cannot be able to sustain its business in the long-term. The real pressure on firms to make good strategic choices is coming from contemporary customers who are becoming more aware of competitiveness and who therefore desire value for their money. They have higher expectations for goods and services, yet they are lesser loyal to a single firm than ever before (Khamwon and Speece, 2005). Firms have to adapt to the needs and demands of their customers. The two strategy-based view theories that have come to the fore on this topic of firm performance are Resource-Based View (RBV) and Dynamic Capabilities (DCs). These two theories have been used to ground this study.

The RBV theory holds that firms in the same industry perform differently because, even in equilibrium, they differ in terms of the resources and capabilities they control (Amit & Zott, 2001; Barney, 2005; Fahy, 2000; De Oliveira & Evaldo Fensterseifer, 2003; Clulow, 2003; Fahy *et al*., 2004; Jantunen, 2005; Palacios Marques & Jose Garrigos, 2006; Halawi *et al*., 2006). They hold differential stocks of resources and superior information about the expected value of those resources (Barney, 2005). Resources are valuable sources of

competitive advantage (Barney, 2005; Newbert, 2007). Firms are expected to have a high-paced, contingent, opportunistic and creative search for satisfactory alternative behaviours so as to avoid being pushed into a firefighting mode by either external environmental changes or internal decisions to change (Winter, 2003). These are the routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, or die (Easterby-Smith *et al*., 2009; Winter, 2003; Hoopes *et al*., 2003; Eisenhardt and Martin, 2000; Dosi *et al*., 2000). This is why the dynamic capabilities theory holds that organizations are expected to learn how to combine resources and to renew their core competences (Ramachandran, 2011). Many scholars have highlighted on the importance of firms acquiring, developing, and maintaining differential bundles of resources and capabilities over time (Pavlou & El Sawy, 2011; Easterby-Smith *et al*., 2009; Wang & Ahmed, 2007; Rothaermel & Hess, 2007; Wu, 2007; Cepeda & Vera, 2007; Carlos Bou-Llusar, 2006; Vivas Lopez, 2005; Ahuja & Katila, 2004; Jensen & Szulanski, 2004 ; De Oliveira & Evaldo Fensterseifer, 2003; Clulow *et al*., 2003; Zahra & George, 2002; Deeds *et al*., 2000; Fahy, 2000;). One of the key challenges facing firms is the acquisition and deployment of resources needed to exploit opportunities, given a relatively limited resources base (Alvarez and Busenitz, 2001; Hadjimanolis, 2000). Environmental changes affect how firms compete with each other and how they respond to customer needs and developments in the industry (Porter, 2008; Luo *et al*., 2005; Wang and Ang, 2004; Drnevich & Kriauciunas, 2011). Over the last two decades, a growing number of scholars have therefore considered dynamic capabilities to be at the heart of firm strategy, value creation, competitive advantage and hence firm performance (Wilden *et al.*, 2013; Helfat *et*

al., 2009; Teece, 2007, Lopez, 2005; Zahra & George, 2002; Winter, 2003; Eisenhardt and Martin, 2000).

The advent of globalization of the world economy has brought with it drastic changes to the landscape of manufacturing firms. For example, manufacturing firms in the developed economies in Europe and the USA are continuously realizing that in order to survive, they must move up the value chain (Bititci *et al.*, 2010). They have to undertake transformational changes so as achieve competitive advantage. Many European economies are reviewing policies to adopt high-value, knowledge-intensive and high skilled business models for manufacturing firms to compete not on cost but on value innovation, process excellence, high brand recognition and contribution to a sustainable society. American firms are considering adoption of new and high-value manufacturing models too (Bititci *et al.*, 2010).

In Africa, even though many countries' economic performance has improved over the last two decades, with their average GDP rising faster than their population, this growth has been influenced by structural adjustment programs that followed macro-economic and political changes soon after their political independence. This kind of growth that is triggered by political changes has not been sustainable. African countries would need to place emphasis on their manufacturing sectors for sustainable growth (Adenikinju *et al.*, 2002) and avoid overreliance on agriculture and mining. Manufacturing firms in Africa are predominantly small, with high attrition rate. The lack of effective policies in many of the African economies, coupled with unstable markets, has led to a low survival rate of

manufacturing firms (Collier and Gunning, 1999; Hatton & Williamson, 2003). Only few large and old firms with good performance survive (Soderbom *et al.*, 2006; Frazer, 2005).

In Kenya, a protected import substitution strategy was adopted immediately after independence in 1963. The basic manufacturing lines then were footwear, leather, rubber, petroleum, industrial chemicals, paints, soft drinks, cement and metal products. This approach ensured goods were available locally and employment opportunities were created. This sector today contributes two thirds of the country's industrial sector and produces a wide range of products. On average, its share contribution to the country's GDP is 10%. The government has acknowledged the sector's importance for future long term economic development and has projected its growth at 20% by year 2030 (National Industrialization Policy Framework for Kenya, 2011-2015). It absorbs most of the new comers into the labour market and provides a market for most of the country's agricultural sector output.

Despite the Government's efforts in this sector over the last three decades, geared at supporting export production through initiatives such as export processing zones, export compensation scheme, international and regional trade agreements and collaborations like the Preferential Trade Area (PTA) of Eastern and Southern Africa, Common Market for Eastern and Southern Africa (COMESA) and the now revived East African Community (EAC), the manufacturing sector in Kenya has remained relatively underdeveloped. Firms within this sector face serious performance difficulties and lack competitiveness, making it uncertain on how long they will actually remain in operation, or even be competitive and to contribute to the sector's overall projected GDP share of 20% by year 2030. Notably,

firms in this sector face excess capacity, technical inefficiency, minimal intra-sector research and inability to compete globally. The firms are agro-based, highly import-dependent on capital goods and operate on obsolete technology and under weak institutional policy frameworks. At present the firms are concentrated in major industrial parks or manufacturing clusters (such as Nairobi, Eldoret, Kisumu, Thika, Nakuru and Mombasa) where there is basic infrastructure (Koirala & Koshal, 2000; Forsyth and Solomon, 1977), with about 80% of them located in Nairobi County.

Kenya is a consumption-led economy, with declining exports. The contribution to the country's GDP by the manufacturing sector has gradually declined owing to its sluggish growth, notably poor performance over the last decade. Kenyan firms are having challenges increasing productivity and their resources allocative efficiency has been low, demonstrating a distorted approach to the use of factors of production (Kenya Economic Update 2014). According to the 2013 and 2014 Kenya Economic Review Reports, the manufacturing sector decelerated from an expansion 3.4 per cent in 2011 to a growth rate of 3.1 per cent in 2012 and 3.2 per cent in 2013. Listed as some of the contributing factors were: - high cost of production, stiff competition from imported goods, high cost of credit, and political shocks. Manufacturing firms have been exiting Kenya, spelling doom to an economy that was expected to recover. According to a report carried by the Business Daily Magazine (Njiru, 2014), Cadbury Kenya - a subsidiary company of US-based Mondelcz International, indicated it was going to cease all its factory operations in Kenya by the end of October, 2014, and review its marketing and distribution operations. Reckitt Benckiser - a home and personal care giant, closed its manufacturing plant in Kenya and outsourced

production of its household brands such as Jik, Dettol and Harpic, to Orbit Chemical Industries Ltd. Colgate Palmolive, Eveready East Africa, Reckitt & Benkiser, Procter & Gamble, Bridgestone, Johnson & Johnson and Unilever, have all either relocated or restructured their operations, opting to serve the local market through importing from low-cost manufacturing areas such as Egypt. In 2014, Tata Chemicals Magadi closed down its main factory and scaled down its production. The Kerio Valley-based Kenya Fluorspar firm has also since shut down.

Cirera *et al* (2014) found out that there existed a lot of heterogeneity in firms' attributes and performance which could be attributed to the presence of economic distortions that affect the efficient allocation of resources across firms in the manufacturing sector. This has led to a lackluster performance of firms in this sector, compared to those in the services sector. There has been a warranted need for examining and locating productivity of the manufacturing sector firms, where leading firms operate alongside laggards, a clear indication of distorted investment and innovation patterns (Cirera *et al*., 2014).

The Future performance of the sector depends on how fast and the extent to which firms will adjust their business operations in tandem with the turbulent environment - hyper-competition, growing complexity, shift of markets and hence unpredictable future. For Kenya to achieve rapid and sustained growth rate, secure a share of employment opportunities for its growing and youthful population and play its pivotal role in East Africa and globally, the current economic hurdles of low investment and low firm productivity in the manufacturing sector need to be addressed as quickly as possible.

Firms use ordinary capabilities to ensure a continuity of current operations. However, in unstable environments, ordinary capabilities may be unsuitable (Leonard-Barton, 1992). This line of argument suggests that changes to the operating market environmental weaken the effect of ordinary capabilities on firm performance. Environmental dynamism is the unpredictability of customer tastes, production or service offering technologies and the general level of competition (Miller and Friesen, 1983). Dynamic capabilities are therefore important in a dynamic environment since they contribute to the 'catch-up' efforts by firms (Chmielewski and Paladino, 2007; Helfat *et al*., 2007). Prior studies indicate that firm performance declines when a firm's environment becomes more dynamic (Wang and Ang, 2004). This is so especially when capabilities are not flexible or aligned with the changing environment (Eisenhardt, 1989; Simerly and Li, 2000; Garg, Walters, and Priem, 2003). Firms are therefore expected to use dynamic capabilities to adjust to these changing environments (Teece *et al*., 1997; Eisenhardt and Martin, 2000).

In order to extend knowledge, the study undertook to examine how manufacturing firms embrace the concept of dynamic capabilities in their businesses. The study adapted and modified the conceptual framework that was used by Drnevich and Kriauciunas (2011). It was therefore logical to propose that in the contemporary global market, where stiff competition is inevitable, those firms that deploy dynamic capabilities are able to improve their performance. Drnevich and Kriauciunas (2011) used environmental dynamism to moderate the dynamic capabilities and firm performance relationship.

The study further proposed that strategic choices and decisions that firms make, have effect on the deployment of dynamic capabilities. In making strategic choices on when, where and how to deploy dynamic capabilities, firms rely on the cognitive behaviours of their top leadership - the CEOs. The study therefore took cognizance of the behaviour of the firms' top leadership in helping managers and employees to recognize and respond to some of the more common opportunities and threats presented by dynamic environments. Firm owners do not pick leaders at random, but make a careful selection. They also develop, incentivize and monitor the performance of the leaders whom they entrust their businesses as agents (Jensen and Meckling, 1976). The strategic decision on the nature and extent to which expenses can be accommodated by the firm in the course of deploying dynamic capabilities to drive improved firm performance depends on the leadership of the firm. The revenue generation is guided by the leadership's strategic decision. The decisions on the choice and modification of the line of products a manufacturing firm undertakes, the strategy setting, operationalization of the goals, and delivery of value to stakeholders is a complex process that heavily depends on the top leadership of a firm. The foregoing argument conspired to explain why leadership behaviour was considered an appropriate moderator for this study.

1.2 Statement of the Problem

Over the past two decades, the government of Kenya has been under a lot of pressure to grow the manufacturing sector that is thought to be the fulcrum for fostering the country's integration into the regional economic block and the global economy. This sector has been contributing only 10% of the country's GDP (National Industrialization Policy Framework

for Kenya, 2011-2015). The efforts made by government include a policy framework aimed at reducing the overreliance on exports of primary goods and tourism. The other perceived benefits include the generation of foreign earnings and provision of employment opportunities to the rising number of college graduates coming out of the country's growing population.

Despite the efforts by the government and other stake holders such as Kenya Association of Manufacturers, National Chamber of Commerce and Industry and the Kenya Private Sector Alliance, the sector's performance has not improved. Firms in this sector face increasing competition from cheap imports, resources constraints, regulatory challenges, risk management issues, poor industry policies, industry malpractices, nepotism and lack of capital (Mbalwa *et al.*, 2014; Love, 2011). The consumer behaviour is ever changing. Many manufacturing firms have since closed down their operations. Some have shifted to other countries. Many other firms are experiencing declining performance. A few studies (Zott, 2000; Zahra & George, 2002; Wang & Ahmed, 2007; Dnrevich & Krausianius, 2011; Aramand & Valliere, 2012; Rice *et al.*, 2013) attempted to link firm performance to the concept of dynamic capabilities. In Kenya, studies on this sector have examined primarily factors influencing firm performance (Shih & Agrafiotis, 2015; Wamae *et al*., 2014; Lagat *et al*., 2012; Otieno *et al*., 2012). However, little has been done to find out the extent to which manufacturing firms, in Kenya, have deployed dynamic capabilities so as to respond to the dynamic environment.

The deployment of dynamic capabilities means a change to a firm's process routines, business models and risk management. These changes require that they be incorporated in the strategy process. The firms' leadership, especially the CEOs, drive matters strategy (Davies & Davies, 2004; Engelen *et al*., 2015). Although some studies have linked leadership behaviour to leadership effectiveness (Yukl & Taber, 2009) and also to firm performance (Garg *et al.,* 2003), little empirical literature exists about the effect of leadership behaviour on the relationship between dynamic capabilities and firm performance. The import of this study therefore was the intersection of dynamic capabilities and leadership behaviour, duly motivated by the prevailing situation in Kenya's manufacturing sector.

1.3 Objectives of the Study

The general objective of the study was to investigate the moderating effect of leadership behaviour on the relationship between dynamic capabilities and performance of manufacturing firms in Kenya. The specific objectives were as presented in the subsequent sub-section.

1.4 Specific Objectives of the Study

The specific research objectives of the study were:-

i).To determine the effect of dynamic capabilities on firm performance.

a).To establish the effect of sensing capabilities on firm performance.

b).To determine the influence of seizing capabilities on firm performance.

c).To establish the effect of reconfiguration capabilities on firm performance.

ii).To analyze the moderating effect of transformational leadership behaviour on the relationship between dynamic capabilities and firm performance.

a).To establish the moderating effect of transformational leadership behaviour on the relationship between sensing capabilities and firm performance.

b).To determine the effect of transformational leadership behaviour on the relationship between seizing capabilities and firm performance.

c).To establish the moderating effect of transformational leadership behaviour on the relationship between reconfiguration capabilities and firm performance.

iii).To analyze the moderating effect of transactional leadership behaviour on the relationship between dynamic capabilities and firm performance.

a).To determine the effect of transactional leadership behaviour on the relationship between sensing capabilities and firm performance.

b).To establish the effect of transactional leadership behaviour on the relationship between seizing capabilities and firm performance

c).To determine the effect of transactional leadership behaviour on the relationship between reconfiguration capabilities and firm performance

iv).To analyze the moderating effect of Laissez faire leadership behaviour on the relationship between dynamic capabilities and firm performance.

a).To evaluate the effect of laissez faire leadership behaviour on the relationship between sensing capabilities and firm performance.

b).To establish the effect of laissez faire leadership behaviour on the relationship between seizing capabilities and firm performance

c).To determine the effect of laissez faire leadership behaviour on the relationship between reconfiguration capabilities and firm performance

1.5 Research Hypotheses

The research hypotheses on the direct relationship were:

H_01_a: There is no significant effect of sensing capabilities on firm performance.

H_01_b: Seizing capabilities have no significant effect on firm performance.

H_01_c: Reconfiguration capabilities have no significant effect on firm performance.

The hypotheses on the conditional relationship were:

$Ho2_a$: There is no significant effect of transformational leadership behaviour on the relationship between sensing capabilities and firm performance.

$Ho2_b$: Transformational leadership behaviour has no significant effect on the relationship between seizing capabilities and firm performance.

$Ho2_c$: There is no significant effect of transformational leadership behaviour on the relationship between reconfiguration capabilities and firm performance.

$Ho3_a$: Transactional leadership behaviour has no significant effect on the relationship between sensing capabilities and firm performance.

$Ho3_b$: There is no significant effect of transactional leadership behaviour on the relationship between seizing capabilities and firm performance.

$Ho3_c$: Transactional leadership behaviour has no significant effect on the relationship between reconfiguration capabilities and firm performance.

$Ho4_a$: Laissez faire leadership behaviour has no significant effect on the relationship between sensing capabilities and firm performance.

$Ho4_b$: There is no significant effect of laissez faire leadership behaviour on the relationship between seizing capabilities and firm performance.

$Ho4_c$: There is no significant effect of laissez faire leadership behaviour on the relationship between reconfiguration capabilities and firm performance.

1.6 Significance of the Study

The study was a significant attempt at providing firm leaders and managers with information for application in their technical and organizational spheres, to be able to take appropriate actions that promote development of capabilities in firms. Organizational management practitioners will be able to redesign and manage capabilities that influence firm performance. Investors and strategic groups in the business world benefit from the study's model that showed the interrelationships among the three variables of dynamic capabilities, leadership behaviour and firm performance; together with the tools and techniques used for this research, for their planning on firm performance, growth, business acquisitions and strategic collaborations (both locally and internationally) especially in view of the ever changing business environment. To be specific, manufacturers will benefit from new information on the factors influencing their activities.

The study informs industry and government policy formulation to come up with appropriate guidelines in addressing any noted firm vulnerabilities to the ever changing operating environment in order to achieve firm performance in the industrial sector or manufacturing sub-sector.

The study addressed a research gap and hence subsequent studies benefit from its contribution to the general body of knowledge on strategic management, concerning the relationship between dynamic capabilities and firm performance and how this relationship is moderated by leadership behaviour. Its contribution to theory or extension of existing theory in this field accords strategy students and scholars new knowledge and insight on the importance of firm capabilities and firm performance. This study enhances the existing body of knowledge by providing an empirically tested insight on the manufacturing sector in Kenya.

1.7 Scope of the Study

The study was a cross-sectional survey of manufacturing firms operating in Nairobi County, Kenya. It focused on establishing the moderating effect of leadership behaviour on the relationship between dynamic capabilities and firm performance. Firm performance is the interest of every firm, sector, industry or economy. The unit of analysis was the manufacturing firm and the respondents were their chief executive officers (CEOs) and senior managers who report directly to the CEOs. The study was carried out using explanatory research design.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview.

This chapter reviews the concepts of firm performance, dynamic capabilities and leadership behaviour; and extant empirical literature along with relevant theories. It also covers the conceptual framework for the study and the relationships among the variables.

2.2 The Concept of Firm Performance

Beyond the recognized interest of capital owners of a firm, there are many individuals and groups such as financial claimants, employees, customers, communities, government and environmental proponents, among many others, who have an interest in the existence, processes, outcomes and reputation of a firm. The import of the stakeholders' theory is that business managers make decisions that take into account the interests of all stakeholders of a firm, not just wealth maximization (Godard, 2004). The social perspective approach to the objectives of a firm has made the theory to be widely adopted even though it conflicts with the economic view of value maximization (Polonsky & Scott, 2005; Kaplan and Norton, 2004; Carneiro *et al.*, 2007; Richard *et al.*, 2009; Santos and Brito, 2012). According to Kaplan and Norton (2004), performance indicators should be designed around the various stakeholders so that even at an individual level, managerial incentive systems are aligned to broader goals of the firm. The balanced scorecard approach therefore entails three (3) major stakeholder groups - shareholders, employees, and customers; and then proposes objective indicators of performance with regard to each

group (Kaplan and Norton, 2004) e.g., ROE, turnover, and market share. Other studies focus on labour productivity, safety or equality in compensation (Baker *et al*., 2006; Godard, 2004). The importance of defining firm performance as the satisfaction of stakeholders helps studies to focus on the performance outcomes (Rojas, 2000; Cameron, 2010; Wright, 2010). Firms adopt more quality measures in performance evaluations so as to align organizational incentives to the long term success of the firm (Hoque, 2004).

In order to understand firm performance, three aspects must be considered. The first one is the time frame – the need for differentiating between past and future performance. For example past superior performance does not guarantee that the performance will remain superior in the future. The second aspect is the duration (or the interval) being considered (short, medium or long term). The third is the reference against which performance is being measured, e.g. the industry average, the results of main competitors, an established target, or past performance (Carneiro *et al*., 2007). Using the average value of the industry or of the main competitors as the baseline shows companies' competitive position and may be more useful for strategic analyses.

Besides the foregoing, firm performance entails a discussion of both effectiveness and efficiency. Effectiveness is a goal-oriented measure and hence refers to the achievement of objectives. Efficiency refers to the usage rate of resources in achieving objectives. The balancing between effectiveness and efficiency requires an examination of assumptions regarding the objectives of the firm in order to make a meaningful assessment of achievement. Patterson *et al* (2005) shows that firms have different views of performance in part because of how they view the relative importance of, and their different goals

relating to, effectiveness and efficiency. This means that one simple indicator may not be sufficient to measure a broad array of firms. It would therefore be appreciated that different firms have different goals and objectives with regard to what effectiveness or efficiency means. What is required is a dynamic mechanism of measurement that is able to account for these differences. It is also necessary to consider a firm's purpose, because it is not only about the simple possession of an attribute (say increased market share or low margins), but also about the utilization of that attribute toward some end that reflects on firm performance. That is to say, having a large market share in itself does not sufficiently amount to firm performance. It is therefore evident that the definition of firm performance and its measurement continues to challenge scholars due to its complexity.

Profit and growth are relevant for the existence of a firm and need to be included in any attempt to measure performance. The question normally is what else is relevant and should be considered as well. Measuring performance involves identifying the stakeholders and defining the set of performance outcomes that measure their satisfaction (Rojas, 2000; Cameron, 2010; Wright, 2010). Many previous management researches have therefore either varied or adopted different measures of firm performance. Richard *et al* (2009) measured firm performance using financial performance (ROA, ROI, profits etc.), product market performance (market share, turnover etc.) and shareholder return. Ozer & Tinaztepe (2014) proposed eleven performance outcomes. It would therefore be important to dive deeper and examine two types of broad firm performance measures – financial and non-financial performance.

2.2.1 Financial Performance

Financial performance is the ability of the firm to satisfy investors and stockholders and is represented by profitability, growth and market value (Farjoun, 2002; Khatri & Ng, 2000; Liu, 2000; Cho & Pucik, 2005; Li *et al.*, 2008; Glick *et al.*, 2005, Santos and Brito, 2012; Arend, 2014). These three measures complement each other. Profitability measures an organization's past ability to generate returns (Glick *et al*., 2005). Growth in sales demonstrates a firm's past ability to increase its business coverage (Whetten, 2006) that would increase absolute profit and cash generation while also bringing about economies of scale and market power, leading to enhanced future profitability. Market share or value represents the external assessment and expectation of firms' future performance. It has a correlation with historical profitability and growth levels, but also incorporates future expectations of market changes and competitiveness.

2.2.2 Non-Financial Performance

Firms are being required to demonstrate not only profitability of their businesses, but to also customize their products to meet the individual and heterogeneous demands by customers. The interactivity between firms and their customers and other non-investment stakeholders has been heightened by technological advancement of the global economy (Yadav & Varadarajan, 2005; Ramani & Kumar, 2008). Customers want companies to provide them with goods and services that match their expectations (Cronin *et al*., 2000). To do that, companies must understand their customers' needs, avoid defects and improve the perceived quality and value added by their offerings. Customer satisfaction increases the willingness to pay and thus the value created by a company (Barney & Clark, 2007).

Employees, on the other hand, obtain their satisfaction from investments in good human resource practices. The satisfaction of employees is a reflection of a firm's ability to attract and retain employees and lower their attrition rates (Farjoun, 2002). Other stakeholders, like governments and communities, are impacted by a number of the firm's actions, especially social and environmental ones. Social and environmental performance is also a way of satisfying communities (Farjoun, 2002) and governments (McWilliams & Siegel, 2001). Some activities associated with the satisfaction of these groups are safe environmental practices, increased product quality and safety, ethical advertising, minority employment and development of social projects (Polonsky & Scott, 2005; Short *et al*., 2009; McWilliams & Siegel, 2001; Filatotchev *et al*., 2009; Park and Luo, 2001; Santos and Brito, 2012).

A study that was undertaken by Wang *et al* (2015) on 113 UK high-tech small and medium size firms, to examine the effects of success traps on dynamic capabilities and firm performance relationship, used both financial and non-financial measures of firm performance. However, after factor analysis, only growth in sales and profitability measures were retained.

Overall, firm performance has at least seven measures, namely: -profitability, growth in sales, market share, customer satisfaction, employee satisfaction, environmental performance and social performance (Santos and Brito, 2012). An analysis of all articles published in the Strategic Management Journal between 1980 and 2004 covering 238

empirical studies, showed that 56 different indicators of firm performance were used, but in most of these cases (82%), financial performance was used (Combs *et al*., 2005). A similar observation was made by subsequent studies (Carton and Hofer, 2006; Richard *et al*., 2009; Santos and Brito, 2012). The following section therefore makes reference to the relevant theories in order to properly ground and appropriately analyze the construct of firm performance.

2.3 The Theoretical Perspectives

This study was guided by the resource-based view and the dynamic capabilities theories. Further relevance was found in the theory of the firm, the theory of competitive advantage, upper echelons theory and transformational-transactional theory of leadership.

2.3.1 The Theory of the Firm

This is one way of conceptualizing a firm (Holmstrom and Tirole, 1989). It tries to answer the question why firms exist and what precisely a firm is. Besides addressing why businesses are organized into firms, it also explains the relationships within the firm as well as between it and the external environment. The first conceptualization of why firms exist was on process innovation-based competition (Drejer, 2004). Later on firms became to be described as administrative organizations that are collections of heterogeneous productive resources that are historically determined and that their value creation does not come from the mere possession of resources, but rather from the use of the resources (Bloch & Finch, 2010). How much value is created depends on how the resources are deployed. In order to grow, firms should keep developing expertise and innovation.

Besides managerial skills, firms require more of entrepreneurial and leadership skills, because whereas the former allows them to run an existing undertaking, the latter brings about change and create advantage. Therefore, the ultimate constraint of growth of a firm is its top managers (Bloch & Finch, 2010). This is because these managers are limited by their knowledge of the firm's resource base and understanding of external environment. Further and subsequent contributions were made on firm behaviour (Augier & March, 2008) and asset specificity of the firm (Seddon *et al*., 2004). The theory of the firm has however been criticized for failing to recognize that managers of a firm are not owners. Bolton & Scharfstein (1998) identified the chief executive officers as agents of shareholders of the firm (Khalil *et al*., 2007).

There are two reasons why this theory was deemed an important input in the study. First is the continued debate by economists, particularly on the following aspects: - existence of the firm, the size and organization of firms (Stramaglia, 2010; Foss, 2000; Rickets, 2008). The notable spectrum of theoretical contributions towards this theory laid the foundation on the firm's existence, its boundaries, internal organization and coordination, capital structure, role of management, knowledge creation, role of entrepreneur and the external coordination between firms. The second reason is that extant literature highlights several variables influencing performance and life cycle of the firm and how inherent micro-economic and macro-economic factors alter the operating framework and environment thereby causing some degree of unpredictability in the firm's growth (Stramaglia, 2010).

2.3.2 The Theory of Competitive Advantage

Unlike the evolutionary theory of economic change (Nelson and Winter, 2002) that covers the role of a firm's routines, how they shape and constrain firm growth within a changing environment, the theory of competitive advantage (Porter, 2008) takes a market position performance approach of a firm. This theory posits that a firm is a source of bundles of resources, mechanisms by which they learn and accumulate new skills; and also capabilities and forces that enables the rate and direction of their processes (Nonaka & Toyama, 2002). The role of strategic management is to adapt, integrate and reconfigure internal and external organizational skills, resources and functional competencies to enable the firm cope with the changing environment. Many once successful firms struggle or fail when their environments change. The field of strategic management is largely concerned with how firms generate and sustain competitive advantage (Grant, 2001; Ambrosini and Bowman, 2009). Firm performance studies have been done at both corporate level (economies of scope and transaction costs) and business level (resources, competitions and profitability). The business level studies make up the Resource-based (RBV) theory of the firm, discussed herein below, focusing on how organizations' resources or knowledge is developed and how this affects firm performance (Kanyabi & Devi, 2012).

2.3.3 Resource-Based View Theory

The resource-based view (RBV) theory states that organizations can have competitive advantage through the development of resources that are peculiar and diversely distributed (Barney, 2010). The source of competitive advantage is resources that are simultaneously VRIN, i.e. valuable, rare, imperfectly imitable and imperfectly substitutable (Barney, 2010;

Ambrosini and Bowman, 2009). The underlying assumption of the RBV is that resources are heterogeneous across firms and this heterogeneity can sustain over time. This enables firms to earn super-profits in equilibrium, although this has been observed to be essentially a static view (Barney, 2001).

A firm's strategy is viewed as a quest for Ricardian rent and therefore once resources depreciate, or become obsolescent or are replicated by other firms, the rent they generate tends to disappear (Bikker & Haaf, 2002). Barriers to entry are caused by economies of scale, patents, experience, brand reputation or when a resource is costly to acquire or will take long time to be acquired. A firm's capabilities refer to what it can do as a result of sets or teams of resources working together (Grant, 2001). In order for it to attain better capabilities relative to its competitors, a firm's strategy should exploit relative strengths of resource combinations. Failures of many strategies are due to these strategies extending their activities to beyond the scope of their capabilities.

The RBV theory recognizes four (4) important characteristics of resources and capabilities in determination of a firm's competitive advantage: - durability, transparency, transferability and replicability. The theory holds the position that firms are heterogeneous with respect to their resources, capabilities or endowment. Some of these resources are not readily tradable - for example tacit know-how and reputation (Teece, 2007). Therefore from the RBV perspective, firms possess not only heterogeneous resources, but also sticky resource bundles. The resource heterogeneity results from their immobility and non-tradability in the factor markets making them difficult to accumulate and imitate.

Firms with superior systems and structures become more profitable because they have markedly lower costs or they offer higher quality products. This approach focuses on the rents accruing to the firm that has scarce and firm-specific resources rather than the economic profits from product market positioning. Competitive advantage lies upstream of product markets and rests on the firm's idiosyncratic and difficult-to-imitate resources. What firms can do is not simply a function of opportunities they confront, but rather depends on what resources they can master too (Ghobadian & O'Regan, 2008).

The key to firms' success or their future development lies in their ability to find or create competencies that are truly distinctive (Ghobadian & O'Regan, 2008). Resources are classified as tangible, intangible and personnel-based (Grant, 2001). The tangible resources refer to financial and physical possessions such as buildings, equipment, vehicles and stocks of raw materials. Intangible resources include such possessions as structure, technology and processes. The people resources include culture, management, employee skills and talent. These resources are not productive when left on their own. Therefore, the resource-based perspective recognizes the firms' capabilities to assemble, integrate and manage these resources (Aragon-Correa & Sharma, 2003). Success however depends on whether they can rationally identify and use valuable resources that are rare and inimitable (Barney, 2010), or not. There are strong relations of complementarity and co-specialization among resources (Mathews, 2002). It is the way resources are clustered and interplay and their fit into the system that is important to the understanding of competitive advantage (Bridoux, 2004) and firm performance.

The RBV theory does not however address how future new valuable resources can be created and how the current stock of resources can be refreshed, re-integrated or reconfigured under unstable markets (Ambrosini and Bowman, 2009). It leaves out the process of resource development and adaptation to the external environment. This is what dynamic capabilities bridge. They alter the resource base in relation to the changing environment (Zahra & George, 2002) and therefore are more valuable in unstable environments. They may create market change as opposed to just respond to it (Eisenhardt & Martin 2000).

The resource base of a firm is path dependent and dynamic capabilities can alter these paths (Helfat *et al*., 2009). Dynamic capabilities are also context dependent (Winter 2003). It is not possible to generalize the performance or even existence of dynamic capabilities without taking to account the institutional, environmental and market context (Rouse & Dallenbach, 2002).

2.3.4 The Theory of Dynamic Capabilities

Dynamic capabilities theory is an extension of the resource-based view (RBV) of the firm which was propounded by Penrose (1959), Nelson and Winter (2002), Wernerfelt (2014), Barney (2005), Fahy, 2000; De Oliveira & Evaldo Fensterseifer, 2003; Clulow *et al*., 2003), among others. Dynamic capabilities and RBV share assumptions, but the former helps us to understand how a firm's resource stock evolves over time leading to firm performance. Dynamic capabilities involve a process of creating new resources, renewals thereof and alterations to the resources mix (Ambrosini and Bowman, 2009). Even though

the RBV theory assumes that firms can be conceptualized as bundles of resources that are heterogeneously distributed and that the resource differences persist over time (Amit & Zott, 2001), it does not adequately explain how and why certain firms have competitive advantage and better performance than others, in situations of rapid and unpredictable change (Eisenhardt and Martin, 2000).

The concept of dynamic capabilities is at the forefront of strategy research because it is a source of competitive advantage (Hou & Chien, 2010). As a field that is normative, strategic management seeks to guide those aspects of the business that have material effects on the success and survival of firms (Zahra & George, 2002). The dynamic capabilities approach tends to guide managers on creating distinctive and difficult-to-imitate advantages and to avert losing customers to the competition. Teece (2007), used the term dynamic capabilities to stress the firm's ability to exploit internal and external firm-specific competencies to address the dynamic environment.

Therefore the source of sustained firm performance is dynamic capabilities, which firms are able to apply so as to integrate, build and reconfigure internal and external resources and competencies to match the rapidly changing environments (Zahra & George, 2002). Dynamic capabilities are the higher level capabilities that differ from ordinary capabilities in aspects of priority, availability, imitability, overall objective and results of their application by firms. Table 2.1 is a summary of the differences between ordinary and dynamic capabilities, adapted from existing literature (Teece, 2014).

Table 2:1: Differences between Dynamic and Ordinary Capabilities

Aspect	**Ordinary Capabilities**	**Dynamic Capabilities**
Tripartite schema	Operate, administrate, and govern	Sense, seize, and transform
Priority	Doing things right	Doing the right things
Purpose	Technical efficiency in business functions	Meet customer needs and tap technological and business opportunities
Mode of attainability	Buy or build (learning)	Build (learning)
Key routines	Best practices	Signature processes
Managerial emphasis	Cost control	Entrepreneurial asset orchestration
Imitability	Relatively imitable	Inimitable
Result	Technical fitness (efficiency)	Evolutionary fitness (innovation)

Source: Teece (2014).

In a previous study on the role of intellectual human capital in firm innovation, Hess (2008) concluded that dynamic capabilities emerge at firm-level through interactions at individual level. It was also found that interactions between different types of boundary spanners or employees, influenced by top management, allows the formation of dynamic capabilities at the firm level. Therefore the process of dynamic capability formation can be initiated through managerial action on formalization of roles. The resulting dynamic capabilities, therefore, cannot simply be explained by the sum of the inputs provided by each individual. Rather, dynamic capabilities are emergent, arising from the continuous interactions of specific boundary spanners attempting to overcome different knowledge gaps in the innovation process. This is what Teece (2007) meant by referring to capabilities

as not vested in a single individual, nor capable of being articulated by an individual; rather, they are supra-individual and not reducible to individual memory. Protogerou (2008) empirically tested the mediating role of marketing and technological competences on the relationship between dynamic capabilities and firm performance. Findings suggested that long-term competitive advantage lies in the functional competences that firms build and reshape using dynamic capabilities, not in the capabilities themselves. Dynamic capabilities are therefore the tools by which functional competences can be reconfigured and manipulated by managers so as to form new and innovative forms of competitive advantage.

Another previous study (Engelen *et al*., 2015) however indicated that organizations' entrepreneurial orientation may not fully translate into performance benefits if it is not well aligned with the firm's strategy. Strategy is set by the strategic leadership – the CEO, TMT or the Board. Strategic leadership of a firm sets direction, broad aggregated agendas and a future view of the firm (Davies & Davies, 2004). Therefore one of the aspects of leadership that comes into focus is the leadership behaviours, which influence employees' work environment and the firm's corporate culture (Engelen *et al*., 2015), deployment of resources and application of dynamic capabilities to deliver firm performance. Leadership keeps the scientific teams focused on research and development (Deeds *et al*., 2000). The following two theories – upper echelons and the transformational-transactional theories, were found relevant in grounding the leadership behaviour construct that was used in the study to moderate the dynamic capabilities – firm performance relationship.

2.3.5 Upper Echelons theory

Upper echelons theory states that firm outcomes – both strategies and effectiveness – are reflections of the values and cognitive bases in the firm, of powerful actors called leaders (Carpenter *et al*., 2004; Carpenter & Fredrickson, 2001). It is founded on the premise that firm outcomes are directly linked to the knowledge, experiences and expertise of those individuals who occupy leadership roles in the firm (Carpenter & Fredrickson, 2001). The strategic choices made are a function of the unique characteristics that the leaders exhibit. Humans have limited capacity for information processing at any given time and as a result, their decision on, and responses to, certain elements in the environment are determined by their dispositions and personal tendencies. In other words, personal characteristics of leaders determine perceptions of their corporate environment and influences what they see in the environment that informs their decisions regarding strategic choices which in turn affect the performance of the firm (Carpenter *et al.*, 2004; Van Knippenberg *et al*., 2004). The upper echelons theory further postulates that executives make choices on the basis of their personalized analysis of the situations they face and interpret situations and execute decisions based upon their own unique experiences accumulated through-out their lives (Hambrick 2007). The institutional logics are the ideas and beliefs that drive the behaviours of individuals within the context of interpersonal relationships, firms, and society at large (De Nooy, 2003).

Previous studies testing this theory have been focusing on Top Management Team's (TMT) demographic variables such as age, functional background, education, tenure, and social backgrounds; in a given context in relation to the firm outcomes (Carpenter *et al*.,

2004). Some of these variables (age, size, and environment) have since been conceptualized as control variables or moderators. Carpenter *et al* (2004) identified these and other factors as affecting the leadership's strategic decision-making process. Leadership characteristics are reasonable proxies for underlying differences in cognitions, values, and perceptions (Carpenter *et al*., 2004). For example, Nishii *et al* (2007) demonstrate that demographic diversity of senior management relate positively with the adoption of diversity practices. Hambrick and Mason (1984) suggest that cognitive diversity is needed for the success of leadership in a turbulent business environment and that demography serves as proxy for underlying deep-level personal factors such as personality, power, values, interests, and so on (Cannella & Pettigrew, 2001). An executive who is newly hired from an outside firm may bring a different perspective to the decision making process than an individual promoted from within (Carpenter & Fredrickson, 2001).

The reason why this study chose to refer to this theory is based on two aspects. First, the theory has defined the top management team (leadership) as executive managers who also serve on the board of directors (Carpenter *et al*., 2004). These are individuals operating at the highest levels of management such as the Chief Executive Officer (CEO), Chief Operating Officer (COO) or Directors (Marcel, 2009). Secondly, previous studies have utilized the theory in establishing how top management teams have influenced firm performance. For example, a study by Lin & Shih (2008) on Taiwanese companies linked strategic human resource management practices to organizational competitive advantage. The study found that TMT composition can influence the effectiveness of human resource practices on firm financial performance, thereby providing a potential relationship in which

the TMT can serve as a moderator in the relationship between strategy and firm performance. A study by Henderson *et al* (2006) applied the upper echelons theory to examine the relationship between CEO tenure, industry composition and firm performance in both stable and dynamic operating environments. This theoretical foundation was also applied in the examination of both the CEO and TMT of top 500 industrial Italian family-owned firms and it was found out that where the CEO was a member of the ownership family, the firm demonstrated higher levels of financial performance (Minichilli *et al*., 2010). Patzelt *et al* (2008) found out that TMT should comprise those individuals who demonstrate the requisite levels of experience and relevant skills to design and implement business models that enable firms to achieve their performance objectives. Geletkanycz and Hambrick (1997) examined the intra and extra industry interpersonal relationships of TMT members with respect to how they shape organizational focus and performance. External ties of TMT members directly contribute to the type of action taken by the organization (Stam & Elfring, 2008). A study that examined the relationship between TMT characteristics and innovation adoptions amongst a sample of 460 state chartered and national banks located in the Midwestern United States (Van Knippenberg *et al*., 2004) found that banks managed by more educated TMTs who came from diverse functional backgrounds were more likely to adopt innovative products, programs or services. Another study that focused on the relationship between TMT characteristics and the adoption of IT technologies amongst small businesses in the United States (Chuang *et al*., 2009) found out that group heterogeneity could be used to explain rates of IT adoption amongst the small businesses.

The issue that appear to be creating consistent challenges for scholars is whether to focus research on a single individual (CEO) or on a group of top managers (TMT). In addressing this concern and to choose the appropriate focus, both the context in which the firm conducts business and the strategic decision making processes are key considerations. In organizations where collaborative decision making is practiced as a standard approach to address key strategic issues, a focus on the TMT would seem appropriate (Klein & Kozlowski, 2000). But in a setting where a single individual is granted and exercises full authority to put decisions into action, focus on this individual alone may be sufficient when applying the theory. It is not lost however that CEOs are typically the ultimate decision makers and the drivers of performance in the relatively small-size-firms in the manufacturing sector in Kenya.

Typically, a leader can demonstrate both transactional and transformational behaviours with each leader's profile having more of one behaviour and less of the other (Avolio & Bass, 2004; Kirkbride, 2006). A leadership model that explains the full range of leadership behaviours was developed by Bass and Avolio in (2004). It is a continuum from a non-leadership to the more transformational leadership behaviour.

2.3.6 Transformational – Transactional Theory of Leadership

This theory of leadership touches on effective organizational change management. When a firm is to adapt to changes in the environment, its leadership is a critical factor for any successful change. Saowalux and Peng (2007) and Burns (1978) state two factors that distinguish ordinary from extraordinary leadership (Obiwuru *et al*., 2011). That

transactional leadership is based on the conventional exchange relationship in which followers' effort, productivity, and loyalty is exchanged for expected rewards. On the other hand, transformational leadership raises followers' level of consciousness on the importance and value of designated outcomes and ways of achieving them. Followers are motivated to transcend their own immediate self-interest for the sake of the firm's mission and vision, through emotional, intellectual and moral engagement. They end up performing beyond expectations (Obiwuru *et al*., 2011; Waldman *et al*., 2001). Whereas transactional leaders follow existing rules and procedures, transformational leadership drives changes in corporate and individual level attitudes in order to achieve the firm's goals based on a new vision, mission and revised shared assumptions, values and norms. Burns (1978) and Bass and Avolio (2004) proposed a continuum composed of three major leadership behaviours. On the one extreme is transformational leadership and on the other extreme is transactional leadership behaviour. Midway of the continuum is a laissez-faire leadership behaviour or style.

Transformational leadership drives a compelling and clear vision; mobilization of employee commitment, institutionalization of organizational change, increasing followers' awareness of what is right and important; and motivating them to perform beyond expectation. Such leaders display their behaviours associated with four characteristics (Kirkbride, 2006). These are the idealized influence - whereby the leader is a role model due to personal characteristics and demonstrates moral behaviours, trust, integrity, honesty, purpose, competence, achievements and power for positive gain; the inspirational motivation - where followers are motivated for superior performance and the leader

articulates the firm's vision and moves on to build expectations, simplicity and creates a sense of priority and purpose; the intellectual stimulation – followers are stimulated to think through issues and problems for themselves and be able to develop their own abilities and finally the individualized consideration –a concern for followers and appreciation of their strengths and weaknesses with tasks assigned based on the individuals' abilities. A two-way exchange of views is encouraged (Muenjohn & Armstrong, 2008).

The transformational leadership behaviour involves more than the administration of rewards or punishments. It is concerned with the transformation or change of followers' fundamental values, goals and aspirations (Rothfelder *et al.,* 2012). These kind of leaders show high standards of moral and ethical conduct, not just because they live up to their own set of expectations but also because they have their followers' best interests in mind. The subordinates identify and try to emulate their transformational leaders. Followers feel inspired and motivated and tend to truly respect and admire their leaders. They offer an optimistic and attractive vision of the future, stimulate followers' creativity and encourage team spirit and do not easily lose sight of subordinates' individual concerns. They appreciate followers' uniqueness and individually foster followers' personal development. Previous studies (Rothfelder, 2012) found that employees led by a transformational leader feel more satisfied with their overall work than subordinates of transactional leaders (Bass and Avolio, 2004; Currie & Lockett, 2007; Humphreys & Einstein, 2003; Erkutlu, 2008). In a previous study (Rothfelder *et al.,* 2012), all the components of transformational leadership (idealized influence, inspirational motivation and individualized consideration and intellectual stimulation) were positively related to employee job satisfaction. This is

consistent with the prior findings in other contexts (Bass and Avolio, 2004; Currie & Lockett, 2007; Erkutlu, 2008; Humphreys & Einstein, 2003). In practice, this means that transformational leaders articulate a clear vision, set a personal example, motivate subordinates, inspire them, provide meaning to work, act in ways that make followers want to trust them, show support and understanding and treat subordinates as individuals with different needs, abilities and aspirations. Followers under a transformational leader share organizational values and are usually committed to the strategic goals. They accomplish work tasks out of motivation and not because they get rewarded for accomplishments (Pearce *et al*., 2003; Northouse, 2007).

Transactional leadership on the other hand encompasses fairly traditional managerial behaviours where leaders gain compliance and performance by either offering rewards or punishing deviations from standards. It is identified by three attributes (Judge & Piccolo, 2004), namely:- the contingent reward - whereby an exchange of rewards between leaders and followers takes place and effort is rewarded for good performance or threats and disciplines for poor performance; the management-by-exception (passive) - whereby the leader intervenes when procedures and standards for accomplishing tasks are not met, and management by exception (active) – when a leader proactively monitors to detect mistakes (Muenjohn & Armstrong, 2008; Bass and Avolio, 2004). These styles are useful for stable situations and not useful for firms undergoing environmental turbulence or rapid change. The transactional leadership behaviour primarily focuses on the exchange dimension between leaders and followers, using either rewards or disciplines in order to influence

followers' performance (Waldman *et al*., 2001). These leaders clarify their expectations and clearly communicate how followers will get rewarded for successful task completion.

Transactional leaders demonstrate contingent reward behaviour when they clearly articulate their expectations. The rewards occur in the form of praises, commendations, bonuses and also in pay increases. This, beyond a doubt, argues for the assumption that overall employee job satisfaction can be increased by contingent rewarding behaviour. Transactional leaders also apply the active or passive management-by-exception approach, by watching closely for any mistakes or deviations and take direct or delayed corrective actions. There is a lot of controlling and monitoring involved in this leadership style. Thus, the approach is likely to slow down individual development instead of encouraging it. For this reason, it can be argued that active and passive management-by-exception behaviour reduces employee job satisfaction. Previously conducted studies (Currie & Lockett, 2007; Judge & Piccolo, 2004; Bass and Avolio, 2004; Humphreys & Einstein, 2003) found that subordinates of transactional leaders experience lower overall work satisfaction than did the subordinates of transformational leaders.

In the midway of the leadership behaviour continuum, lies the laissez faire, which describes leaders who avoid clarifying expectations, do not address conflicts, and fail to make decisions. This is a leader who tends to withdraw from the leadership role or offers little in terms of direction or support. Their followers are left in conflict with each other regarding roles and responsibilities and therefore try to usurp their leader’s role, or look elsewhere for guidance. The leader takes a neutral position on any matter. Laissez-faire

behaviour is hands-off and lets things go their own way. It is conceptually correlated to the passive form of management- by-exception and lacks in action even when correction is needed. Leaders with this behaviour usually abdicate authority and responsibility, hesitate to take action, delay decisions or avoid decision making completely. They avoid taking positions, give no feedback to followers and make little or no effort to help followers grow. They are inactive, indifferent, uninfluential, and inattentive and typically absent when needed. Laissez-faire leadership behaviour can be seen as a 'sink or swim' strategy in which followers either make it on-their-own or do not make it at all. Followers working under this type of leadership seek assistance, direction and support from alternative sources such as peers, other leaders or even from outside the firm (Judge & Piccolo, 2004; Bass and Avolio, 2004). Laissez-faire leadership has been found to be negatively related to followers' job satisfaction (Erkutlu, 2008).

In the next sections of this chapter, the concept of dynamic capabilities is expounded, borrowing from the foregoing theoretical background. The study introduced, at this stage, the relationship between dynamic capabilities and firm performance.

2.4 The Concept of Dynamic Capabilities

Dynamic capabilities represent a class of higher order capabilities that influence the rate at which a firm is able to respond to environmental changes (Easterby-Smith *et al*., 2009; Winter, 2003). This is the repeatable, patterned choices and routines that provide the capacity for a firm to purposefully create, extend, or modify its resource base (Helfat *et al*., 2009); or the ability to develop, deploy, and orchestrate value creation and value capture

through sensing, seizing, and transformative skills (Teece, 2007). Extensive extant theoretical literature brings out the role of dynamic capabilities in firm strategy and performance. The dynamic capabilities framework is built upon the theoretical foundations provided by Helfat *et al* (2009), Teece (2007), Zahra & George (2002), Nelson and Winter (2002), Bloch & Finch (2010) and Drejer (2004) and seeks to explain the sources of enterprise-level competitive advantage over time and hence performance in a changing global environment (Zahra & George, 2002). The ability to renew the firm's competences, defined as dynamic capabilities, is precious for a firm operating in a turbulent market (Teece, 2007).

The role of dynamic capabilities in firm strategy and performance is that of integrating, building, and reconfiguring internal and external competencies to address rapidly changing environments (Zahra & George, 2002; Winter, 2003; Eisenhardt and Martin, 2000; Zollo and Winter, 2002; West & Iansiti, 2003). However, empirical testing of the influence of dynamic capabilities on firm performance has been limited. This has partly been due to lack of consensus on definition, concern over the potentially tautological nature of the concept (Priem & Butler, 2001) and questions around the measurement (Wernerfelt, 2014) and operationalization. Of late empirical analyses have attempted to take on the task of defining, measuring and testing the effects of dynamic capabilities on firm performance (Macher & Mowery, 2009). Firms are conceptualized as collections of sticky and difficult-to-imitate resources that create competitive advantage and contribute to sustained industry performance differences (Helfat *et al*., 2009; Hoopes *et al*., 2003). Previous related studies on firm capabilities include those that focussed on the persistent differences among firms

in product and process development (Knight & Cavusgil, 2004), research and development on productivity (Deeds *et al*., 2000; Wang & Ahmed, 2007; Rothaermel & Hess, 2007), the importance of initial inter-firm differences (Cockburn *et al*., 2000); deliberate learning mechanisms (Zollo & Singh, 2004); managerial cognition and inertia (Tripsas & Gavetti, 2000); managerial, human and social capital selection, training and deployment (Hatch & Dyer, 2004); and customer and project management investment (Ethiraj *et al*., 2005).

In many industries, changing the entire resource base in response to external or internal changes is simply unrealistic. At the same time, ignoring these changes altogether is not an alternative. Leadership and management are therefore forced to engage in the complex task of dynamic capability building in order to facilitate firm performance in the light of depreciating value of resources base available within their organizations.

Dynamic capabilities theory attempts to deal with two key issues: - how existing business models can be changed to adapt to radical discontinuous environmental shift and how firms can maintain threshold capability standards so as to ensure continued performance. A close monitoring of parameters about fluctuations will enable firms to tackle the internal process of adapting to their resources base. Often, this is simply not possible because of strong path dependencies or practical feasibility constraints that apply to certain industries. For example, some industries rely on a certain routine process. Once a new technology arrives, changing the routine process on short notice becomes unrealistic. It is therefore more likely that adaptations are about the firm leadership making the most out of their existing resource material but most importantly, to simultaneously understand the ongoing depreciation of their firms' resources base (Ludwig and Pemberton, 2011).

Unlike operational capabilities which pertain to the current operations of firm, the basic assumption of dynamic capabilities framework is that core competencies can be used to modify short-term competitive positions to build longer-term competitive advantage. Research on firm performance factors is therefore now focusing on the role of dynamic capabilities (Wilden *et al.,* 2013) - the capacity to renew resources so as to achieve congruence with shifting business demands (Teece *et al.,* 2008; Wilden *et al.,* 2013). Ten *et al* (2003) provides a capability maturity model that was originally designed to assist firms to improve software processes. It is now used by firms to analyze and evaluate firm-wide improvements. The pragmatic five levels capabilities pyramid provides guidance for both processes and general improvement. A firm which facilitates feedback is able to continuously improve on its processes, goods or services.

Wang *et al* (2007) proposed future research on dynamic capabilities to be grounded on the relevant RBV and dynamic capabilities theories. They identify three dimensions of dynamic capabilities. These are adaptive capability – the identification and capitalization on emerging market opportunities (Biedenbach & Muller, 2012; Wang *et al.,* 2007), absorptive capability – ability to recognize the value of new, external information, assimilate and apply it to commercial ends (Zollo & Winter, 2002; Wang *et al.*, 2007) and innovative capability – ability to develop new products and markets through aligning strategic innovative orientation with innovative behaviours and processes (Wang and Ahmed, 2004).

In their study on exploring the role of dynamic capabilities in firm performance under the resource-based view framework, Lin &Wu (2014) used the dimensions of integrate, learn and reconfigure, to explain how dynamic capabilities mediate the resources and FP relationship. Zott (2000) found that although dynamic capabilities are linked to firm performance, there are some causes of intra-industry performance differentials. These are timing of deployment of the dynamic capabilities, imitation through search for alternative resource configuration, deployment learning process and the cost of deployment.

An study done by Kivela (2007) on small software firms revealed that there exists dynamic capabilities in inter-firm relationships, notably in exchanging and combining knowledge-based resources which in turn improve organizational effectiveness of firms in response to the changing operating environment. Macher and Mowery (2008) examined the development and introduction of new process technologies in semiconductor manufacturing in the USA. The empirical results provided strong support for the arguments of Teece *et al* (2008), Eisenhardt and Martin (2000), Zollo and Winter (2002), Winter (2003) and Helfat *et al* (2009) that, in rapidly changing environment, firm-specific performance differences may reflect differences in their capabilities in managing innovation. The study also highlighted the importance of deliberate, rather than passive, learning for the development of dynamic capabilities. According to Helfat *et al* (2009), the three variables of dynamic capabilities construct are: - sensing capabilities, seizing capabilities and reconfiguration capabilities.

2.4.1 Sensing Capabilities

This is a firm's ability to recognize shifts in the environment that could impact the firm's business (Teece, 2007). It is achieved by establishing processes through which to regularly scan the local and distant business environment (Danneels, 2008; Teece, 2007), to interpret gathered information and to filter relevant aspects of the information (Teece, 2007). It involves recognition and monitoring of opportunities and threats from both the external and internal environment. For its measures, this study adopted those that have been used in previous studies (Danneels, 2008; Jansen *et al*., 2005; Lichtenthaler, 2009). The resulting questionnaire items were slightly reworded for clarity to the respondents. Cao (2011) used a similar dimension, sensing (shaping) opportunities and threats to refer to the firm's scanning, filtering, monitoring, assessing, creating, learning, interpreting, figuring out and calibrating business opportunities and threats. This involves a deliberate investment in continuous search for internal and external information about customer needs, technological shifts and opportunities, supplier and competitor responses and structural evolution in the market.

2.4.2 Seizing Capabilities

This is a firm's learning, reflected by the ability to create internal knowledge, to acquire external knowledge and to assimilate internal and external knowledge through knowledge sharing (Cepeda & Vera, 2007; Easterby-Smith *et al*., 2009; Vivas Lopez, 2005; Zahra & George, 2002). Knowledge creation and knowledge acquisition are very important as they build a basis for capability creation (Cepeda & Vera, 2007; Easterby-Smith *et al*., 2009; Vivas Lopez, 2005). New processes and products mainly result from new combinations of

knowledge (Augier & Teece, 2009). Firms are expected to possess knowledge-acquisition capability because the capability to create knowledge internally may not be sufficient to cope with the challenges arising from changes in the operating environment (Lichtenthaler, 2009). A previous study on understanding the elusive black box of dynamic capabilities (Pavlou & El Sawy, 2011) used measures on this variable, which this study adopted. Cao (2011) used this dimension to refer to the firm's ability to attend to products, process or service opportunities, selection of business models and identifying talent to coordinate the firm's functional activities.

2.4.3 Reconfiguration Capabilities

Reconfiguration refers to the creation and integration of capabilities internally or those acquired from external sources. Building capabilities internally relates to the transformation of existing capabilities, i.e. to change the form, shape, or appearance of capabilities existing within the firm (Teece, 2007). This includes redeployment or recombination of existing capabilities (Ahuja & Katila, 2004). Acquiring or transferring capabilities from external sources is exemplified by licensing, purchasing contracts, alliancing, mergers and acquisitions (Capron & Mitchell, 2004; Capron & Mitchell, 2009). Measures from a previous study (Pavlou & El Sawy, 2011) were adopted. According to Cao (2011), this is the recombination and reconfiguration of the firm's assets, processes and structures to match the shifting operating environment. It calls for business model re-designing, alignment and revamping of routines.

2.5 The Moderating Role of Leadership Behaviour

Leadership is a process of influence, which includes inspiring and supporting others towards the expected achievement of a desired purpose based on clear and professional values (Davies & Davies, 2004). It is also the behaviour of an individual while he or she is involved in directing group activities, organizing work relations, criticizing or praising followers and taking care of their welfare and feelings (Judge & Piccolo, 2004). What is clear, however, is that leadership implies influence of one person over a group or firm in order to encourage activities. It is the process of influencing followers to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives (Yukl *et al.*, 2009).

Studies have approached leadership construct from three perspectives. First is looking at the characteristics of leaders, such as traits and behaviours. Second is examining characteristics of followers, such as the confidence and optimism they have on the leader, trust, task commitment and job satisfaction. Third is looking at the situation or context within which the leaders operate, including the type and size of firm, structure and external dependencies (Yukl *et al*., 2009). The traits approach assumes that some people are born with leadership qualities - having certain traits which others don't possess. Such traits include intuition, foresight and power of persuasion. Over time, research has however shown that traits cannot guarantee leadership success (Yukl *et al*., 2009).

Studies have now focused on the behavioural approach. This is concerned about what leaders actually do on the job, pattern of their activities, responsibilities, functions, and

how they cope with demands, constraints and conflicts. This is a focus on the correlation between leadership behaviour and the different indicators of leadership effectiveness (Yukl & Taber, 2009). Leadership behaviour is therefore about how development of subordinates is accomplished through coaching, training and development, empowerment, participation and delegation. There is a positive relationship between developing leadership skills of employees and their performance. Some of the roles of leadership include coaching, training or development, empowerment of followers, involving followers in setting strategic objectives (participation) and delegating activities to followers.

Coaching can be used on the job to identify problem areas where employees lack knowledge and to encourage them to learn to solve problems themselves (Abbas and Yaqoob, 2009). According to Champathes (2006), coaching has become an important technique in improving performance. This is dual-way communication where the coaches identify what can be improved and how it can be improved. Further, coaching addresses the beliefs and behaviours that hinder performance (Toit, 2007). It is all about helping someone else to improve performance (Starr, 2004). There exists a relationship between leadership behaviour and the level of coaching and employee performance (Abbas and Yaqoob, 2009).

Training and development enhances employees' skills so that they can perform well. This is done through either formal training and development programs or informally on the job training. Individual or organizational training needs are identified and budgets are put in place to undertake training with overall objective of improvement in individuals and firm

performance. Previous research has shown that where learning takes place to enhance employee knowledge and skills and proper attitudes, employee performance improves (Abbas and Yaqoob, 2009). It is the responsibility of the leader to address and ensure the skills gap is closed as desired to achieve actual performance (Sahinidis and Bouris, 2008).

Success is the achievement, accomplishment and attainment of performance through empowerment (Boudrias *et al*., 2010). Empowerment is in the form of employee's role performance, collective organizational goals and objectives, and shared mutual benefit from work experience that addresses both social and personal growth needs. Bartram and Casimir (2007) found in their research that empowerment had significant positive correlations with both performance and satisfaction.

Participation is a useful way of involving employees to use their skills in problem solving. Chen and Tjosvold (2006) studied participation and its importance and stressed that participation management is about involving employees in the decision making process where they feel that they have the opportunity to discuss problems and can influence a firm’s decisions. Participation leads to increased employee job performance and low attrition rate.

Delegation is the sharing of a leader’s role with individual subordinates or direct reports (Yukl *et al.*, 2002). This involves assignment of new responsibilities and additional authority to subordinates. This is a sure way developing subordinates’ skills and confidence.

Manufacturing sectors are ordinarily capital intensive. But the abilities and motivations of their employees (King, 2010) is a function of the behaviour of their leadership. The frontline employees for example play an important role because of their interactions with customers. They influence how customers perceive the firm (Harris and de Chernatony, 2001; Ottenbacher, 2007). The rest of (back-office and factory) workforce play a part in shaping how their firms perform in the long term (Rothfelder *et al.,* 2012, King, 2010).

Garg *et al* (2003) suggested that Executives should prioritize on scanning of appropriate sectors in both the external and internal environments that are important to firm performance. Leaders cannot take effective control of organizational processes and outcomes until they form appropriate judgments about the levels of key variables inside and outside their firm; and set strategies to either counter threats or exploit opportunities. Leaders drive the causal relationships of variables with one another to influence firm performance. High performing CEOs vary their relative internal and external scanning according to the rate of changes in the external operating environment (Garg *et al.*, 2003).

For a long time, theorists approached studies on leadership with the assumption that leaders influence firm performance. They therefore focused mainly on identifying traits, styles or behaviours of leaders and how strategic leadership behaviours influence firm activities. Weiner and Mahoney (1981) found that leadership accounts for more variance in firm performance than did environmental factors. Further, effective leadership has been found to be strongly associated with firm performance. This means that there is a

possibility that some individual leadership behaviours are more appropriate for particular business environments (Quigley & Hambrick, 2015; O'Reilly *et al*., 2010). Strategic orientation has therefore never been more important to research scholars.

Leadership behaviour influences the performance of both management and employees - hence how firms will be able to utilize their capital, financial and human resources to compete and survive in contemporary business environment. Leaders have had to brace themselves for a variety of new challenges, including decentralized organizational forms, globalization, rapidly changing business environments, diverse workforce, and new work arrangements (Gordon & Yukl, 2004).

Previous studies have used leadership behaviour as a moderator of various predictor and criterion variables. In their study, Engelen *et al* (2015) used leadership behaviour to moderate entrepreneurial orientation and firm performance. Panagopoulos (2010) used leadership behaviour and environment to moderate the sales strategy - performance relationship and found out that transformational leadership, among other aspects, exerts significant moderating effects on this relationship. Todorovic (2007) found out that there is a significant effect by charismatic leadership on the entrepreneural orientation – firm performance relationship. Kotter (1998) claims that change always demands more leadership. Leaders inspire followers by creating shared values, beliefs and visions in an organization (Ahn *et al*., 2004). Leadership is the system used by a manager to influence group members towards the accomplishment of objectives (West & Tonarelli-Frey, 2008). There are three concentrations of leadership behaviour along a leadership continuum –

Transformational, transactional and laissez-faire. There have so far been no studies regarding the moderating role of transformational or transactional leadership on the relationship between dynamic capabilities and firm performance.

The study acknowledged the complexity of leadership behaviour and that individuals are not the same, hence proposed that the strength and form of relationship between dynamic capabilities and firm performance depended on leadership behaviour. As a moderator, leadership behaviour variable modifies the form or strength of the relation between dynamic capabilities and firm performance (Aguinis, 2004; Aiken & West, 1991). The study used the leadership behaviour's full range model (Avolio & Bass, 2004) to capture its dimensions of transformational, transactional and laissez-faire behaviours.

2.6 The Conceptual Framework

The conceptual framework in figure 2.1 was adapted from a previous study (Drnevich & Kriauciunas, 2011). The same was adjusted, albeit slightly to accommodate the variable of leadership behaviour (instead of environment and heterogeneity) as moderator on the relationship between dynamic capabilities and firm performance. This was to clarify the fundamental propositions on the conditions and limits of the contribution of dynamic capabilities to firm performance (Drnevich & Kriauciunas, 2011). The conceptual framework provides an explicit connection between theory, previous research attempts and the purpose of the study (Johansson & Fredriksson, 2009, Leshem & Trafford, 2007; Trafford & Leshem, 2002). It shows what the study sought to achieve and how it was to be

achieved (Leahey, 2007) and identifies and demonstrates the relationships between the variables and how their relationships provide new knowledge (Leshem & Trafford, 2007).

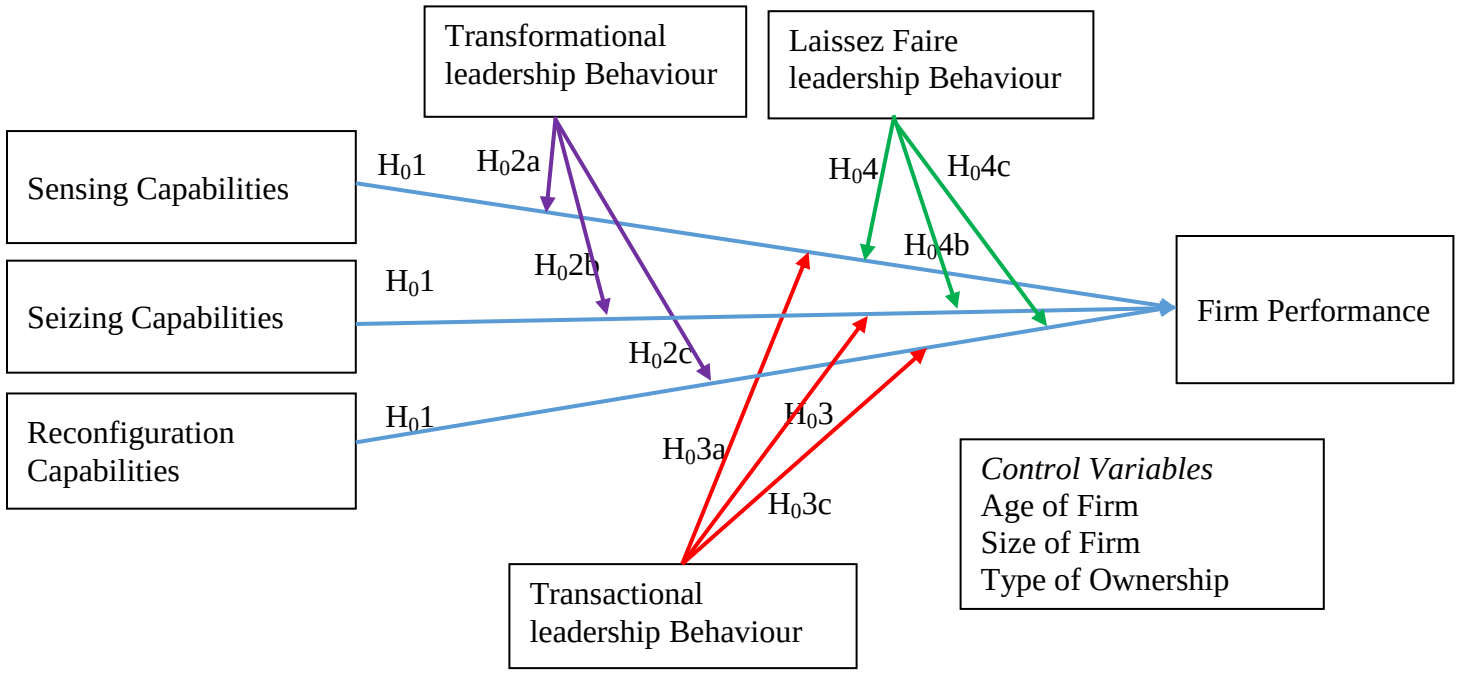
According to the strategy-based theories - the resource-based view (RBV) and the dynamic capabilities approach, a firm's internally derived configuration of resources play an important role in its performance. The resource-based view of the firm has been a useful framework to study the determinants of value creation (Barney, 2010). However, possessing valuable, rare, inimitable and non-substitutable resources alone does not automatically lead to firm performance. The firm's resources must be managed appropriately to produce value (Sirmon and Hitt, 2008). New value-creating strategies are generated by a recombination process of resources (Eisenhardt and Martin, 2000). This is captured in the dynamic capabilities approach - a furtherance of the RBV which examines how new value is created in firms (Zahra & George, 2002).

While there has been an increasing amount of research on dynamic capabilities, a gap exists in understanding how their relationship with firm performance can be influenced by leadership behaviour. Similar positioning of leadership behaviour as a moderator was evident in a recent study on entrepreneurial orientation- firm performance (Engelen *et al*., 2015). For example, research on firms has observed that organizational culture influences entrepreneurial activities (Hall *et al*., 2001; Zahra *et al*., 2004). Firms' organizational culture is defined as a shared and learned experience and values which inform and bind employees. Culture is expressed, reproduced and communicated partly in symbolic form (Green & Li, 2011). Some firms tend to develop cultures that make them inflexible,

resistant to change and inclined to stick to path-dependent traditions, hence becoming less favourable to new and proactive strategies and business models (Hall *et al*., 2001).

The moderation model was therefore guided by the resource-based view's theoretical perspective (Barney, 2010) that intangible resources interact with strategic posture to yield firm performance (Newbert, 2007). Resources and dynamic capabilities are useful in increasing a firm's positive returns required by strategic leadership. Therefore leadership behaviour plays a role in the complex and intangible net of relationships in a firm, which is difficult for outsiders to immediately observe and imitate (Panagopoulos & Avlonitis, 2010).

Figure 2.1: Conceptual Framework: Moderation effect of leadership behaviour on the relationship between dynamic capabilities and firm performance



Source: Adapted from Drnevich & Kriauciunas (2011) and modified by the study (2017)

2.6.1 Relationship between Dynamic Capabilities and Firm Performance

In order to derive the variables of the dynamic capabilities construct, literature was reviewed. This study adopted the approach taken by Helfat *et al* (2009) in deriving the three dimensions; namely: sensing capabilities - the ability to identify the need for change in the firm; seizing capabilities - ability to formulate a response; and reconfiguration capabilities - ability to implement appropriate measures for sustainable performance. For firms to attain both technical and revolutionary fit, they require these capabilities (Zahra & George, 2002; Teece, 2007). These are discussed in detail in the following subheadings.

2.6.2 Relationship between Sensing Capabilities and Firm Performance

Firms are faced with changing customer needs and behaviours, the ever rising competition, inherent resources constraints and legal frameworks. Sensing capabilities refers to the frequency and speed of search procedures that firms use to spot opportunities and threats thereby raising the probability of identifying new business markets (Zahra & George, 2002). This involves regular scanning of the local and distant business environment (Danneels, 2008; Pavlou & El Sawy, 2006; Teece, 2007). This study therefore proposed that firms which apply sensing capabilities are able to achieve and sustain their performance.

2.6.3 Relationship between Seizing Capabilities and Firm Performance

Seizing capabilities refers to the frequency and speed of adaptation of organizational processes aimed at responding to opportunities and threats. They enable firms to build responsiveness to market or customer demands (Hult *et al*., 2000), through knowledge

acquisition and creation and interpretation of the gathered information so as to filter the relevant and useful knowledge (Teece, 2007) which is shared within the firm. That way, all opportunities identified at the sensing capabilities stage are taken up quickly and used to improve firm performance.

2.6.4 Relationship between Reconfiguration Capabilities and Firm Performance

Reconfiguration capabilities refer to the frequency, speed and rate of revision of activities concerning change such as business strategies, business operations and markets. This is the firm's strategic orientation in terms of behaviour, process, product and innovation. This is the capability creation and integration process. Examples include changes to the form, shape or appearance of capabilities and redeployment or recombination of existing capabilities within the firm (Carlile, 2004; Teece, 2007; Ahuja & Katila, 2004) or acquisition of capabilities with or without physical transfer from outside sources (Capron, Peng, 2001; Capron & Mitchell, 2009; Lavie, 2006). Reconfiguration capabilities enable a firm to build a repository of tact for adoption in case of environmental shift, thereby ensuring that performance is not only achieved, but improved too.

2.6.5 Moderating Effect of Leadership Behaviour on the Dynamic Capabilities - Firm Performance Relationship

Leadership behaviour is an important aspect in corporate governance especially when focusing on strategy, corporate culture and diversity of a firm (Peng *et al*., 2004; Tan, 2002). The proposition of this study was that, while sensing capabilities, seizing capabilities and reconfiguration capabilities provide options for firms to pursue new

manufacturing opportunities, effective utilization of these dynamic capabilities requires appropriate leadership behaviour from top management. Followers who feel trust and respect towards their leader are motivated to do more than what they are expected to do (Pearce *et al*., 2003) because the firm's setting is favourable and accommodating for creative ideas (Monsen & Boss, 2009). This perspective is consistent with the idea that leadership behaviour is a crucial ingredient in successful strategy implementation (Panagopoulos & Avlonitis, 2010). According to the upper echelons theory, top management can play an important role in fostering change in the firm and particularly in the minds of employees (Daily *et al*., 2002; Carpenter & Fredrickson, 2001). Therefore leadership behaviour is perceived to influence employees' work environment and the firm's corporate culture (Engelen *et al*., 2015; Judge & Piccolo, 2004). It also determines the rate of deployment of resources and application of dynamic capabilities to deliver firm performance.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Overview

This chapter discusses the methodology used in the study. It covers the study area, research philosophy, research design, target population, sampling design, types and sources of data, and collection procedures, reliability, validity, data collection instruments, measurement of study variables and analytical model. It also provides justification for each step.

3.2 Study area

The study was conducted in Nairobi County, Kenya and focused on manufacturing firms. The sector contributes two thirds of the country's industrial sector and 10% of the country's GDP. The government of Kenya has focused on this sector's growth because of its importance for future long term economic development, projecting its growth at 20% by year 2030 (National Industrialization Policy Framework for Kenya, 2011-2015). It also provides a market for most of the country's agricultural sector output. Nairobi County has a population size of about 3.5 million (Nairobi County Integrated Development Plan 2014). It hosts the capital City of Kenya. With the great north road passing through the county, being at the convergence of road transport from East African countries and the presence of a world class international airport - Jomo Kenyatta International Airport, Nairobi County is perceived to be of interest to many businesses particularly manufacturing firms. Annualy, a comprehensive list of manufacturing firms is provided by Kenya National Bureau of Statistics (KNBS) after annual reviews carried out by the state

department of Ministry of Finance and Planning and during which new firm entrants and exits are updated.

3.3 Research Philosophy

This research took a positivist philosophical approach. Positivists regard the world as made up of observable and measurable facts (Owens *et al*., 2000) and that there are general patterns of cause-and-effect that can be used as a basis for predicting and controlling variable relationships. By relying on the world to provide accurate data using a strict methodological protocol, findings are free of any subjectivity bias. This philosophical approach was duly guided by the objectivist epistemology which holds that reality exists independent of consciousness (Bergin, 2011) and that there is an objective reality out there. So, the study was about the discovery of this objective truth (Gray, 2013) and was intended to fill a knowledge gap. In doing this, the study avoided feelings and values but believed that firm performance, dynamic capabilities and leadership behaviour are defined objectively using established theoretical frameworks. Using structured instruments to assess and analyze the interrelationships, the study was able to make generalization.

3.4 Research Design

A research design is a step-by-step plan for collecting data. This research design was anchored on the logical positivism philosophical foundation. It used selected existing empirical theories and models and applied and tested them in measuring the variables under study, hence the approach was deductive - the formulation of variables and hypotheses grounded on existing theory (Saunders *et al.*, 2007). The study was explanatory; finding out what was happening and also sought new insights (Robson, 2002)

into relationships that existed between research variables. The explanatory research design allowed the use of inferential statistics to determine variable relationships (Hair *et al.*, 2006). The study took the form of a cross-sectional survey. The objective was to investigate and predict the relationship between dynamic capabilities and firm performance given different leadership behaviours. The justification for using a cross-sectional survey approach was its appropriateness in the snapshot examination (Coltman, 2007) of the variable interrelationships; its cost effectiveness, flexibility, efficiency and faster turnaround period in the large data collection situation (Babbie & Benaquisto, 2009).

3.5 Target Population

The target population for the study was manufacturing firms. In Kenya, the sector contributes on average 10% of the national gross domestic product and employs over 2 million people. Among stakeholders are local and international buyers, investors and the Government of Kenya. The study targeted this sector because, like in many developing countries, the level of innovativeness is relatively low compared to many countries in developed economies. Although existing production value chains would benefit from low-labour cost, firms in this sector should not continue operating under the existing internal and external constraints in capabilities, research and development, design, and innovation. Based on the paper's findings, Kenyan firms and policy makers would learn about dynamic capabilities and the effect that leadership behaviour has on the relationship between dynamic capabilities and firm performance. As Kenyan firms strive to be globally competitive, what is appreciated is the ever dynamic market arena that requires each and

every firm to summon appropriate dynamic capabilities to be able to keep up with the hyper-economic pace.

Even though some previous studies targeted manufacturing firms that are members of the KAM, Anzetse (2014) noted that KAM membership is made up of only 40% of manufacturing firms in Kenya, mainly large firms. The study further noted that some of the members of the KAM are not actually manufacturing firms. Therefore in order to obtain a more comprehensive and representative list of the target population, the study used the data of manufacturing firms provided by the Kenya National Bureau of Statistics (KNBS). This was in harmony with other previous studies (Lee, 2004; Wei & Lau, 2010; Behnke & Muthami, 2011; Kamaku & Waari, 2011; Mwangagi, 2016). The source provided a list of all small, medium and large firms in the Kenyan manufacturing sector that depict as many different attributes as possible, in terms of age, size, manufacturing process, market and firm ownership type (Lee, 2004; Beheshti *et al*., 2014). It was noted that 80% of manufacturing firms are located in Nairobi, with the rest located in other major towns and cities of the country (Anzetse, 2014). For the purpose of this study, the study population comprised manufacturing firms operating in Nairobi County.

The target respondents consisted of the CEOs and three of the senior managers who report to the CEOs from the departments of Human Resources, Marketing, Information Technology or Factory. The CEOs are presumed to know their firm performance goals and also actual achievement and made a balanced judgment of the different measurement scales used for dynamic capabilities and also firm performance. The three direct reports,

ordinarily and structurally, were those in regular interaction with the CEO, especially noting the nature of the manufacturing firms. They therefore had knowledge in answering questions about leadership behaviour. The information collected was of two types; the CEOs provided information on the firm's performance and also the extent to which sensing capabilities, seizing capabilities and reconfiguration capabilities were deployed while the direct reports on the other hand provided information on the leadership behaviour in respect to their CEO.

These top level executives were presumed to know their firms' organizational performance goals against either actuals or in comparison with the other firms within the sector. They were indeed responsible for defining and helping implementation of their organizational strategies. Even though they did not represent the entire firm's stakeholders, their positions required that they made balanced judgment on organizational achievements. The CEOs rated firm performance and dynamic capabilities. The direct reports rated the CEO's leadership behaviour. The use of these senior managers as key informants was consistent with prior studies (Corsten & Felde, 2005).

3.6 Sampling Procedure

A sample is a smaller (representative) collection of units from a population that is used to determine truths about that population (Field, 2005). The main reason behind sampling was because of resources constraints, workload reduction and provision of results with known accuracy that were reliable on making research conclusions and recommendations. The study appreciated the determinants of a good sample, namely: - target population,

sample size and sampling method. A correctly defined, identified and truly representative sample influences the quality of the results. Because the required statistical procedures were followed, the study did not need to select every item in a population because the results of the sample reflected the same characteristics as the population as a whole (Zikmund *et al.*, 2012).

For this study, a list of manufacturing firms that operated within Nairobi, formed the sampling frame, or the working population from which the sample and unit of analysis were picked. Probability sampling was used. It is the most commonly used in survey-based studies where one needs to make inferences from the sample about a population and to answer questions or to meet set objectives (Saunders *et al*., 2007). Each member of the population had an equal probability of being selected. This method was used in this study because each element in the population had a chance of being included in the sample (Roberts-lombard, 2002). Every element in the population had a known, non-zero probability of selection. This removed the danger of bias in the selection process which arise from own opinion or desire (Frey *et al*., 2000). The sample therefore represented the population (Frey *et al*., 2000).

The study used systematic random sampling. The justification was that all the elements had an equal chance of being selected. It provided a statistical precision and ensured a representative sample across the entire population, with a smaller sampling error. This technique was used because the population consisted of manufacturing firms which operate within close proximity and rely on relatively standard infrastructure. The sample units

were selected from the list obtained from KNBS. The list was in no particular order. The study, in applying systematic random sampling, picked the first listed firm, and thereafter every 4th name, until the sample size was reached (Frey *et al*., 2000; MacNealy, 1999).

3.6.1 Sample Size

Extant literature emphasizes on appropriate and adequate sample size so as to capture the desired effect size and precision of findings that can be inferred back to the population (Naing *et al*., 2006; Blanche *et al.*, 2006). This study therefore attempted to maximize the statistical power at the design stage. Sample size was noted to be a strategic component of the study (Sink & Mvududu, 2010).

The formula used to determine sample size, with finite population correction, was according to Naing *et al* (2006), thus:-

$$S = \frac{N.Z^2.p.q}{d^2.(N-1) + Z^2.p.q}$$

Where, S = the sample size;

Z = Z statistic for the 95% confidence level,

p= proportion in the population estimated to have the target characteristics.

d = degree of accuracy /precision. It is also equal to 1-p.

There were 1496 targeted manufacturing firms. The anticipated population was 50%, in order to have a large sample (Macfarlane, 1997; Daniel, 2005; Naing *et al*., 2006). A confidence level of 95% and a relative precision of 45% to 55% or a standard error of 5%

were used in line with previous studies (Macfarlane, 1997; Cochran, 2007; Naing *et al*., 2006).

$$S = \frac{1496 \times 1.96^2 \times 0.5 \times 0.5}{0.05^2 (1496-1) + 1.96^2 \times 0.5 \times 0.5}$$

$$S = \frac{1436.7584}{(3.7375 + 0.9604)} = \frac{1436.7584}{4.6979} \text{ or } 306$$

This translated to a sample size of 306. A further adjustment of 20.5% was made to cater for non-response i.e 306 x 0.205, or 63 (Bartlett, 2001), translating to adjusted sample size of 369 for purposes of this study. Therefore 369 CEOs and 1,107 (369 x 3) senior managers who report directly to the CEOs were targeted as respondents. This was considered adequate sample size (VanVoorhis & Morgan, 2007).

3.7 Data Collection Instruments and Procedure

Primary data was used for purposes of this study. A questionnaire (Appendix IV) was used to collect primary data from the sample firms.

3.7.1 Types and Sources of Data

Primary data was utilized because it has been found to be a good source of empirical studies and tends to reduce measurement errors (Hair *et al.,* 2006; Malhotra and Birks,

2007). This was the type of data collected from the respondents. The firms' chief executive officers (key informants) reported their perceptions of the variables in the questionnaire and not their personal attitudes or behaviours (Tkaczynski *et al*., 2010).

3.7.2 Data Collection Instruments and Administration

A questionnaire was used as the data collection instrument. This was considered appropriate because the required information source was primary data. The questionnaire was based on a seven (7) point Likert-type scale which enabled the collection of answers to specific research questions based on responses on aspects of the firm's manufacturing business or operational processes and its performance in the market. A Likert-type format enabled respondents to indicate the extent to which they agreed or disagreed with the statements, based on the context and availed a wider choice of responses (Robson, 2002), namely: - 1: Not at all; 2: To a very slight extent; 3: To a small extent; 4: To a moderate extent; 5: To a considerate extent; 6: To a great extent; 7: To an extreme extent. Closed questions were used, to motivate respondents and save their time.

The instrument was prepared in two parts. The first part was administered to the firms' CEOs and contained sections A, B and C. Section A called for the organizational profile – size of the firm, type of firm ownership and the age of the firm. The section consisted of questions that were designed to determine sample demography and sample bias. Section B required the CEO to rate the firm's financial and non-financial performance using ten items on a 7-point Likert type scale. Section C contained 25 questions designed to rate the extent of deployment of sensing capabilities, seizing capabilities and reconfiguration

capabilities in the firm. These were answered by the CEOs based on the 7-point Likert type scale.

The second part of the questionnaire was administered to the direct reports of the CEOs from the same firms, targeting three of those heading Human Resources, Information Technology, Factory or Marketing. These respondents are structurally the heads of common departments/sections in manufacturing firms that would ordinarily report direct to the CEOs. This part contained 3 questions on the respondent's profile and 36 questions on leadership behaviour. The 36 questions required a 7-point Likert type scale rating on the behaviour of the respective CEOs. This multi-rater approach has the advantages of using the multiple judgments provided by more than one rater as the basic data, hence greater reliability of their mean unlike responses by a single rater. According to Cohen (1960) and subsequent studies (Rourke *et al*., 2001; Gwet, 2008; McHugh, 2012), the number of multiple raters may be as small as two, but this study used three.

3.7.3 Data Collection Procedure

A total of 369 questionnaires were administered to the participants using seven (7) research assistants who were graduate students in Business, as these had undergone research study methodology in their studies and had some experience in research projects. They were well trained, on data collection process, including on how to show respect to respondents and upholding courtesy during administration of the research instrument to respondents, how to handle research material and the general study procedure. In order to improve on the response rate, the survey questionnaires were fairly short and questions were concise. The

research assistants were briefed on how to insist on delivering the questionnaires to the targeted respondents, CEO and direct reports; and ensuring prompt callback where contacts were exchanged for follow up. A transmittal letter was attached to the questionnnaire, indicating clearly the purpose of the information sought and requesting that all the questions be answered.

Once the questionnaires were received from the field, they were coded, edited and response details keyed into a Statistical Package for Social Sciences (SPSS) database. A continuous follow up on responses was made by research assistants, spending their daytime out on the field to physically deliver the questionnaires and to collect the completed ones.

3.8 Measurement Scales

This study had three independent variables – sensing capabilities, seizing capabilities and reconfiguration capabilities. There were three dimensions of the moderator variable – transformational leadership behaviour, transactional leadership behaviour and laissez faire leadership behaviour. The dependent variable was firm performance. The study relied on and adapted existing measures that have been used and validated in previous studies. Appropriate scales for the constructs were developed, through review of the relevant literature. Suitable measurement items were adopted from prior studies. All the constructs were measured using ordinal data on a Likert type scale, except for those of control variables -firm size and age of the firm on which interval scale was used. For type of firm

ownership, also a control variable, nominal scale was used, duly dummy-coded, in harmony with Alkharusi (2012).

3.8.1 Measures of Dynamic Capabilities

In order to measure dynamic capabilities, a list of items was used to measure the three dimensions of the construct – sensing capabilities, seizing capabilities and reconfiguration capabilities. A total of 30 items were used in the questionnaire to capture the scales for sensing capabilities, seizing capabilities and reconfiguration capabilities. These were adapted from past studies with only minimal adjustments. This was to ensure content validity of the measures. Sensing capabilities was measured using two scales. The first scale was the recognition of opportunities and threats from the environment. This consisted of four items, adopted from prior studies (Cao, 2011; Lichtenthaler, 2009; Danneels, 2008; Jansen, 2005). The second scale was monitoring of internal capabilities, which was measured using four items adopted from a previous study (MacInerney-May, 2012). Seizing capabilities had three scales. These were knowledge acquisition, knowledge sharing and knowledge integration. The knowledge acquisition scale was measured using three items adopted from previous studies (MacInerney-May 2012; Lichtenthaler, 2009; Jansen *et al.*, 2005). Knowledge sharing was measured using three items adopted from prior research (MacInerney-May, 2012; Tippins and Sohi, 2003). Knowledge integration scale was measured using four items adopted from a prior research (MacInerney-May 2012). Reconfiguration capabilities variable was measured using two scales – capabilities creation and capabilities integration. Capabilities creation had four items adopted from prior reaserch (MacInerney-May, 2012), while capabilities integration was measured using

three items adopted from various prior studies (MacInerney-May, 2012; Prieto *et al*., 2009; Pavlon & El Sawy, 2006). Table 3.1 shows the summary of independent variables, the count of items used and and the sources of the measurement scales used in the study.

Table 3.1: Summary of Independent Variables and Related Studies

Research Variable	No of Items	Sources
Sensing capabilities	9	Pavlou *et al* (2011); MacInerney-May (2012); Ellonen *et al* (2009, 2012); Teece (2007); Hou (2008); Arend (2014)
Seizing capabilities	9	Pavlou *et al* (2011); MacInerney-May (2012); Ellonen *et al* (2009, 2012); Teece (2007); Hou (2008); Arend (2014)
Reconfiguration capabilities	12	Pavlou *et al* (2011); MacInerney-May (2012); Ellonen *et al* (2009, 2012); Teece (2007); Hou (2008); Arend (2014)

Source: Study (2016)

3.8.2 Measures of Leadership Behaviour

The study adopted the full range Multifactor Leadership Questionnaire (MFQ) that was developed by Avolio and Bass (2004). Leadership behaviour construct was measured using ordinal measures of nine (9) factors on a 7-point Likert type scale. The factors are idealized influence (attributed), idealized influence (behavioural), inspirational motivation, intellectual stimulation, individual consideration, contingent reward, management by exception (active), management by exception (passive) and laissez-faire. A total of thirty six (36) items that measure leadership behaviour were identified from previous studies (Antonakis *et al*., 2003; Coetzee & Schaap, 2005; Spinelli, 2006). These measures and

number of items are as shown on table 3.2. Previous studies evaluated the structural validity of the full range (nine factor) multi-factor leadership (MLQ) model and found it to be the best theoretical construct representing the latest form of the MLQ whether with a large sample, *n* = 1,394; or small sample, *n* = 138 (Muenjohn & Armstrong, 2008). It was found out that even though some leadership factors were found to be correlated with each other, especially the five factors of transformational leadership; they still distinctly measured their own leadership constructs. This MLQ 5x version accords confidence, to some extent, in measuring the nine leadership factors representing leadership behaviours (Muenjohn & Armstrong, 2008).

Table 3.2 Leadership Behaviour Factors: MLQ 5X Measurement Items.

Factors	**No of Items**
Transformational Leadership	
1. Idealized influence (attributed)	4
2. Idealized Influence (behavioural)	4
3. Inspirational Motivation	4
4. Intellectual Stimulation	4
5. Individualized Consideration	4
Transactional Leadership	
6. Contingent Reward	4
7. Management by Exception(Active)	4
8. Management by Exception(Passive)	4
Laissez-faire	
9. Laissez-faire	4
Total	**36**

Source: Coetzee and Schaap (2005); Bass & Avolio (2004); Koech & Namusonge, (2012).

3.8.3 Measures of Firm Performance

Ozer and Tınaztepe (2014) observed that Firm performance is one of the most important constructs in management research. Further, Richard *et al* (2009) found that performance encompasses three specific areas of firm outcomes. These are financial performance (profits, return on assets, return on investment, etc.); product market performance (sales, market share, etc.) and shareholder return (total shareholder return, economic value added, etc.). Out of eleven items used by Richard *et al* (2009), this study used six of them (growth of sales, market share, profitability, the return on investment, customer satisfaction and employee satisfaction). The study incorporated financial liquidity because in order to meet investors' perception of a going concern, a firm's leadership must demonstrate how it deals with liquidity which is fundamental for the firm's effective and efficient operations and sustainability in a dynamic environment (Enyi, 2006; Egbide *et al*., 2013). For example, working capital management is critical to every firm (Ajanthan, 2013). A firm is required to maintain a balance between liquidity and profitability while conducting its business (Padachi, 2006), as both inadequate liquidity and surplus liquidity do affect profitability (Ogundipe *et al*., 2012).

Sales growth refers to the increase in sales over a specific period, usually annually. Market share is the percentage of the total market of a given form of product or service that is attributable to a given firm. Profitability is company's ability to generate earnings. This is done by turning over revenues in excess of costs incurred in producing those revenues. Return on investment (ROI) is an indicator of how profitable a firm's total assets are. It is

the efficiency or else, of using assets to generate earnings. Customer satisfaction is the extent to which a product or service meets the customer's expectations. Employee satisfaction is vital for those firms that are attentive in developing and retaining productive employees for organizational success (Richard *et al.*, 2009)). It is the affective and non-affective or cognitive positive emotional state of the employees. Besides the above measures, other non-financial measures were deemed necessary owing to the modern days' corporate philanthropy that is increasingly becoming part of corporate strategy. Firms are devoting more and more resources towards their social initiatives. On the other hand, communities within which firms operate are demanding for a share of the benefits that a firm receives by operating in the community. The moral marketplace is therefore becoming more sophisticated but imperative. The main drivers of corporate social initiatives are:- competitive advantage factors – through building of reputation assets; the new marketplace factor – embodied in capital, consumer and labour markets; and the comparative advantage – requiring a firm's flexibility and ability, through exercising their core competencies, to respond to certain social needs and playing the critical role of complimenting the government and NGOs.

The study therefore adapted the scales and measures used by Santos and Brito (2012). The 9 scales' multidimensional model of firm performance measures used in this study were:- growth of sales, market share, profitability, financial liquidity, return on investment, financial liquidity, customer satisfaction, employee satisfaction, environmental performance and social performance (Ellonen *et al.*, 2012; Rongwei *et al.*, 2010; Arend, 2014; Santos & Brito, 2012).

The table 3.3 shows the summary of all the variables, count of items and the type of measurement used in the study.

Table 3.3: Type of Measures.

Research Variable	Type	No of Items	Type of Measurements
Sensing capabilities	Independent Variable	9	Likert scale of 1-7
Seizing capabilities	Independent Variable	9	Likert scale of 1-7
Reconfiguration capabilities	Independent Variable	12	Likert scale of 1-7
Leadership Behaviour	Moderator	36	Likert scale of 1-5
Firm performance	Dependent variable	9	Likert scale of 1-7
Total		75	

Source: Study, 2017.

3.9 Validity and Reliability of the Study

This section discusses validity and reliability tests for the study

3.9.1 Validity of the Study

Validity test was undertaken to ensure precision or correctness of the research finding (Lewis and Ritchie, 2003; Winter, 2000) and for purposes of generalizability. The instrument that was used was standardized according to predetermined procedures (Golafshani, 2003). Content validity was validated by using the variables which have been used in previous studies. This was achieved through review of previous literature and past

empirical studies, from where the constructs were adapted and adopted. Also, discussions were held with the subject area experts. A doctoral student from Moi University was also requested to review the instrument. Feedback from these experts was incorporated in the revised instrument. This was to ensure the instrument's face validity, its physical appeal and clarity. A pilot test was carried out on 8 firms for initial assessment, to check on face validity (Golafshani, 2003). The pre-test survey ensured the questionnaire was free from ambiguity (Somekh and Lewin, 2005). This brought out theoretical relatedness on construct validity, whereby the instrument used was to be free from ambiguity (Somekh and Lewin, 2005). A further test for criterion validity was undertaken to establish the extent to which the instrument measured predictability of the dependent variable by the other variables.

Construct validity - the degree to which the scales measured what they intended to measure (Garver and Mentzer, 1999; Toh Tsu Wei *et al.*, 2009), the consistency of the measures and their relationship with other constructs (DeRue *et al*., 2012; Arrindell *et al*., 2005; Cavanaugh *et al*., 2000), was tested using principal component analysis.

3.9.2 Reliability of the Study Instrument

Reliability test was undertaken to ensure the measures were dependable, trustworthy, unfailing, authentic, genuine and reputable. This shows the extent to which data collection and analysis procedures yield consistent findings and provide assurance that the same results can be expected on any other subsequent similar occasions (Kimberlin & Winetrstein, 2008). The questionnaire was constructed based on measures, scales and

items from previous literature. Further, checks on the questionnaire were done through pre-testing the instrument (Saunders *et al.,* 2007) before final administration. This ensured that it was clearly understood and captured the key components of the variables and was administrable without undue delays.

The data collected was subjected to Cronbach's alpha coefficients test (Iacobucci & Duhachek, 2003; Simatupang & Sridharan, 2005), separately for each variable, to assess consistency and homogeneity among the variable measures (Hudson *et al*., 2001; Suliman & Iles, 2000). The Cronbach's alpha coefficient results of just about 0.7 was considered acceptable for the research (Hudson *et al*., 2001; Suliman & Iles, 2000).

In order to minimize non-responses, flexible time frame within which the respondents were allowed was factored in the process, thereby avoiding a rushed data collection period. Reminders were made through physical callbacks by the research assistants and also physical collection of those completed questionnaires. Further, respondents were provided with stamped and clearly addressed return-mail envelopes to take care of those who wanted to mail back the responses. The respondents were assured that their details and the information which they provided remained completely confidential. With all these steps, the data collection exercise was accomplished within a reasonable period.

3.9.3 Factor Analysis

A principal component factor analysis was applied on all the items of the constructs in the study, using extraction with varimax rotation. Those items that did not load were removed,

using absolute cutoff value of 0.500 (Welch & Feeney, 2014; Tavakol & Dennick, 2011). Factor analysis was considered necessary for the following reasons. First was to determine data items reducibility on the variables used in the study, so as to simplify data and to help eliminate problems of multicollinearity in subsequent regression analysis. Second, the study used multiple variables, measured at ordinal level using a 7-point Likert type scale and measures adapted from previous studies with some adjustments. It was therefore necessary to collapse the number of variables into a few interpretable underlying factors in order to improve on study validity. With the assumption of a linear relationship between the variables, it was desirable to undertake factor analysis. Third, the study sample size initially used was 369 which is more than the required minimum of 150 cases, thereby in consonant with VanVoorhis and Morgan (2007).

3.10 Data Analysis and Presentation

A code book was maintained containing descriptions of how data was coded before it was captured into the computer's readable format (Pallant, 2007). Two data files were prepared in SPSS computer application. One file was used to capture the CEOs' responses on Firm Performance and on Dynamic Capabilities. The other file was used to record responses from the senior managers, who also report direct to the CEOs, about the leadership behaviour of the latter. Multivariate multiple regression (MMR) analysis was used to establish relationships amongst the independent variables (sensing capabilities, seizing capabilities and reconfiguration capabilities), the moderator (leadership behaviour) and the dependent variable (firm performance). Multiple regression was chosen for its appropriateness in determining causal relationship between continuous variables,

exploration of interrelationships among a set of variables and also in explaining the power of explanatory variables that account for variations of an outcome (Field, 2005; Huizingh, 2007).

3.10.1 Significance Level

The significance level, or alpha, was determined using *P*-value, so that when this value was less than or equal to alpha, the result was considered statistically significant. A low value of Alpha of 0.05 was used for the study so as to minimize the probability of Type I error. The less than 0.05 level (or a statistical score of > 0.95), provides a 5% level of confidence in the results, i.e. it is less than 5% chance or randomness of the results. When the confidence level, *P*, was less than 0.05, the study rejected the null hypothesis in favor of the alternative. And when *P* was greater than 0.05, the null hypothesis was not rejected.

3.10.2 Descriptive Statistics

The study used qualitative data techniques (frequencies, means and standard deviation) to compute and summarize the data in respect to each variable. The Kolmogorov Smirnov and Shapiro Wilk test was used to test normality of the variables and the Pearson's product-moments correlation was used to test linearity of association between the variables. In order to ascertain linear relationships between the dependent variable and the independent variable for each aspect of the moderator variable, the study extracted hierarchical multiple regression coefficient statistics using SPSS to visually check for relationships.

3.10.3 Analytical Model

A total of 12 hypotheses were conducted using multiple regression. The first three hypotheses were used to test the effects of sensing capabilities, seizing capabilities and reconfiguration capabilities on firm performance. This determined the way the independent variables related with the dependent variable (Addae *et al*., 2006). Another three hypotheses were used to test the effect the interaction between transformational leadership behaviour and dynamic capabilities had on firm performance. A further three hypotheses were used to test the effect transactional leadership behaviour had on the relationship between dynamic capabilities and firm performance. Another set of three hypotheses were used to test the interaction between laissez faire leadership behaviour and dynamic capabilities and the effect of this interaction firm performance. This approach has been widely used to test hypotheses regarding effects of moderator variables (Mun *et al*., 2009; Gardner & Brown, 2010).

The analytical model equation 1 was used to examine the direct relationship between dynamic capabilities (for each observable variable or predictor) and the criterion i.e. firm performance (Reuber & Fischer, 2002; Choi & Cai, 2010), based on 95 percent confidence level (α = 0.05).

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + \mathcal{E} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Equation 2 was used to examine the conditional relationship between dynamic capabilities and firm performance, using leadership behaviour as moderator (Reuber & Fischer, 2002; Choi & Cai, 2010; Brown & Ryan, 2003; Saunders, 2011).

$$Y = B_0+B_1X_1+B_2X_2+B_3X_3+B_4Z_i+B_5X_1Z_i+B_6X_2Z_i+B_7X_3Z_i+\mathcal{E} \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where, Y is the dependent variable, firm performance.

X_1, X_2, and X_3 are the independent variables sensing capabilities, seizing capabilities and reconfiguration capabilities respectively.

Z_i is the moderator variable, with i taking the values of 1: transformational leadership behaviour, 2: transactional leadership behaviour and 3: laissez faire leadership behaviour.

$\mathcal{E}$ is a residual or a randomly distributed error term - variation due to other unmeasured factors.

B_0, represents the constant, in the relationship between predictors and the criterion.

B_1, represents the relation between the sensing capabilities and firm performance.

B_2, represents the relation between the seizing capabilities and firm performance.

B_3 represents the relation between the reconfiguration capabilities and firm performance.

B_4 represents the relation between the moderator and firm performance.

B_5, B_6 and B_7, represent the relation between firm performance and the interaction of independent variables and the moderator.

3.10.4 Assumptions of the Model

The study took cognizance of the following assumptions. This was deemed necessary so as to avoid type I or type II errors (Pallant, 2005).

i. All variables were normally distributed. A test for normality was undertaken.
ii. The relationship between the predictor and dependent variables was linear. This was tested using Pearson's correlation coefficients.

iii. The dependent variable's variance was equal across a range of independent variables.

iv. The data on the independent variables showed no multicollinearity - i.e. not highly correlated with each other. This was tested using variance inflation factor (VIF).

v. The error term was normally distributed.

vi. Homoscedastic nature of the data and this was tested using a scatter plot.

3.11 Controlled Variables

The study provided information on other additional variables that were considered necessary to control for so as to isolate the direct and moderated effect of dynamic capabilities on firm performance (Sakakibara *et al.*, 1997). These controlled variables were size, age and ownership type of the firm.

3.11.1 Size of Firm

Owing to their large size, firms are more likely to justify adoption of dynamic capabilities in their manufacturing activities (Hendricks and Singhal, 2001). As firms increase their workforce and reduce their operating costs, their profits are expected to rise, albeit to a certain threshold. As a result, one might expect a positive relationship between profit rates and firm size, at least for smaller firms. The extent of the relationship between size and profitability has for long been a matter for research. Previous studies have measured the size of a firm using the number of employees (Allocca & Kessler, 2006). In order to remain consistent with previous studies (Arend, 2014), the study defined small firms as those that had fewer than 30 employees and large firms as those that had more than 100

employees. The study set 30 employees count as the threshold after considering that manufacturing firms are ordinarily expected to be capital intensive.

3.11.2 Age of Firm

With passing years, firms tend to discover what and how they can perform better than others (Ericson & Pakes, 1995; Loderer & Waelchli, 2010). Other previous studies have shown that age makes knowledge and skills obsolete and leads to organizational decay (Agarwal and Gort, 2002; Loderer & Waelchli, 2010). Older firms are reluctant to adopt advanced practices and they often fail to realize the effect of dynamic capabilities in their manufacturing activities. Over time, firms age and slowly lose their ability to compete, as if they were living organisms. Consistent with organizational evolutionary cycle, after a certain threshold, rigidities, rise in costs, reduced margins, slowed growth, assets obsolescence and decline in investment and research and development kick in. Based on the date of commencement of business by the firm or date of registration, the number of years a firm had been in operation was used to determine its age. Those firms that had been in operation for less than 5 years were viewed as relatively new and the age profile of firms was set at 5 intervals of 5 years.

3.11.3 Firm Ownership Type

Conflict of interest between shareholders and management significantly increases the agency cost (Jensen and Meckling, 2003). The reason lies in the fact that managers are self-interested individuals (Corbetta & Salvato, 2004) driven by personal ego and who act mainly in their own best interests, forsaking the interests of shareholders and carring out activities that go against the maximization of shareholder's wealth. A previous study

(Zeng and Luo, 2013) showed that there are two key contextual variables in organizations - ownership type and size of organization. The moderating effect of these two contextual variables on the linkage between organizational culture and firm effectiveness was examined, using a survey conducted in China, which compared foreign invested and state-owned firms operating in China. It was found out that firm ownership type has significant influence on organizational culture and has effect on firm performance (Zeng and Luo, 2013). Type of firm ownership is an important topic in corporate governance literature (Lopez-Morales and Vargas-Hernandez, 2014). There are several other studies carried out over the last decade on the influence of firm ownership type (Cuervo-Cazurra *et al.*, 2014; Arocena and Oliveros, 2012; Chizema and Le, 2011; Goldeng *et al.*, 2008). These studies focus on comparing privately owned firms and state-owned firms (Dahlan, 2010; Dewenter and Malatesta, 2001). They also compare performance of firms before and after privatization (Harper, 2001; D'souza and Megginson, 1999). Some studies, however, present inconclusive results because of differences of goals of the firms studied (Bozec *et al.*, 2002, Lopez-Morales and Vargas-Hernandez, 2014). In other cases, there were evidently significant increases in financial performance of firms that changed their ownership type to privately owned entities (Djankov and Murrell, 2002; Megginson and Netter, 2001; Wright *et al*., 2002; Lopez-Morales and Vargas-Hernandez, 2014). A further reference is made to a study that was carried out in Latin America on the effect of the type of ownership on the financial performance of firms (Lopez-Morales and Vargas-Hernandez, 2014), whereby five (5) aspects of firm ownership type were examined, namely: - state ownership, private ownership, foreign ownership, hybrid (partly owned by state and partly privately owned) and public owned firms (Lopez-Morales and Vargas-

Hernandez, 2014). Two of these types (public owned and hybrid) were found to have no significance and were therefore dropped. It would therefore be important to control the effect of firm ownership type using the dimensions of foreign ownership, state ownership, private ownership and public ownership.

3.12 Ethical Considerations

These are considerations that ensured professionalism, right of third party privacy and authenticity of information sources. Transparency and openness were displayed in the course of interacting with respondents and the research assistants. The requisite permissions from the University and the ministry of Education Science and Technology, were obtained. These demonstrated the objective of the data collection and this step helped to avoid suspicions or resistance from the respondents. Clarification was provided to the respondents that their participation in the study was voluntary and consent was obtained from each respondent before engaging him/her (Hammersley and Traianou, 2012). Safety of those who participated in the study was also be maintained. Notably, the informants were anonymized in the study to ensure their privacy (Hurdley, 2010). No one was favoured or unjustly discriminated against, during the study. The respondents' right to privacy and confidentiality of information they provided was upheld while respecting autonomy, avoiding harm and deception and treating them equitably. The respondents were also informed about the nature of the study and that they had the right to withdraw from the study any time during the study. The research assistants were well trained, upfront, on data collection process, including on how to show respect to respondents and upholding courtesy during the research exercise.

CHAPTER FOUR
DATA ANALYSIS, PRESENTATIONS, INTERPRETATION AND DISCUSSIONS OF THE RESULTS

4.1 Overview

This chapter presents how data was collected, analyzed and interpreted. It covers the study response rate, data preparation and cleaning, validity and reliability, statistical tests, results and summary of hypotheses tests. It attempts to respond to the specific objectives posed in chapter one, namely: - to determine the effect of sensing capabilities, seizing capabilities and reconfiguration capabilities on firm performance and to establish the the moderating role of leadership behaviour on the relationship between sensing capabilities, seizing capabilities and reconfiguration capabilities, and firm performance.

4.2 Questionnaire Response Rate.

A total of 369 questionnaires were administered, Part 1 was completed by CEOs of manufacturing firms and Part 2 was completed by senior managers who report directly to the CEOs - three from each of the corresponding firms. The response rate was above average, mainly after reminders were made and the administration and collection of the questionnaires was extended by two weeks. Although there has been no agreed minimum responses return rate, the higher this rate is, the better. A response rate of 73.4% was achieved which was above the generally recommended threshold of between 50% and 60% (Babbie & Benaquisto, 2009; Oso & Onen, 2005).

4.3 Respondents Profile

This covers the age of respondents, gender, size of firm, age of firm and the type of firm ownership. The highest number of CEOs was aged between 30 and 50 years, forming 74.2% of the respondents. 58.7% of the CEO's who responded were male and 41.3% were female. Most of the firms from which responses were received, had between 60 and 200 employees. These firms, by Kenyan standards, were medium sized enterprises, since the manufacturing sector is inherently a capital intensive sector. Many of manufacturing firms had been in operation for between 11 and 30 years. Notably, 74.2% were privately owned. Up to 21.8% of responses came from foreign owned entities. The distribution of respondents was analyzed to confirm that there was no non-response bias (Rungtusanatham, 2003). The demographic profile of the respondents is presented in Table 4.1.

Table 4.1: Firm Profile

Variable	Category	Frequency	Percentage (%)
Age of Respondents	Under 30	6	2.2
	More than 30 up to 40	126	46.5
	More than 40 up to 50	69	25.5
	More than 50 up to 60	52	19.2
	More than 60	18	6.6
Gender of Respondents	Male	159	58.7
	Female	112	41.3
Size of Firm	Less than 30	8	3.0
	31-60	46	17.0
	61-100	86	31.7
	101-200	81	29.9
	201-500	39	14.4
	501 and above	11	4.1
Age of Firm	Less than 5 years	12	4.4
	6-10 years	40	14.8
	11-20 years	83	30.6
	21-30 years	76	28.0
	More than 30 years	60	22.1
Type of Firm Ownership	Public owned	8	3.0
	Private owned	201	74.2
	State owned	3	1.1
	Foreign owned	59	21.8

Source: Research Data (2017)

4.4 Data Preparation and Cleaning

After it was collected, the data was screened and cleaned in preparation for analysis. The reason why this had to be done was to ensure the quality of statistical analysis that followed was not to be jeopardized. This was achieve data accuracy, integrity, correctness,

completeness and consistency so as to avoid unnecessary subsequent manual trouble shooting, or the risk of incorrect analytical findings.

4.4.1 Visual and Range Checks

A visual check through the database was carried out to establish if there were any data entry errors or missing values. Missing data is a common issue in social science research (Allison, 2002; Johnson & Young; 2011). Frequencies and range checks were also done just in case the data contained any invalid or unusual values. None of the responses depicted salient errors or missing items to warrant any remedial action.

4.4.2 Outliers

The study variables were screened for presence of item outliers. This was found necessary because, being extreme values of the variable items compared to the rest of the data, outliers could have rendered data non-normal, yet normality was one of the assumptions of the study (Jose, 2013). Univariate outlier values were identified using boxplots and extreme values tabulation using SPSS. These simple outliers were transformed, by allocating and changing their values to the next highest or lowest non-outlier item number. Thereafter, all the dimensions of the variables used in the study were subjected to a multivariate outlier screening using standardized residuals and Mahalanobis distance test (alpha = 0.001) and the results showed that there were no outliers.

4.5 Psychometric Tests

The psychometric tests were carried out on the study variables to establish whether certain assumptions of the study were met or not. These assumptions required that they be met so as to avoid Type I or Type II errors; and to also avoid over- or under-estimation of significance and effect size. This ensured that any subsequent results were trustworthy (Osborne & Waters, 2012). The results of these tests are explained in the following sub-headings.

4.5.1 Reliability Tests of the Study

Reliability test was undertaken to ensure the study achieved accurate representation of the total population under study (Joppe, 2000). The study carried out reliability test so that the data collection techniques and analytical procedures reproduce consistent findings if they were repeated on other occasions or replicated in subsequent researches (Kirk & Miller, 1986; Golafshani, 2003). Since Likert-type scales were used to collect data, Cronbach's alpha coefficient was calculated for internal consistency reliability (Uzunboylu & Ozdamli, 2011). Cronbach's alpha is expressed as a number between 0 and 1. It expresses the extent to which all the items, in the test, measure the same construct and therefore shows the inter-relatedness of the items within the questionnaire. According to Garson (2012), the intercorrelation of construct items is measured using cronbach's alpha coefficient. When the result is above 0.60 (Sekaran, 2003), the items are considered unidimensional and acceptable. Coefficient values greater than 0.70 are however preferred. The Cronbach's alpha reliability coefficients for the independent variables in the study were: - Sensing capabilities (0.737), Seizing capabilities (0.685) and Reconfiguration capabilities (0.608).

The moderator variable's reliability alpha coefficients were: -Transformational behaviour (0.926), Transactional behaviour (0.884) and Laissez faire (0.648). The dependent variable's Cronbach's alpha coefficient for reliability was 0.904. Therefore apart from Reconfiguration capabilities and Laissez faire, all the other coefficients were about or above 0.700. This is in harmony with Henson (2001) and Hair *et al* (2006). The coefficient for reconfiguration capabilities variable was close but above the 0.60 cutoff (Sekran, 2003; Hair *et al.*, 2006; Garson, 2012). According to Tavakol and Dennick (2011), low value of alpha coefficient may be due to low number of questions or poor inter-relatedness between items. A check was carried out and it was confirmed that the Cronbach alpha coefficients for these variables did not significantly increase by dropping any of the item from the scale. The results however indicated a generally good internal consistency. Table 4.2 shows the constructs, dimensions, count of measures and the respective cronbach's alpha coefficients.

Table 4.2: Cronbach's Alpha Reliability Test

Construct	Dimensions	Count of Measures	Cronbach's alpha Coefficient
Firm Performance	Firm Performance	10	0.904
Dynamic Capabilities	Sensing Capabilities	8	0.737
	Seizing Capabilities	9	0.685
	Reconfiguration Capabilities	7	0.608
Leadership Behaviour	Transformational behaviour	20	0.926
	Transactional behaviour	12	0.884
	Laissez Faire	4	0.648

Source: Research Data (2017)

4.5.2 Validity Tests of the Study

Validity test was carried out to ensure that the research truly measured that which it was intended to measure and that it presented the truth of the research results (Golafshani, 2003). The instrument and study measures were tested for validity, thereby ensuring precision or correctness of the research finding (Lewis & Ritchie, 2003; Winter, 2000) for purposes of generalizability.

Content Validity

Content validity was tested to align the study instrument items to the subject area of study which it was intended to assess. Content was built through a review of previous literature and past empirical studies. A discussion was held with a CEO from the manufacturing sector, on the suitability and usability of the instrument. A similar review was made with a senior manager from the manufacturing sector. The CEO and manager were the sector experts. They however did not subsequently participate in the actual study. Further, a doctoral student from Moi University was requested to review the instrument. Feedback from these reviewers was incorporated in the revision of the instrument. The reason why this was done was to ensure the instrument's face validity - physical appeal, clarity, wording and conciseness, was achieved. Face validity was tested through a review of the contents of the study for appropriateness in logically reflecting what was measured and determine existence of a logical relationship between the variables and the measures.

Criterion Validity

A pre-test survey was carried out on 8 firms for initial assessment. This pre-test was important as it enabled this study to check how respondents interpretted the questions, and also provided suggestions for alternatives. (Golafshani, 2003). It was carried out to ensure the instrument and the measures were concise while also maintaining content validity. This test also helped to check on the theoretical relatedness and construct validity of the instrument. The final instrument, free from ambiguity (Somekh and Lewin, 2005) was used in the field.

Construct validity

This is the degree to which the scales were measuring what they were intended to measure (Garver and Mentzer, 1999; Toh Tsu Wei *et al.*, 2009), the consistency of measures and their relationship with other constructs (DeRue *et al*., 2012; Arrindell *et al*., 2005; Cavanaugh *et al*., 2000). Construct validity was tested in this study using factor analysis. The results are in the following sub-headings.

4.6 Factor Analysis

A principal component factor analysis (PCA) was performed on all the items of the constructs in the study, using extraction with varimax rotation, in order to assess factor loadings for each variable. Those that did not load were removed, using absolute cutoff value of 0.500 (Welch & Feeney, 2014; Tavakol & Dennick, 2011), even though Hair *et al* (2006) recommended a lower cutoff value of 0.40.

The reasons why factor analysis was found appropriate to determine vaidity were as follows. First, the study used multiple variables, measured at ordinal level using a 7-point Likert type scale, from strongly disagree to strongly agree. Second, there was assumption of a linear relationship between all the variables because PCA is based on Pearson correlation coefficients, even though this requirement is usually relaxed with the use of ordinal data. Third, there was sampling adequacy, without which PCA would produce unreliable results. As a rule of thumb, a mimimum of 150 cases, or 5 to 10 cases per variable, has been recommended as a minimum sample size. The study determined the Kaiser-Meyer-Olkin (KMO) value for each variable, to check on sampling adequacy (Statistics, 2015). The study used a sample size of 369 and therefore met this requirement. Fourth, the assumption that there was correlation between the variables made the data reduceable. Factor analysis was an attempt at making the variables reducible to a smaller number of components. This was confirmed using Bartlett's test of sphericity. Finally, there were no significant outliers to distort results, because the same had been addressed at the data cleaning stage. The results for each construct are contained in the following sub-headings.

4.6.1 Firm Performance Rotated Component Matrix

In order to assess the construct validity of firm performance construct, 10 items were examined by principal components extraction with varimax rotation.

Table 4.3: Firm Performance Rotated Component Matrix

Items	Factor Loading	Cum Eigene-value	Cum %	KMO	Bartlett's Test	Sig
Growth in Sales	0.796	5.382	53.820	0.927	1256.728	0.000
Profit margin	0.783					
Customer satisfaction	0.773					
Return on Investment	0.746					
Increase in competitive position	0.746					
Market share	0.730					
Supporting social and cultural projects	0.719					
Net Profits	0.714					
Employee satisfaction	0.680					
Participation in improving the environment	0.635					

Source: Research Data (2017)

The Kaiser-Meyer-Olkin (KMO) measure of sample adequacy was acceptable at 0.927, above the threshold of 0.5 (Field, 2005). The Bartlett's test for spherecity was also significant (x^2=1256.728, $p < 0.001$). Table 4.3 shows factor loading for each of the 10 items that measured this dependent variable, duly sorted by size. All the 10 items were clustered into one component with eigenvalue of 5.382, explaining a percentage variance of 53.82%. More than 53% of variance shared by the 10 items was accounted for by one factor.

4.6.2 Sensing Capabilities Rotated Component Matrix

The construct validity of sensing capabilities variable was assessed using 8 items from the questionnaire. Principal components extraction with varimax rotation produced a result of Kaiser-Meyer-Olkin (KMO) measure of sample adequacy of 0.834, which was above the threshold of 0.5 (Field, 2005). The Bartlett's spherecity test was significant (x^2=575.018, $p < 0.001$). All the 8 items were clustered into one component with eigenvalue of 4.477. Up to 55.96% of variance was explained by one factor. Table 4.4 shows factor loading for each of the 8 items that measured sensing capabilities, sorted by size.

Table 4.4: Sensing Capabilities Rotated Component Matrix

Items	Factor Loading	Cum Eigene -value	Cum % of Var	KMO	Bartlett's Test	Sig
We are slow to detect fundamental shifts in our industry (e.g. competition, technology, regulation)	0.963	4.477	55.961	0.834	575.018	0.000
We quickly understand new opportunities to serve our clients.	0.739					
We regularly check the quality of our functional capabilities in comparison with competition.	0.734					
We regularly check the quality of our functional capabilities in comparison with companies in different industries.	0.727					
We are very good in observing and anticipating technological trends.	0.709					
We pay a great attention on monitoring the change of functional capabilities.	0.670					
After changing existing capabilities or integrating new capabilities, we pay a great attention on monitoring the efficiency of new processes.	0.644					
We periodically review the likely effect of changes in our business environment, on our customers.	0.578					

Source: Research Data (2017)

4.6.3 Seizing Capabilities Rotated Component Matrix

The seizing capabilities variable was subjected to principal component extraction with varimax rotation, on all the 10 items that were used to measure it.

Table 4.5: Seizing Capabilities Rotated Component Matrix

Items	Factor Loading	Cum Eigene -value	Cum % of Var	KMO	Bartlett's Test	Sig
Existing knowledge (e.g. market or technology) is readily available to each department within our business unit	0.813	4.963	49.627	0.754	329.398	0.000
We frequently acquire knowledge about technologies and market trends from external sources	0.717					
When solving problems, we can rely on good cross-departmental support	0.700					
We are able to identify and acquire external knowledge (e.g. market, technology) very quickly	0.694					
Our employees have the capabilities to produce many novel and useful ideas	0.670					
Employees of our unit regularly visit other branches to learn about new technologies, trends, or business models	0.657					
Our business unit periodically circulates codified knowledge in form of documents (e.g., reports, newsletters) to update other departments	0.561					
Within this business unit, we have the capabilities successfully to learn new things	0.512					

Source: Research Data (2017)

The result showed Kaiser-Meyer-Olkin (KMO) measure of sample adequacy of 0.754 which was above the threshold of 0.500 (Field, 2005). The Bartlett's test result was significant (x^2=329.398, $p < 0.001$). Two items with factor loading of below 0.500 were dropped, namely DZ6 and DZ9. The item descriptions were: DZ6 - when something important happens (market or technological development), the whole business unit knows about it in a short period and DZ9 - we have the capabilities to effectively develop new knowledge or insights that have the potential to influence product development. All the rest 8 items were clustered into one component with eigenvalue of 4.963. One factor explained 49.627% of variance. Table 4.5 shows factor loading for each of the 8 items that measured seizing capabilities, sorted by size.

4.6.4 Reconfiguration Capabilities Rotated Component Matrix

A principal component analysis using varimax rotation was carried out on all the 7 items that measured reconfiguration capabilities.

The results showed that the sample adequacy measure of Kaiser-Meyer-Olkin (KMO) was 0.723, well above the threshold of 0.500 (Field, 2005). The Bartlett's test of spherecity result was significant (x^2=187.574, $p < 0.001$). One item with factor loading of below 0.500 was dropped, namely:- DR3 - our employees are able to identify valuable capability elements, connect, and combine them in new way. All the rest 6 items were clustered into one component with eigenvalue of 3.370. One factor explained 48.144% of variance. Table 4.6 shows factor loading for each of the 6 items that measured reconfiguration capabilities, sorted by size.

Table 4.6: Reconfiguration Capabilities Rotated Component Matrix

Items	Factor Loading	Cum Eigene -value	Cum % of Var	KMO	Bartlett's Test	Sig
We are effective in transforming existing knowledge into new resources (e.g. new organization structure, new technical equipment)	0.757	3.370	48.144	0.723	187.574	0.000
Employees integrate new and existing ways of doing things without stifling their efficiency	0.721					
We can effectively recombine existing capabilities into novel combinations	0.713					
We can successfully integrate the new knowledge acquired with our existing knowledge	0.689					
We can effectively integrate new externally sourced capabilities and combine them with existing capabilities into distinctive combinations	0.625					
Our employees introduce perceptible changes that lie outside the existing features of existing capabilities	0.615					

Source: Research Data (2017)

4.6.5 Transformational Leadership Behaviour Rotated Component Matrix

Using principal component analysis with a varimax rotation on the 20 items that were used to measure transformational leadership behaviour, the test result of Kaiser-Meyer-Olkin (KMO) sample adequacy was 0.928, which according to Field (2005) was above 0.500 and hence acceptable. The Bartlett's test of spherecity returned a significant result (x^2=3370.191, $p < 0.001$). However, 5 items (LM1, LM2, LS3, LS4 and LD2) were dropped after their values went below 0.500. The item descriptions were: LM1 - my leader talks optimistically about the future, LM2 - my leader talks enthusiastically about what needs to be accomplished, LS3 - my leader gets me to look at problems from many different angles, LS4 - my leader suggests new ways of looking at how to complete assignments and LD2 - my leader goes beyond self-interest for the good of the team. All the rest 15 items were clustered into one component with eigenvalue of 13.600. One factor explained 68.002% of variance. Table 4.7 shows factor loading for each of the 15 items that measured transformational leadership behaviour, sorted by size.

Table 4.7: Transformational Leadership Behaviour Rotated Component Matrix

Items	Factor Loading	Cum Eigene-value	Cum % of Var	KMO	Bartlett's Test	Sig
My leader talks about his/her most important values and beliefs	0.888	13.600	68.002	0.928	3370.191	0.000
My leader specifies the importance of having a strong sense of purpose	0.852					
My leader acts in ways that build my respect	0.846					
My leader displays a sense of power and confidence	0.840					
My leader instills pride in me for being associated with him/her	0.818					
My leader emphasizes the importance of having a collective sense of mission	0.805					
My leader considers me as having different needs, abilities, and aspirations from others	0.794					
My leader considers the moral and ethical consequences of decisions	0.781					

Source: Research Data (2017)

Table 4.7 continued: Transformational Leadership Behaviour Rotated Component Matrix

Items	Factor Loading	Cum Eigene-value	Cum % of Var	KMO	Bartlett's Test	Sig
My leader expresses confidence that goals will be achieved	0.746					
My leader articulates a compelling vision of the future	0.742					
My leader treats me as an individual rather than just as a member of a group	0.677					
My leader re-examines critical assumptions to question whether they are appropriate	0.671					
My leader seeks differing perspectives when solving problems	0.639					
My leader spends time teaching and coaching	0.637					
My leader helps me to develop my strengths	0.598					

Source: Research Data (2017)

4.6.6 Transactional Leadership Behaviour Rotated Component Matrix

A principal component analysis with a varimax rotation was used on the 12 items that were used to measure transactional leadership behaviour. The results showed Kaiser-Meyer-Olkin (KMO) value of 0. 0.817. This KMO value, according to Field (2005) was above 0.500 and acceptable. Two items (LA3 and LA4) were dropped because their values were below 0.500. Their full item descriptions were: LA3 - my leader keeps track of all mistakes; and LA4 - my leader directs my attention toward failures to meet standards. The Bartlett's test result was significant (x^2=1539.870, $p < 0.001$). All the rest 10 items were clustered into one component with eigenvalue of 6.422. One factor explained 71.354% of variance. Table 4.8 shows factor loading for each of the 10 items that measured transactional leadership behaviour, sorted by size.

Table 4.8: Transactional Leadership Behaviour Rotated Component Matrix

Items	Factor Loading	Cum Eigene -value	Cum % of Var	KMO	Bartlett's Test	Sig
My leader makes clear what one can expect to receive when performance goals are achieved	0.892	6.422	71.354	0.817	1539.870	0.000
My leader waits for things to go wrong before taking action	0.884					
My leader discusses in specific terms who is responsible for achieving performance targets	0.880					
My leader fails to interfere until problems become serious	0.879					
My leader expresses satisfaction when I meet expectations	0.861					
My leader focuses attention on irregularities, mistakes, exceptions, and deviations from standards	0.819					
My leader provides me with assistance in exchange for my efforts	0.811					
My leader demonstrates that problems must become chronic before taking action	0.805					
My leader shows that he/she is a firm believer in "if it isn't broken, don't fix it."	0.780					
My leader concentrates his/her full attention on dealing with mistakes, complaints, and failures	0.722					

Source: Research Data (2017)

4.6.7 Laissez Faire Leadership Behaviour Rotated Component Matrix

Principal component analysis with a varimax rotation was used on the 4 items that were used to measure Laissez faire leadership behaviour. The results showed Kaiser-Meyer-Olkin (KMO) value of 0.654, which was acceptable (Field, 2005). All the items were clustered into one component with eigenvalue of 1.965. One factor explained up to 49.114% of variance. The Bartlett's test result was significant (x^2=161.331, $p < 0.001$). Table 4.9 shows factor loading for each of the 4 items, duly sorted by size.

Table 4.9: Laissez Faire Rotated Component Matrix

Items	Factor Loading	Cum Eigene-value	Cum % of Var	KMO	Bartlett's Test	Sig
My leader delays responding to urgent questions	0.780	1.965	49.114	0.654	161.331	0.000
My leader avoids making decisions	0.773					
My leader is absent when needed	0.617					
My leader avoids getting involved when important issues arise	0.616					

Source: Research Data (2017)

4.7 Summary of Factor Loading

The sampling adequacy measure of Kaiser-Meyer-Olkin (KMO) and sphericity measure of level of significance of Bartlet's coefficient for all the variables is summarized in table 4.10 below. Factor loading for firm performance was for all its initial 10 items. The factor

loading for sensing capabilities was 8 items, seizing capabilities (8 items), reconfiguration capabilities (6 items), transformational leadership behaviour (15 items), transactional leadership behaviour (10 items) and laissez faire leadership behaviour (4 items). In all these cases, the Bartlet's test of sphericity was significant, $p < 0.05$. These results therefore were considered acceptable (Hair *et al*., 2006; Tabachnick, 2001; Bartlett, 1950) and provided the basis for proceeding to the next stage of transformation of the variables.

Table 4.10 Sampling Adequacy

N=271	FP	SC	SZ	RC	TF	TR	LF
Kaiser-Meyer-Olkin	0.927	0.834	0.754	0.723	0.928	0.817	0.654
Bartlet's Test	1256.728	575.018	329.398	187.574	3370.191	1539.87	161.331
Significance	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**
Factor Loading	10	8	8	6	15	10	4

Notes: KMO Threshold > 0.6, Bartlet's Test of Sphericity $p < 0.05$

FP = Firm Performance, SC = Sensing capabilities, SZ = seizing Capabilities, RC = Reconfiguration Capabilities, TF = Transformational Leadership Behaviour, TR = Transactional Leadership Beahaviour, LF = Laissez Faire Leadership Behaviour

Source: Research Data (2017)

4.8 Transformation of Variables

Since a single construct in the questionnaire for each variable was measured by multiple items, the average score of the multi-items for a construct was computed and used in further analysis, such as descriptive statistics, correlation analysis and multiple regression analysis (Wang and Benbasat, 2007).

4.9 Descriptive Statistics

Descriptive analysis of the study variables - sensing capabilities, seizing capabilities, reconfiguration capabilities, transformational leadership behaviour, transactional leadership behaviour, laissez faire leadership behaviour and firm performance was done prior to hypotheses tests, so as to make meaning from the data and to also discover trends. The table 4.11 shows the descriptive statistics – mean, standard deviation, skewness and kurtosis of the variables.

Table: 4.11 Descriptive Statistics

Variable	Mean	Std. Dev	Skewness	Kurtosis
Firm Performance	4.449	1.103	0.074	-0.23
Sensing Capabilities	3.843	0.991	-0.257	-0.242
Seizing Capabilities	4.612	0.829	0.02	-0.149
Reconfiguration Capabilities	4.135	0.845	0.105	-0.502
Transformational Leadership Behaviour	3.998	1.102	-0.04	-0.535
Transactional Leadership Behaviour	3.664	0.973	0.114	-0.016
Laissez Faire Leadership Behaviour	3.757	0.968	-0.075	-0.511

Source: Research Data (2017)

Firm performance had a mean score of 4.449 and standard deviation of 1.103. Its normal curve was skewed to the right (0.074) with a kurtosis of -0.230. Sensing capabilities had a mean score of 3.843 and standard deviation of 0.991 with its normal curve skewed to the

left (-0.257) and had a kurtosis of -0.242. Seizing capabilities had a mean score of 4.612 and standard deviation of 0.829 with its normal curve skewed to the right (0.020) and had a kurtosis of -0.149. Reconfiguration capabilities had a mean score of 4.135 and standard deviation of 0.845 with its normal curve skewed to the right (0.105) and had a kurtosis of -0.502. Transformational leadership had a mean score of 3.998 and standard deviation of 1.102 with its normal curve skewed to the left (-0.040) and had a kurtosis of -0.535. Transactional leadership had a mean score of 3.664 and standard deviation of 0.973 and its normal curve is skewed to the right (0.114). It had a kurtosis of -0.016. Laissez faire leadership had a mean score of 3.757 and standard deviation of 0.968, with its normal curve skewed to the left (-0.075) and had a kurtosis of -0.511 (Bulmer, 1979).

4.10 Normality Tests of the Study

The Shapiro Wilk test was used to test normality of the variables. The reason why Shapiro Wilk test was preferred to Kolmogorov-Smirnov was because the sample size for the study fell within the range of zero and 2,000 (Garson, 2012). According to Shapiro and Wilk (1965), a sample size falling within the range of 3 to 5000 is recommended. The test compared observed cumulative distribution of a function of a variable with a specified theoretical normal distribution.

Table 4.12: Normality of Variables

	Kolmogorov-Smirnov			Shapiro-Wilk		
Constructs	Statistic	df	Sig.	Statistic	df	Sig.
Firm Performance	0.037	271	0.200	0.990	271	0.057
Sensing Dynamic Capabilities	0.074	271	0.001	0.987	271	0.015
Seizing Dynamic Capabilities	0.059	271	0.024	0.994	271	0.313
Reconfiguration Dynamic Capabilities	0.061	271	0.018	0.989	271	0.047
Transformational Leadership	0.044	271	0.200	0.992	271	0.179
Transactional Leadership	0.051	271	0.090	0.993	271	0.207
Laissez Faire Leadership	0.074	271	0.001	0.988	271	0.019

Source: Research Data (2017)

Apart from sensing capabilities and laissez faire leadership behaviour, all the rest of the variables' data showed *p*-value greater than 0.05, which meant that the H_0 on normality test hypothesis was not rejected and the data was therefore normally distributed (Pallant, 2005; Shapiro & Wilk, 1965; Shapiro *et al.*, 1968). Although results of sensing capabilities and laissez faire leadership behaviour variables showed $P<0.05$, their test statistic values were 0.987 and 0.988, both were close to 1 and demonstrated normalilty of data (Ahmad & Khan, 2015). Table 4.13 shows the normality test results.

4.11 Multicollinearity Tests of the Study

A further test was done to establish if there was any unacceptably high level of multicollinearity. Diagnostics were conducted to establish if the independent variables were significantly related to each other instead of being related to the dependent variable. The results are contained in table 4.14. Their variance inflation factors (VIF) of between 1.254 and 2.067 were acceptably within the threshold of between 1 and 10 (Morrison, 2003). Tolerance values (TV) were between 0.484 and 0.797, well within the range of 0.2 to 1 (Agboola, 2006). The results indicate that there was no multicollinearity among the explanatory variables hence meeting the requisite assumption.

Table 4.13: Collinearity Statistics

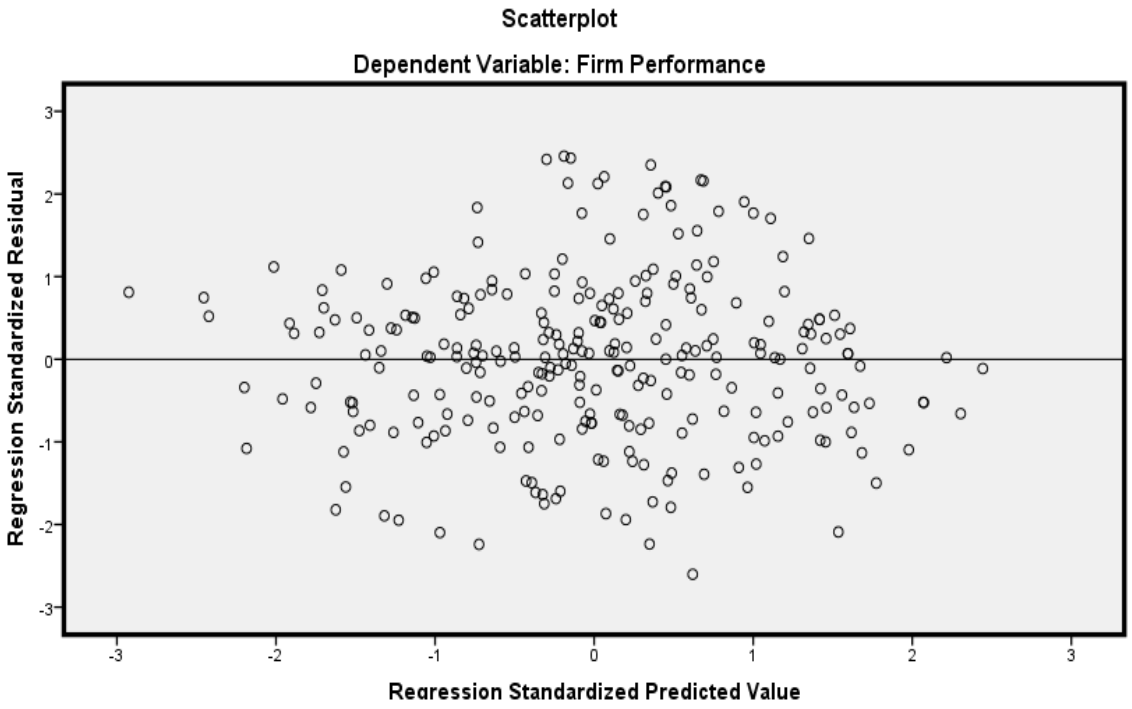
Dependent variable: Firm Performance	Tolerance	VIF
Sensing Capabilities	0.546	1.832
Seizing Capabilities	0.721	1.388
Reconfiguration Capabilities	0.678	1.475
Transformational Leadership Behaviour	0.484	2.067
Transactional Leadership Behaviour	0.607	1.648
Laissez Faire Leadership Behaviour	0.797	1.254

Source: Research Data (2017)

4.12 Homoscedasticity Tests of the Study

This test was considered necessary to confirm if the model variance of errors was taking any systematic pattern (heteroscedasticity) or not (homoscedasticity). A significant level of heteroscedasticity leads to disturbances or some distortion of results although the estimates would relatively be consistent with the coefficients. A scatter plot of the distribution of the regression standardized residuals (errors) was done against regression standardized predicted values (Huizingh, 2007). There was no systematic pattern and therefore the residuals were randomly spread. The model was free from heteroscedasticity. It was homoscedastic (Huizingh, 2007).

Figure: 4.1 Homoscedasticity: Dependent Variable Firm Performance



Source: Research Data (2017)

4.13 Data Independence Tests

A test for independence of observations was carried out, in line with this assumption in cases where linear and multiple regression analysis is used. Therefore a Durbin-Watson statistic was extracted to check on the independence of residuals or for presence of autocorrelation among the residual values. The recommended range is 1.50 to 2.50 (Hair *et al.*, 2006). The test returned a result of 1.806, well within acceptable range. This test approach is however dependent on, and more useful when there is, a natural order of data in the database.

4.14 Correlations of Variables

The study determined variable's Pearson correlations. Table 4.15 shows the salient information for each factor and the correlation amongst them. There was positive significant correlation between firm performance and the three dimensions of dynamic capabilities - sensing capabilities (0.394, $p<0.01$), seizing capabilities (0.360, $p<0.01$) and reconfiguration capabilities (0.413, $p<0.01$). The correlation between sensing capabilities and seizing capabilities (0.373, $p<001$) and reconfiguration capabilities (0.492, $p<0.01$) was positive but within acceptable threshold for independent variables (Berry *et al*., 2006). The correlation between firm performance and two of the three dimensions of leadership behaviour was positive and significant, thus: - transformational leadership behaviour (0.592, $p<0.01$) and transactional leadership behaviour (0.254, $p<0.01$). The laissez faire leadership behaviour was however strongly ($p<0.01$) negatively correlated with all the other variables (Barnett &Vaicys, 2000). The correlation coefficients did not exceed 0.80.

The highest coefficient for the study was 0.650, which is less than 0.80, showing that data was free from multicollinearity. (Field, 2005).

Table 4.14: Correlation of Variables

	1FP	2SC	3ZC	4RC	5TF	6TR	7LF
Firm Perform	1.000						
SensingC	0.394**	1.000					
SeizingC	0.360**	0.373**	1.000				
ReconfigurationC	0.413**	0.492**	0.372**	1.000			
TransformationalLB	0.592**	0.586**	0.403**	0.434**	1.000		
TransactionalLB	0.254**	0.533**	0.368**	0.458**	0.650**	1.000	
Laissez FaireLB	-0.504**	-0.153*	-0.392**	-0.247**	-0.339**	-0.262**	1.000

Pearson Correlation (2-tailed). Significance: * $p<0.05$; ** $p<0.01$.

Firm Perform (FP): Firm Performance; SensingC (SC): Sensing Capabilities; SeizingC (ZC): Seizing Capabilities; ReconfigurationC (RC): Reconfiguration Capabilities; TransformationalLB (TF): Transformational Leadership Behaviour; TransactionalLB (TR): Transactional Leadership Behaviour; Laissez FaireLB (LF): Laissez Faire Leadership Behaviour.

Source: Research Data (2017)

4.15 Multiple Regression Analyses and Hypotheses Testing

A hierarchical multiple regression analysis was used to test the hypotheses. The regression was undertaken in two blocks (of 2 and 4 steps respectively), to determine both the direct

and conditional relationship between the independent and dependent variables as indicated in the following sub-headings.

4.15.1 Regression Analysis: Direct Effects

This model regression was to determine the direct relationship between the independent variables (sensing capabilities, seizing capabilities and reconfiguration capabilities) and the dependent variable, namely, firm performance. The results were used to test the first three hypotheses, namely: - H_{01a}*:* There is no significant effect of sensing capabilities on firm performance, H_{01b}*:* Seizing capabilities have no significant effect on firm performance and H_{01c}*:* Reconfiguration capabilities have no significant effect on firm performance.

The first step was to establish relationship between control variables and the criterion. The control variables of firm size, age of firm and firm ownership type were selected and entered as independent variables in the SPSS analysis tool, and firm performance was entered as a dependent variable. The results were as indicated in table 4.17.

The results showed that out of the three control variables, age of firm (B = 0.037) has insignificant relationship with firm performance. The rest two have significant effect on firm performance. Overall, the three control variables (in aggregate) explained 6.6% (R^2=0.066) of the variance in firm performance.

Table 4.15: Direct Regression - Step 1 Results

	Unstd B Coefficients	Std. Error	Std Beta Coefficients	t	Sig.
(Constant)	8.62E-16	0.026		0.000	1.000
Zscore:Size of Firm	0.080**	0.031	0.080	2.613	0.009
Zscore:Public Owned Firm	-0.078**	0.027	-0.078	-2.904	0.004
Zscore:State Owned Firm	0.096***	0.026	0.096	3.637	0.000
Zscore:Foreign Owned Firm	0.157***	0.029	0.157	5.465	0.000
Zscore: Age of Firm	0.037	0.029	0.037	1.278	0.202
R	0.257				
R^2	0.066				
Adj. R^2	0.062				
R^2 Change	0.066				
F Change	19.049***				0.000

Notes: Significance *p<0.05;**p<0.01;***p<0.001.

Dependent Variable: ZscoreFirmPerformance.

Unstd: Unstandardized coefficients. Std.: Standardized coefficients.

Source: Research Data (2017)

In step two, independent variables were introduced, namely: - sensing capabilities, seizing capabilities and reconfiguration capabilities. This brought in the aspect of direct effects of predictor variables, on the criterion. Results are presented in Table 4.18. The results show that all the three variables - sensing capabilities (B=0.215, p<0.01), seizing capabilities (B=0.194, p<0.01) and reconfiguration capabilities (B=0.182, p<0.001); have significant effect on firm performance. The variables combined, contribute 25.9% (R^2=0.259) of the

variance in firm performance, an improvement from the first set of control variables' contribution, by 19.3% (ΔR^2 =0.193). The null hypothesis $H_0 1_a$ predicted that there was no significant effect of sensing capabilities on firm performance. The coefficient for sensing capabilities from the direct effects regression analysis was B=0.215. This was a significantly positive (p<0.01) relationship. The null hypothesis was rejected and therefore it was concluded that sensing capabilities had a significant effect on firm performance. Hypothesis $H_0 1_b$ predicted that seizing capabilities had no significant effect on firm performance. The coefficient for seizing capabilities from the direct effects regression analysis was B=0.194; a significant (p<0.01) and positive relationship. The null hypothesis was rejected and therefore it was concluded that seizing capabilities had significant effect on firm performance. The null hypothesis $H_0 1_c$ predicted that reconfiguration capabilities had no significant effect on firm performance. The coefficient for reconfiguration capabilities from the direct effects regression analysis was B=0.182, with a strong (p<0.001) and positive relationship. The null hypothesis was therefore rejected and it was concluded that reconfiguration capabilities has a significant effect on firm performance.

Table 4.16: Direct Regression - Step 2 Results

	Unstd B Coefficients	Std. Error	Std Beta Coefficients	t	Sig.
(Constant)	8.236E-16	0.023		0.000	1.000
Zscore:Size of Firm	0.031	0.027	0.031	1.132	0.258
Zscore:Public Owned Firm	-0.007	0.024	-0.007	-0.295	0.768
Zscore:State Owned Firm	0.079**	0.024	0.079	3.302	0.001
Zscore:Foreign Owned Firm	0.084**	0.026	0.084	3.205	0.001
Zscore:Age of Firm	0.062*	0.026	0.062	2.359	0.018
Zscore(SensingC)	0.215***	0.029	0.215	7.518	0.000
Zscore(SeizingC)	0.194***	0.026	0.194	7.454	0.000
Zscore(ReconfigC)	0.182***	0.028	0.182	6.486	0.000
R	0.509				
R^2	0.259				
Adj. R^2	0.255				
R^2 Change	0.193				
F Change	117.107***				0.000

Notes: Significance *p<0.05;**p<0.01;***p<0.001.

Dependent Variable: ZscoreFirmPerformance.

Unstd: Unstandardized coefficients. Std.: Standardized coefficients.

Source: Research Data (2017)

4.15.2 Direct Effects: ANOVA Results

The study used ANOVA results to test the model fit. The results are in table 4.19. The results showed a good model fit, with overall statistical significance, F (8, 262) = 58.895, p<0.001. This confirmed that, sensing capabilities, seizing capabilities and reconfiguration capabilities predicted firm performance.

Table 4.17: ANOVA Results: Direct relationship

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.032	5	17.806	19.049	0.000[b]
	Residual	1260.968	265	0.935		
	Total	1350.000	270			
2	Regression	350.034	8	43.754	58.895	0.000[c]
	Residual	999.966	262	0.743		
	Total	1350.000	270			

Notes: a. Dependent Variable: Firm Performance. b. Predictors: (Constant), Age of Firm, State-owned Firm, Public Firm, Foreign-owned Firm, Size of Firm. c. Predictors: (Constant), Age of Firm, State Owned Firm, Public Owned Firm, Foreign Owned Firm, Size of Firm, Seizing Capabilities, Reconfiguration Capabilities, Sensing Capabilities

Source: Research Data (2017).

The next step was to test the interaction hypotheses to determine the conditional relationship between the predictor and criterion variables.

4.15.3 Conditional Effects

A hierarchical regression was undertaken for this model to determine the effect of leadership behaviour on the relationship between dynamic capabilities (sensing capabilities, seizing capabilities and reconfiguration capabilities) and firm performance. The study followed the recommendation by Aiken and West (1991) and standardized the variables, so as to reduce the problem of multicollinearity that arises when a moderator variable is introduced and their product with the predictor variable is used to predict the criterion (Brown & Ryan, 2003). The interaction variables were computed by multiplying the standardized values of the predictor and moderator variables. Four (4) steps were followed.

Conditional Regression Analysis Step 1

Using SPSS, the Zscore value of firm performance was entered as a dependent variable and all the three Zscore values of control variables were entered as independent variables. The Beta coefficients were significant except for the age of firm. The size of firm showed positive significant effect, *B*=0.80, $p<0.01$; public owned firm type had a negative significant effect, *B*= -0.078, $p<0.01$; state owned firm type had a positive significant effect, *B*=0.096, $p<0.001$ and foreign owned firm type showed a positive and significant effect, *B*=0.157, $p<0.001$. The age of firm control variable showed insignificant effect *B*=0.037. The results are contained in table 4.20.

Table 4.18 Regression Results - Conditional Effects Step 1

	B	Std. Error	Beta	*t*	*Sig*
(Constant)	8.621E-16	0.026		0.000	1.000
Zscore:Size of Firm	0.080	0.031	0.080**	2.613	0.009
Zscore:Public Owned Firm	-0.078	0.027	-0.078**	-2.904	0.004
Zscore:State Owned Firm	0.096	0.026	0.096***	3.637	0.000
Zscore:Foreign Owned Firm	0.157	0.029	0.157***	5.465	0.000
Zscore:Age of Firm	0.037	0.029	0.037	1.278	0.202
R			0.257		
R^2			0.066		
Adj. R^2			0.062		
R^2 Change			0.066		
Std. Error of the Change			0.967		
F Change			19.049***		0.000
df.			5		

Notes: Dependent Variable: Zscore (Firm Performance). Significance: *$p<0.05$; **$p<0.01$; ***$p<0.001$.

Source: Research Data (2017)

Conditional Regression Analysis: Step 2

The Zscore values of independent variables - sensing capabilities, seizing capabilities and reconfiguration capabilities; were introduced and entered as such in SPSS. The results are shown in table 4.21. Sensing capabilities showed a positive significant effect, B=0.215, p<0.001; seizing capabilities had equally positive and significant effect, B=0.194, p<0.001 and so was reconfiguration capabilities with B=0.182, p<0.001. The results also showed R^2 change by 0.193 (19.3%) from 0.066 (6.6%) to 0.259 (25.9%). The F change was significant (117.107, P<0.001).

Table 4.19 Regression Results - Conditional Effects Step 2

	B	Std. Error	Beta	*t*	*Sig*
(Constant)	8.236E-16	0.023		0.000	1.000
Zscore:Size of Firm	0.031	0.027	0.031	1.132	0.258
Zscore:Public Owned Firm	-0.007	0.024	-0.007	-0.295	0.768
Zscore:State Owned Firm	0.079	0.024	0.079**	3.302	0.001
Zscore:Foreign Owned Firm	0.084	0.026	0.084**	3.205	0.001
Zscore:Age of Firm	0.062	0.026	0.062*	2.359	0.018
Zscore(SensingC)	0.215	0.029	0.215***	7.518	0.000
Zscore(SeizingC)	0.194	0.026	0.194***	7.454	0.000
Zscore(ReconfigC)	0.182	0.028	0.182***	6.486	0.000
R			0.509		
R^2			0.259		
Adj. R^2			0.255		
R^2 Change			0.193		
Std. Error of the Change			0.862		
F Change			117.107***		0.000
df.			3		

Notes: Dependent Variable: Zscore (Firm Performance). Significance: *p<0.05; **p<0.01; ***p<0.001. SensingC: Sensing Capabilities; SeizingC: Seizing Capabilities; ReconfigC: Reconfiguration Capabilities.

Source: Research Data (2017)

Conditional Regression Analysis: Step 3

At this stage, the Zscore values of the moderator variables were introduced and entered in SPSS, namely: - transformational leadership behaviour (TransformL), transactional leadership behaviour (TransactionL) and laissez faire leadership behaviour (LaissezL).

Table 4.20 Regression Results - Conditional Effects Step 3

	B	Std. Error	Beta	*t*	*Sig*
(Constant)	3.195E-15	0.018		0.000	1.000
Zscore:Size of Firm	0.031	0.021	0.031	1.477	0.140
Zscore:Public Owned Firm	-0.046	0.019	-0.046*	-2.417	0.016
Zscore:State Owned Firm	0.077	0.018	0.077***	4.173	0.000
Zscore:Foreign Owned Firm	0.130	0.021	0.130***	6.355	0.000
Zscore:Age of Firm	-0.046	0.021	-0.046*	-2.149	0.032
Zscore(SensingC)	0.089	0.025	0.089***	3.535	0.000
Zscore(SeizingC)	0.028	0.022	0.028	1.313	0.189
Zscore(ReconfigC)	0.126	0.022	0.126***	5.690	0.000
Zscore(TransformL)	0.508	0.026	0.508***	19.457	0.000
Zscore(TransactionL)	-0.322	0.024	-0.322***	-13.338	0.000
Zscore(LaissezL)	-0.386	0.021	-0.386***	-18.197	0.000
R			0.748	0.509	
R^2			0.559	0.259	
Adj. R^2			0.556	0.255	
R^2 Change			0.300	0.193	
Std. Error of the Change			0.666	0.862	
F Change			304.878***		0.000
df.			3		

Notes: Dependent Variable: Zscore (Firm Performance). Significance: *p<0.05; **p<0.01; ***p<0.001. SensingC: Sensing Capabilities; SeizingC: Seizing Capabilities; ReconfigC: Reconfiguration Capabilities; TransformL: Transformational leadership behaviour; TransactionL: Transactional leadership behaviour; LaissezL: Laissez faire leadership behaviour.

Source: Research Data (2017)

Transformational leadership behaviour showed a positive and significant effect, B= 0.508, p<0.001, while both transactional and laissez-faire leadership behaviour had significant but negative effect of B= -0.322 and B= -0.386 respectively, p<0.001. Notably, R^2 change (from step 2 results) was by 0.300 (30%) i.e. from 0.259 (25.9%) to 0.559 (55.9%). F change was significant (304.878, p<0.001). The results are shown on table 4.22.

Conditional Regression Analysis: Step 4

This was the last of the conditional regression steps. The results of this step were used to test the moderation hypotheses. The hypotheses were:- $Ho2_a$*:* There is no significant effect of transformational leadership behaviour on the relationship between sensing capabilities and firm performance, $Ho2_b$*:* Transformational leadership behaviour has no significant effect on the relationship between seizing capabilities and firm performance, $Ho2_c$*:* There is no significant effect of transformational leadership behaviour on the relationship between reconfiguration capabilities and firm performance, $Ho3_a$*:* Transactional leadership behaviour has no significant effect on the relationship between sensing capabilities and firm performance, $Ho3_b$*:* There is no significant effect of transactional leadership behaviour on the relationship between seizing capabilities and firm performance, $Ho3_c$*:* Transactional leadership behaviour has no significant effect on the relationship between reconfiguration capabilities and firm performance, $Ho4_a$*:* Laissez faire leadership behaviour has no significant effect of on the relationship between sensing capabilities and firm performance, $Ho4_b$*:* There is no significant effect of laissez faire leadership behaviour on the relationship between seizing capabilities and firm performance and $Ho4_c$*:* There is

no significant effect of laissez faire leadership behaviour on the relationship between reconfiguration capabilities and firm performance.

The study focused on the interaction of each of the three dimensions of the moderator variable, namely the transformational leadership behaviour (TFLB), transactional leadership behaviour (TRLB) and laissez faire leadership behaviour (LFLB) with each of the three independent variables - sensing capabilities (SC), seizing capabilities (ZC) and reconfiguration capabilities (RC). They were therefore introduced as interactions of their Zscores, namely: - Zscore(TFLB) ∗ Zscore(SC), Zscore(TFLB) ∗ Zscore(ZC), Zscore(TFLB) ∗ Zscore(RC), Zscore(TRLB) ∗ Zscore(SC), Zscore(TRLB) ∗ Zscore(ZC), Zscore(TRLB) ∗ Zscore(RC), Zscore(LFLB) ∗ Zscore(SC), Zscore(LFLB) ∗ Zscore(ZC) and Zscore(LFLB) ∗ Zscore(RC). The results were as presented in the next two sub-headings.

4.15.4 Conditional Effects: Regression Results

The F-statistic was significant at $p<0.001$ (F=4.703). This implies that there existed a statistical relationship between the interaction (predictor) and firm performance (criterion) variables, either directly or indirectly. The coefficient of determination R^2 from the model was 0.573, meaning that the interaction terms (dynamic capabilities variables with leadership behaviour variables) accounted 57.3% of the variation in firm performance. Table 4.24 below shows the indirect (moderated) regression results. The model results showed that the Beta coefficient for Zscore(TFLB) ∗ Zscore(SC) was significant though negative (B=-0.061, $p<0,05$). The coefficient for Zscore(TFLB)∗ Zscore(ZC) was negative

and significant (B=-0.068, p<0.05). At B=0.029, the coefficient for Zscore(TFLB) ∗ Zscore(RC) was insignificant. That of Zscore(TRLB) ∗ Zscore(SC) was also insignificant (B= -0.021). The interactions Zscore(TRLB) ∗ Zscore(ZC), Zscore(TRLB) ∗ Zscore(RC) and Zscore(LFLB) ∗ Zscore(SC) showed significant coefficients of B= 0.088, p<0.001; B= -0.070, p<0.05 and B= -0.097, p<0.001; respectively. The rest of the interactions, Zscore(LFLB) ∗ Zscore(ZC) and Zscore(LFLB) ∗Zscore(RC) had positive but insignificant coefficients of B= 0.025 and B=0.011 respectively.

Table 4.21 Regression Results - Conditional Effects Step 4

	B	Std. Error	Beta	*t*	*Sig*
(Constant)	0.056	0.023		2.437	0.015
Zscore:Size of Firm	0.034	0.021	0.034	1.577	0.115
Zscore:Public Owned Firm	-0.052	0.019	-0.052**	-2.766	0.006
Zscore:State Owned Firm	0.072	0.018	0.072***	3.883	0.000
Zscore:Foreign Owned Firm	0.107	0.021	0.107***	5.138	0.000
Zscore:Age of Firm	-0.039	0.022	-0.039	-1.761	0.078
Zscore(SensingC)	0.061	0.026	0.061*	2.338	0.020
Zscore(SeizingC)	0.048	0.022	0.048*	2.148	0.032
Zscore(ReconfigC)	0.124	0.022	0.124***	5.605	0.000
Zscore(TransformL)	0.529	0.027	0.529***	19.954	0.000
Zscore(TransactionL)	-0.353	0.025	-0.353***	-14.099	0.000
Zscore(LaissezL)	-0.381	0.021	-0.381***	-17.785	0.000
Zscore(TFLB) * Zscore(SC)	-0.061	0.029	-0.061*	-2.052	0.040
Zscore(TFLB) * Zscore(ZC)	-0.073	0.028	-0.068*	-2.57	0.010
Zscore(TFLB) * Zscore(RC)	0.029	0.027	0.029	1.082	0.279
Zscore(TRLB) * Zscore(SC)	-0.019	0.028	-0.021	-0.678	0.498
Zscore(TRLB) * Zscore(ZC)	0.086	0.024	0.088***	3.544	0.000
Zscore(TRLB) * Zscore(RC)	-0.066	0.029	-0.070*	-2.28	0.023
Zscore(LFLB) * Zscore(SC)	-0.101	0.023	-0.097***	-4.32	0.000
Zscore(LFLB) * Zscore(ZC)	0.026	0.022	0.025	1.166	0.244
Zscore(LFLB) * Zscore(RC)	0.012	0.025	0.011	0.496	0.620
R			0.757		
R^2			0.573		
Adj. R^2			0.567		
R^2 Change			0.014		
Std. Error of the Change			0.657		
F Change			4.703***		0.000
df.			9		

Notes: Dependent Variable: Zscore (Firm Performance). Significance: *p<0.05; **p<0.01; ***p<0.001. SensingC: Sensing Capabilities; SeizingC: Seizing Capabilities; ReconfigC: Reconfiguration Capabilities; TransformL: Transformational leadership behaviour; TransactionL: Transactional leadership behaviour; LaissezL: Laissez faire leadership behaviour; TFLB: Transformational Leadership Behaviour; TRLB: Transactional Leadership Behaviour; LFLB: Laissez Faire Leadership Behaviour; SC: Sensing Capabilities; ZC: Seizing Capabilities; RC: Reconfiguration Capabilities.

Source: Research Data (2017)

4.15.5 Conditional Effects: ANOVA Results

The overall results in table 4.23 show the F values were 19.049, 58.895, 154.992 and 89.477 (p<0.001) for steps 1, 2, 3 and 4. This therefore means that the interactions of dynamic capabilities (sensing capabilities, seizing capabilities and reconfiguration capabilities) with leadership behaviour (transformational leadership behaviour, transactional leadership behaviour and laissez faire leadership behaviour) were predictors of firm performance. The model was found to be statistically significant, F (20, 262) = 89.477, p<0.001; and therefore fit in predicting firm performance using the interaction of dynamic capabilities and leadership behaviour.

Table: 4.22 ANOVA – Conditional Relationship

Dependent Variable: Zscore (Firm Performance)

Steps		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.032	5	17.806	19.049	.000[b]
	Residual	1260.968	265	.935		
	Total	1350.000	270			
2	Regression	350.034	8	43.754	58.895	.000[c]
	Residual	999.966	262	.743		
	Total	1350.000	270			
3	Regression	755.150	11	68.650	154.992	.000[d]
	Residual	594.850	260	.443		
	Total	1350.000	270			
4	Regression	773.442	20	38.672	89.477	.000[e]
	Residual	576.558	261	.432		
	Total	1350.000	270			

Notes:

b. Predictors: (Constant), Zscores of control variables.
c. Predictors: b and Zscores of dynamic capabilities.
d. Predictors: c and Zscores of leadership behaviour
e. Predictors: d and Zscores of interactions of dynamic capabilities with leadership behaviour.

Source: Research Data (2017)

4.16 Hypotheses Testing

The moderated regression analysis results in table 4.21 were used to test the six (6) hypotheses that were anchored on the interaction of dynamic capabilities and leadership behaviour. The first three of the six hypotheses related to transformational leadership behaviour.

Hypothesis H_02_a predicted that there is no significant effect of transformational leadership behaviour on the relationship between sensing capabilities and firm performance. The Beta coefficient for the interaction (TFLB $*$ SC) was negative and significant at B= -0.061 (p<0.05). Therefore the null hypothesis was rejected and it was concluded that transformational leadership behaviour has significant effect on the relationship between sensing capabilities and firm performance.

Hypothesis H_02_b predicted that transformational leadership behaviour has no significant effect on the relationship between seizing capabilities and firm performance. The coefficient for the interaction (TFLB $*$ SZ) was significant and negative (B= -0.068; p<0.05). The null hypothesis was rejected and alternative hypothesis adopted, that transformational leadership behaviour has a significant effect on the relationship between seizing capabilities and firm performance.

Hypothesis H_02_c had predicted that there is no significant effect of transformational leadership behaviour on the relationship between reconfiguration capabilities and firm performance. The interaction (TFLB $*$ RC) was insignificant (B= 0.029). The null

hypothesis was not rejected and the conclusion was reached that transformational leadership behaviour has no effect on the relationship between reconfiguration capabilities and firm performance. The next set of three null hypotheses were anchored on the interaction between transactional leadership behaviour and dynamic capabilities.

Hypothesis H_03_a predicted that transactional leadership behaviour has no significant effect on the relationship between sensing capabilities and firm performance. The Beta coefficient for the interaction (TRLB $*$ SC) was insignificant at B= -0.021. The null hypothesis was therefore not rejected. A conclusion was therefore that indeed transactional leadership behaviour has no effect on the relationship between sensing capabilities and firm performance.

Hypothesis H_03_b predicted that there is no significant effect of transactional leadership behaviour on the relationship between seizing capabilities and firm performance. The Beta coefficient for the interaction of TRLB with SZ was significant and positive (B= 0.088; p<0.001). The null hypothesis was rejected. It was therefore concluded that transactional leadership behaviour has significant effect on the relationship between seizing capabilities and firm performance.

The other hypothesis, H_03_c, predicted that transactional leadership behaviour has no significant effect on the relationship between reconfiguration capabilities and firm performance. However, The TRLB and RC interaction was negative and significant

(B=-0.070; p<0.05) leading to the conclusion that transactional leadership behaviour has significant effect on the relationship between reconfiguration capabilities and firm performance. The third and last set of three null hypotheses was based on the interaction of the independent variables with laissez faire leadership behaviour.

Hypothesis H_04_a predicted that laissez faire leadership behaviour has no significant effect of on the relationship between sensing capabilities and firm performance. The interaction of LFLB $*$ SC was negative and significant with B=0.097 (p<0.01). The null hypothesis was rejected and it was concluded that laissez faire behaviour has significant effect on the relationship between sensing capabilities and firm performance.

Hypothesis H_04_b predicted that there is no significant effect of laissez faire leadership behaviour on the relationship between seizing capabilities and firm performance. The interaction of LFLB with ZC was insignificant. (B=0.025) and a conclusion reached was that laissez faire behaviour has no significant effect on the relationship between seizing capabilities and firm performance.

The last hypothesis was H_04_c, which predicted that there is no significant effect of laissez faire leadership behaviour on the relationship between reconfiguration capabilities and firm performance. Since the interaction between LFLB and RC was insignificant (B=0.011), the null hypothesis was not rejected. The conclusion made therefore was that laissez faire leadership behaviour has no significant effect on the reconfiguration capabilities - firm performance relationship. Table 4.23 shows the summary of the hypotheses testing results.

Table 4.23 Summary Results: Hypotheses Tests.

Hypotheses				Results
H_01_a:	Sensing Capabilities (SC)	→	Firm Performance	Supported
H_01_b:	Seizing Capabilities (SZ)	→	Firm Performance	Supported
H_01_c:	Reconfig. Capabilities(RC)	→	Firm Performance	Supported
H_02_a:	SC ∗ TFLB	→	Firm Performance	Supported
H_02_b:	SZ ∗ TFLB	→	Firm Performance	Supported
H_02_c:	RC ∗ TFLB	→	Firm Performance	Not supported
H_03_a:	SC ∗ TRLB	→	Firm Performance	Not supported
H_03_b:	SZ ∗ TRLB	→	Firm Performance	Supported
H_03_c:	RC ∗ TRLB	→	Firm Performance	Supported
H_04_a:	SC ∗ LFLB	→	Firm Performance	Supported
H_04_b:	SZ ∗ LFLB	→	Firm Performance	Not supported
H_04_c:	RC ∗ LFLB	→	Firm Performance	Not supported

Source: Research Data (2017)

CHAPTER FIVE
SUMMARY, DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.0 Overview

This chapter covers the summary of findings, discussions of the empirical study results that have been obtained in chapter four, conclusion, theoretical and managerial implications, limitations of the study and suggestions for further research.

5.1 Summary of Findings

The literature on dynamic capabilities consists largely of conceptual and theoretical discussions. Few extant empirical studies have examined the effect of firms' dynamic capabilities on firm performance. The study was premised on the relationship between firm performance and sensing capabilities, seizing capabilities and reconfiguration capabilities; and also when this relationship is moderated by leadership behaviour. The full leadership model (or nine-correlated leadership model) was used because it adequately captures the full range factors of the construct on a continuum from transformational, through Laissez faire to transactional leadership behaviour (Muenjohn and Armstrong, 2008; Molero-Alonso *et al*., 2010; Arham, 2014). A conceptual framework was developed and was tested empirically. The analysis covered description and characteristics of respondents, responses and measures of the study variables. A multi-variate moderated regression analysis was undertaken.

The hypotheses were tested to address the following specific study objectives:- to establish the effect of sensing capabilities on firm performance, to determine the effect of seizing

capabilities on firm performance, to establish the effect of reconfiguration capabilities on firm performance, to establish the moderating effect of transformational leadership behaviour on the relationship between sensing capabilities and firm performance, to determine the effect of transformational leadership behaviour on the relationship between seizing capabilities and firm performance, to establish the moderating effect of transformational leadership behaviour on the relationship between reconfiguration capabilities and firm performance, to determine the effect of transactional leadership behaviour on the relationship between sensing capabilities and firm performance, to establish the effect of transactional leadership behaviour on the relationship between seizing capabilities and firm performance, to determine the effect of transactional leadership behaviour on the relationship between reconfiguration capabilities and firm performance, to find out the effect of laissez faire leadership behaviour on the relationship between sensing capabilities and firm performance, to establish the effect of laissez faire leadership behaviour on the relationship between seizing capabilities and firm performance and to determine the effect of laissez faire leadership behaviour on the relationship between reconfiguration capabilities and firm performance. The key findings of the study are discussed in the following sections.

5.2 Discussions of Empirical Results and Related Literature of Findings

Twelve hypotheses were tested and from the results, eight of them were supported while four were not. In this study, the leaders' perceived behaviours was rated by their juniors, unlike previous studies which requested leaders to self-rate their behaviours (Hur *et al.*,

2011; Cavazotte *et al.*, 2012). The approach adopted by this research in evaluating leadership behaviours reflected more of their actual behaviours free of bias.

5.3 The Role of Dynamic Capabilities in Firm Performance.

The hypotheses testing results are largely consistent with previous studies, as highlighted below for each hypothesis.

H_01_a: There is no significant effect of sensing capabilities on firm performance. The hypothesis test results showed that sensing capabilities has a significant effect on, and hence is a predictor of, firm performance (B=0.212, p<0.01). This result corroborated the findings by Osisioma *et al* (2016) on First Bank Nigeria Plc and United Bank for Africa Plc in Awka, Nigeria, where it was found that sensing capabilities enhance organizational performance. Osisioma *et al* (2016) computed a Pearson product-moment correlation coefficient to assess the relationship between sensing capabilities and organizational performance. There was a positive correlation (r = 0.545, n = 30, p = 0.002) and a positive significant relationship between the two variables. Li & Liu (2014) undertook a research which found that firms that display the propensity to sense opportunities and threats, so as to make timely decisions in implementing strategic decisions and changes efficiently, end up pursuing the right direction and achieve competitive advantage. This study further corroborated the finding of Woldesenbet *et al* (2012) that found that firms apply sensing capabilities in their creative search to identify opportunities and threats, changing customer demands and the dynamic competition landscape. Another research (Karagouni *et al.*, 2012) used coordination, learning and competitive response as dimensions of dynamic

capabilities and found that these have a positive, albeit slight, influence on firm performance irrespective of the extent of environmental change. In harmony with Karagouni *et al* (2012), the study used sensing capabilities to mirror the dimension of coordination with results showing a similarly positive significant effect on firm performance. From the initial conceptual model by Gathungu & Mwangi (2012), sensing capabilities play a crucial part in identification and assessment of opportunities. A study by Wu (2010) on 253 Taiwanese firms found that those firms that possess dynamic capabilities enhance their competitive advantages.

H_01_b: Seizing capabilities have no significant effect on firm performance. The hypothesis test results showed that seizing capabilities is a predictor of firm performance (B=0.236, p<0.01). The finding supports that of Pandza and Holt (2007) who used absorptive capabilities, to refer to the firm's ability to recognize the value of external information and to assimilate and apply the same to its commercial ends. This study fits into the theoretical conceptual framework proposed by Kocoglu *et al* (2015) on the differential relationship between absorptive capacity and product innovativeness. Seizing capabilities is about pro-activeness, a response to opportunities, and is an appropriate approach for firms facing competition (Lumpkin & Dess, 2001). Firms pursue acquisition and deployment of resources so as to exploit opportunities presented by the changing operating environment (Alvarez and Busenitz, 2001; Hadjimanolis, 2000). Eisenhardt and Martin (2000) refer to this as the gaining and releasing of resources. Wei & Lau (2010) highlights on high performance work systems (innovation) and organizational performance and links the latter to adaptive capabilities, a variable described in this study as seizing capabilities.

H_01_c: Reconfiguration capabilities have no significant effect on firm performance. The results of regression indicated that reconfiguration capabilities has a significant and positive effect on firm performance (B=0.317, p<0.001). This corroborated a previous study carried out on the Indian SMEs (Batra *et al*., 2015; Wu, 2007) which found that those firms that reconfigure their resources according to the prevailing opportunities are more likely to succeed. Resource-constrained firms acquire sustainable advantage not only by acquiring new resources (or seizing capabilities) but also by utilizing their resources in different ways (Jantunen *et al.*, 2005; Protogerou, 2012; Bloch & Finch, 2010). The findings also support the results of Cao (2011) that targeted international retailers in China on shaping, seizing and reconfiguration of opportunities and threats. Although firms face strong inertial forces that limit their abilities to change, they also encounter competitive pressures to continuously undertake change (Capron & Mitchell, 2004). Another previous similar finding was by Lin & Wu (2014) where the results indicated that dynamic capabilities significantly mediate VRIN resources to improve firm performance (Ray *et al*., 2004).

5.4 The moderating effect of leadership behaviour

The hypotheses used to test the role of leadership behaviour as a moderator of the relationship between the predictors:- sensing capabilities, seizing capabilities and reconfiguration capabilities; and firm performance (criterion) produced mixed results as indicated below.

H_02_a: There is no significant effect of transformational leadership behaviour on the relationship between sensing capabilities and firm performance. The regression results returned a negative and significant interaction coefficient (B= -0.061, p<0.05). Therefore it was concluded that transformational leadership behaviour has significant effect on the relationship between sensing capabilities and firm performance. This finding supports many other previous studies. For example, in examining the moderating role of transformational leadership in senior team attributes and organizational ambidexterity, Jansen *et al* (2008) found that executive directors' transformational leadership increases the effectiveness of senior team attributes in ambidextrous organizations and moderates the effectiveness of social integration and contingency rewards. Also, Uymaz (2015) analyzed 247 employees to determine the direct and indirect effects of transformational leadership on follower performance through upward knowledge management and organizational learning and the results showed a positive relationship.

In the Kenyan context, where many of the manufacturing firms are small and mediun size, solace of the hypothesis test result is found in Vaccaro *et al* (2012) where it was concluded that smaller, less complex organizations do not benefit from transformational leadership behaviour. Firm size moderated the relationship between transformational leadership behaviour and management innovation (Vaccaro *et al*., 2012). Most of the manufacturing sector firms are small, capital intensive and less complex.

$H_0 2_b$: Transformational leadership behaviour has no significant effect on the relationship between seizing capabilities and firm performance. The regression results showed that the coefficient for the interaction was significant and negative (B= -0.068; p<0.05). A conclusion was therefore reached that transformational leadership behaviour has a significant influence on the relationship between seizing capabilities and firm performance. This is in consonant with the following prior studies. Garcia-Morales *et al* (2008) that used data from 408 Spanish organizations and found that transformational leadership affected dynamic capabilities and that a direct and significant relationship exists between transformational leadership and innovation which influences performance. Another study, Muchiri & Ayoko (2013) examined the moderating role of transformational leadership and found it has effect on the relationships between organizational tenure and organizational citizenship behaviours, and also organizational tenure and general productivity. Goswami *et al* (2016) found that transformational leadership has a significant moderating influence on the relationship between leaders' positive humor and employees' positive emotions at work. Chen *et al* (2015) concluded that emotional intelligence has a positive relationship with work performance and that perceived transformational leadership positively moderates the relationship between the subordinates' emotional intelligence and work performance.

$H_0 2_c$: There is no significant effect of transformational leadership behaviour on the relationship between reconfiguration capabilities and firm performance. The results showed that transformational leadership behaviour has no effect (B= 0.029) on the relationship between reconfiguration capabilities and firm performance. The result is consistent with Mesu *et al* (2015), which found that the effect of transformational

leadership depends on the size and industry of organization. According to Vaccaro *et al* (2012), smaller, less complex organizations do not benefit from transformational leadership behaviour. Many of the firms in the Kenya's manufacturing sector are small, capital intensive and less complex, explaining the reason why there was noted to be insignificant effect of transformational leadership behaviour on the relationship between reconfiguration capabilities and firm performance. While transformational leadership is effective in service firms, it is only effective within manufacturing firms when it is combined with a directive (or transactional) leadership style (Mesu *et al.*, 2015).

$H_0 3_a$: Transactional leadership behaviour has no significant effect on the relationship between sensing capabilities and firm performance. The Beta coefficient for the interaction (TRLB X SC) was insignificant at B= -0.021. It was therefore concluded that there is no effect of transactional leadership behaviour on the relationship between sensing capabilities and firm performance. This finding is consistent with that of Waldman *et al* (2001) which examined CEO leadership attributes and firm profitability under conditions of perceived environmental uncertainty and established that the interaction of transactional leadership and uncertainty has no significant effect on firm performance. Indeed the Kenyan context poses a dynamic operating environment for the manufacturing sector, owing to stiff global competition.

$H_0 3_b$: There is no significant effect of transactional leadership behaviour on the relationship between seizing capabilities and firm performance. The Beta coefficient for the interaction was significant and positive (B= 0.088; p<0.001). It was therefore

concluded that transactional leadership behaviour has significant effect on the relationship between seizing capabilities and firm performance. This result is in harmony with Mahdinezhad and Suandi (2013) who observe that transactional leadership offers rewards in return for performance and that transactional leaders use rewards in form of recognition and praise, promotions, merit increases, honors, or bonuses which ultimately improve job performance of the followers. This has direct positive effect on firm performance.

$H_0 3_c$: Transactional leadership behaviour has no significant effect on the relationship between reconfiguration capabilities and firm performance. The TRLB and RC interaction was negative and significant (B= -0.070; p<0.05) leading to the conclusion that transactional leadership behaviour has a significant effect on the relationship between reconfiguration capabilities and firm performance. The negative relationship is in harmony with previous studies (Howell & Avolio, 1993; Kelloway *et al*., 2006). Their finding was that some transactional measures of leadership (contingent reward and management by exception - active and passive), are each negatively related to business-unit performance (Howell & Avolio, 1993; Kelloway *et al*., 2006).

$H_0 4_a$: Laissez faire leadership behaviour has no significant effect of on the relationship between sensing capabilities and firm performance. The interaction of laissez faire leadership behaviour and sensing capabilities was negative and significant (B= -0.097, p<0.001). It was therefore concluded that laissez faire leadership behaviour has significant effect on the relationship between sensing capabilities and firm performance. This finding supports previous studies that examined laissez faire leadership behaviour and observes

that it is associated with negative outcomes including stress, demotivation, or organizational outcomes (Skogstad *et al*., 2007; Kelloway *et al*., 2005; Piccolo, 2004). Even though there is limited discussions about laissez-faire leadership in the literature (Judge and Piccolo, 2004; Hinkin and Schriesheim, 2008), few researches found Laissez-faire leadership to be the opposite of transformational or transactional leadership (Hinkin and Schriesheim, 2008). The finding is also in harmony with Yang (2015) who observed that laissez-faire leadership is a lack of leadership or a zero leadership by failing to provide subordinates with information or feedback (Bass and Avolio, 1990). According to Yang (2015) the moderating effect of laissez-faire leadership is dependent on how the behaviours of laissez-faire interact with the contexts in which they take place. It was observed that the fluidity of leadership styles is contextual and a leader's laissez faire behaviour can have positive or negative effects under different situations.

$H_0 4_b$: There is no significant effect of laissez faire leadership behaviour on the relationship between seizing capabilities and firm performance. Since the coefficient for the interaction between laissez faire leadership behaviour and seizing capabilities was insignificant (B=0.025), it was observed that the former has no effect on the relationship between the latter and firm performance. Liassez faire behaviour contributes to passive leadership. The result of this study supports a previous study by Chenevert *et al* (2015) which examined the moderating role of passive leadership in the relationships of perceived support from organization, coworkers, and physicians to affective commitment and organizational citizenship behaviour among 182 hospital employees. It was observed that laissez faire is negatively associated with follower satisfaction and leaders effectiveness. Such leadership

fails to reward good performance or punish poor performance (Hinkin and Schriesheim, 2008). It is no surprise therefore that this study found insignificant effect of the interaction between laissez faire leadership behaviour and seizing capabilities, which does not account for any change in firm performance.

$H_0 4_c$: There is no significant effect of laissez faire leadership behaviour on the relationship between reconfiguration capabilities and firm performance. The interaction of laissez faire leadership behaviour and reconfiguration capabilities was insignificant (*B*= 0.011). The observation made was that this leadership behaviour has insignificant influence on the relationship between reconfiguration capabilities and firm performance. Yang (2015) found that laissez-faire leads to positive or negative effects based on context. Not surprising therefore that liassez faire leadership neuturalizes the positive and significant direct relationship between reconfiguration capabilities and firm performance. The reason is that it is a leadership behaviour that is negatively associated with follower satisfaction and poor exchange relationships with employees - a destructive influence on followers (Aasland *et al.*, 2010).

5.5 Conclusion of the Study

This study investigated the emerging concept of firm performance in the context of dynamic capabilities and leadership behaviour in the manufacturing sector. In the contemporary unstable operating environment that poses an ever changing customer needs, firms strive to survive. A paradigm shift from the conventional manufacturing to a demand-based and target market-based-production has become inevitable. As a result,

firms' strategic decisions to change have brought their top leadership into focus. The spotlight is on leadership behaviour and how this influences firm responsiveness in integrating, building and reconfiguring internal and external resources and competencies for survival, through the use of dynamic capabilities. The concept of firm performance and its dimensions were introduced by reviewing extant literature.

In conclusion, the findings of this study presents important implications for both academic and empirical strategic management literature and practice. Considering the predictors of firm performance have mostly remained conceptual, with even limited empirical enquiries into how the effect of these predictors' vary with leadership behaviour, the study was an attempt to test the concept in an empirical setting.

The topic of leadership behaviour has been studied in the past both as a predictor of firm performance and a moderator of a variety of variables that have effect on a range of organizational parameters. There haven't been empirical studies on how leadership behaviour moderates the relationship between dynamic capabilities and firm performance. Building on various conceptualizations adapted from other academic disciplines, both planning and execution of strategy is dependent on the top management team of a firm. In many organizations, especially small and medium size entities, the CEO is the key person who provides direction and steers the organization. Studies have also shown that the manner the CEO relates with, and communicates to, the rest of the organization's managers and employees, influences their commitment to the organization, besides their job satisfaction and hence firm performance. The implication is that a CEO's leadership

behaviour as perceived by subordinate managers influences the level of utilization of the firm's capabilities and resources towards improving on performance.

The study results provided insights into the degree of change of firm performance at various leadership behaviour levels along the full range leadership continuum, when interacted with sensing capabilities, seizing capabilities and reconfiguration capabilities. It must therefore be noted that building, integration and reconfiguration of dynamic capabilities within an organization requires a well thought-out strategic plan and commitment of the CEO in order to attain firm performance.

Practicing managers find some useful implications for application in designing strategies used in enhancing and sustaining firm performance, notably, the appropriate model for use when acquiring resources and selecting the competencies and capabilities that would avail desired results efficiently and effectively.

5.6 Theoretical Implications

The study provides empirical evidence on the relationship between the different dynamic capabilities – sensing capabilities, seizing capabilities and reconfiguration capabilities; and how their effect on firm performance is moderated by leadership behaviour. The theoretical contribution is in various ways. First is how the dynamic capabilities concept is key in differentiating firm performance. This extends the firm performance model to provide greater understanding on how dynamic capabilities help firms to improve performance in a dynamic operating environment. The study therefore extends both the

resource based view and dynamic capabilities theories through hypotheses testing using regression findings. Second is how the above role is influenced by the context of leadership behaviour. It explains how perceived leadership behaviour influences the deployment, translation and employment of capabilities towards corporate benefits. This is a contribution to the upper echelons and transformational-transactional leadership theories through the conditional regression hypotheses test findings. Previous studies have not paid adequate attention to the moderating effect of CEO leadership behaviour on the relationship between dynamic capabilities and firm performance. Third, the study results contribute to organizational behaviour studies of strategy literature and suggest that effective adaptation to environmental dynamism is through the deployment of dynamic capabilities, which to some extent is contingent upon the behaviour of top leadership. Fourth, conceptualization of the model extends existing studies that examine firm performance, based on the resource-based view theory, using empirical approach. This study, however, is contextualized to the manufacturing sector in Kenya and provides a sharper theoretical lens and valuable contribution to strategic theories of the resource-based view and dynamic capabilities theories (Alvarez & Busenitz, 2001). It further makes contribution to the area leadership (Wiklund & Shepherd, 2003).

5.7 Managerial Implications

The study results have important implications for practicing managers and leaders. The results guide CEOs and firm stockholders in the manufacturing sector on how to maximize firm performance. From the study, it was found that application of dynamic capabilities results in increase in firm performance. First, sensing capabilities, sizing capabilities and

reconfiguration capabilities have direct effects on firm performance. Although these capabilities are not distinct, it was concluded that firms that display high propensity to sense opportunities and threats, are able to make timely decisions and changes, in the right direction, enabling them to achieve competitive advantage and improved performance. Further, those firms with high concentration of seizing capabilities, or reconfiguration capabilities, are able to adapt and integrate external opportunities and to reconfigure internal processes on which they leverage to improve their performance. The findings showed that manufacturing firms should often assess their level of sensing capabilities, seizing capabilities and reconfiguration capabilities that enable them to deliver their short, through medium, to long term strategies.

Second, the results highlighted the importance of the leadership behaviour of CEOs in fostering strategic flexibility in the deployment of dynamic capabilities in tandem with the shifting operating environment to impact on firm performance. In order to improve the deployment of dynamic capabilities and consequently firm performance, firm owners should recruit CEOs who possess compatible leadership behaviours. The applicability of sensing capabilities, sizing capabilities and reconfiguration capabilities may not universally influence firm performance. Instead, it is contingent on the behaviour of the top leadership of the firm. Manufacturing firms with CEOs who display transformational leadership behaviour, although they are not fast at sensing (scanning) for opportunities and threats, are quick at seizing any opportunities that they are able to reach. However, they are not fast in integrating these changes. Those firms with leaders who display transactional behaviours, are able to seize and reconfigure opportunities which assist them to improve

their performance, although they too are slow at sensing or scanning the environment. Firms with passive leaders or laissez faire, are able to scan (sense) external and internal opportunities and threats and are able to reconfigure resources and capabilities to respond to changes in the operating environment. Some of the opportunities fall through because these firms are found to possess low levels of seizing capabilities. From the above, it is implied that Kenyan manufacturing firms are still internal process-oriented, rely heavily on top-down directions on process execution. For the firms to improve their performance, they must improve on their ways of scanning the environment, adopt and adapt new ways of responding to the environmental changes and most importantly, transform or reconfigure resources and capabilities to efficiently and effectively respond the shifting operating environment.

Third, the findings are useful to other manufacturing firms outside Kenya or firms in other sectors within Kenya. If these Kenyan manufacturing firms are not assisted to improve their leader-follower relationship, their inconsistent performance patterns will have spill-over effects to those firms that are directly or indirectly associated.

The study results provided an important corroboration that performance of firms with balanced level of sensing capabilities, seizing capabilities and reconfiguration capabilities tend to improve. The correlations between sensing capabilities, seizing capabilities and reconfiguration capabilities and performance are stronger when there is perceived appropriate leadership behaviour. One of the practical implications is that manufacturers may develop their dynamic capabilities based on the CEOs leadership behaviour. And if

the CEOs behaviour rating is obtained through regular surveys, results might inform the best strategy to be adopted in explicating dynamic capabilities that would utilize the firm's resources for improved performance.

5.8 Limitations of the Study

The study offers a significant contribution to academic research and practices. However, it had some limitations that open up opportunities for further future research. First, the study context of the manufacturing sector where many of firms are small and medium sized, limits the generalizability of the current findings to other large corporations operating outside this sector. However, many manufacturing firms in Kenya and many other emerging economies fall under SMEs that play a critical role in the industrial growth (Kaivanto & Stoneman, 2007; Luukkonen, 2005).

Second, the study used a cross-sectional design and cannot reflect the lag time or long-term effects of sensing capabilities, seizing capabilities and reconfiguration capabilities on performance. Therefore, future studies could take longitudinal approach, to examine the relationship between these dynamic capabilities and performance over a long time-series context.

Third, the hypotheses were tested after controlling for salient variables such as size of firm, ownership type and age of the firm, for internal validity of results. Future research may wish to investigate the effects of these control factors and expand the scope to other sectors, so that their results can revalidate the generalizability of the model.

5.9 Recommendations of the Study

This study provided important recommendations for not only theory, but also practice. The study presented these recommendations as salient insights into strategic management for both practitioners and scholars. The study findings fill the knowledge gap on the model of firm performance in the context of leadership behavour. It is expected that the results would spur additional research to encompass CEO psychology, temperament, training and experience among many aspects that affect strategic behaviour, and hence firm performance. Future studies should examine more other variables that inter-play within the dynamic capabilities, strategic leadership behaviours and firm performance relationship.

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APPENDICES

Transmittal Letter

Dear Sir/Madam,

RE: DYNAMIC CAPABILITIES AND PERFORMANCE OF MANUFACTURING FIRMS IN KENYA - THE MODERATING EFFECT OF FIRM OWNERSHIP TYPE

I am Thomas O. Nyachanchu, a Ph.D. candidate in the school of Business and Economics of Moi University. I am in my research year of my post graduate studies focusing on the moderating effect of firm ownership type on the relationship between dynamic capabilities and firm performance in the manufacturing firms in Kenya. I have selected you as my study respondent.

Kindly spare a few minutes to answer the questions in the attached questionnaire. Your responses will be kept confidential and used specifically for the purpose of this academic study. No respondent's identity will be published or released to anyone. Your participation is entirely voluntary and the questionnaire will be anonymous. Your participation in facilitating this study will therefore be highly appreciated.

Thank you for participating in this Study.

Yours faithfully,

Thomas O Nyachanchu
Mobile phone 254-0722 732 807
E-mail. tnyachanchu@gmail.com.
P O Box 26195 -00504, Mchumbi Road, Nairobi, Kenya.

Questionnaire

PART 1: To be completed by the CEO/MD.

Dear Sir/Madam,

My name is Thomas Nyachanchu, a PhD student from the school of Business and Economics, Moi University. I am in my research year of post graduate studies focusing on Dynamic Capabilities, Leadership Behaviour and Firm Performance of manufacturing firms. I have selected you as my study respondent. Kindly spare a few minutes to answer the questions in the attached questionnaire. Your participation is entirely voluntary. Your responses will be kept confidential and used specifically for the purpose of this academic study. No respondent's identity will be published or released to anyone. Your participation in facilitating this study will therefore be highly appreciated.

SECTION A: ***Organizational Profile***

Kindly fill in the correct information.

DM01	Name of Firm: (Optional)
DM02	Age of Respondent (years): *Tick as appropriate.* Under 30 ☐ More than 30 up to 40 ☐ More than 40 up to 50 ☐ More than 50 up to 60 ☐ More than 60 ☐
DM03	Gender ……. (Male/Female)
DM04	Manufacturing subsector:

FS1	**Size of Firm**: Number of full time employees of your firm including management	*Please tick the most appropriate response*)
Less than 30 people		
31 - 60 people		
61 – 100 people		
101 – 200 people		
201 – 500 people		
501 – 1000 people		
More than 1,000 people		

FO13	**Type of Firm Ownership**	*Please tick the most appropriate response*
Public Owned Firm		
Privately Owned Firm		
State Owned Firm		
Foreign Owned Firm		

FA1	**Age of Firm**: Your firm has been in business for…	*Please tick the most appropriate response*
Less than 5 years		
6 – 10 years		
11 – 20 years		
21 – 30 years		
More than 30 years		

SECTION B

Firm Performance:
Please tick the single most appropriate response for each of the items below: Compared to other Firms, rate the improvement of your firm over the past 5 years in terms of the following measures.

Note: *1: Not at all; 2: To a very slight extent; 3: To a small extent; 4: To a moderate extent; 5: To a considerate extent; 6: To a great extent; 7: To an extreme extent.*

Count	Scale items	1	2	3	4	5	6	7
	Financial performance							
FP1	Growth in Sales							
FP2	Market share							
FP3	Profit margin							
FP4	Net Profits							
FP5	Return on Investment							
FP6	Increase in competitive position							
	Non-Financial performance							
FP7	Customer satisfaction							
FP8	Employee satisfaction							
FP9	Participation in improving the environment							
FP10	Supporting social and cultural projects							

SECTION C

Dynamic Capabilities*:*

Please tick the single most appropriate response for each of the items below:

The extent to which your firm has deployed **Dynamic Capabilities**, to influence your firm's performance in the face of changing market demand, technology, regulations, etc.).

Note: *1: Not at all; 2: To a very slight extent; 3: To a small extent; 4: To a moderate extent; 5: To a considerate extent; 6: To a great extent; 7: To an extreme extent.*								
Scale items		1	2	3	4	5	6	7
DS01	We are slow to detect fundamental shifts in our industry (e.g. competition, technology, regulation)							
DZ02	We are able to identify and acquire external knowledge (e.g. market, technology) very quickly							
DS03	We are very good in observing and anticipating technological trends							
DZ03	Employees of our unit regularly visit other branches to learn about new technologies, trends, or business models							
DS05	We regularly check the quality of our functional capabilities in comparison with competition							
DR01	We are effective in transforming existing knowledge into new resources (e.g. new organization structure, new technical equipment)							
DS07	We pay a great attention on monitoring the change of functional capabilities							
DZ01	We frequently acquire knowledge about technologies and market trends from external sources							
DR06	We can effectively integrate new externally sourced capabilities and combine them with existing capabilities into distinctive combinations							
DZ04	Existing knowledge (e.g. market or technology) is readily available to each department within our business unit							
DR02	Our employees introduce perceptible changes that lie outside the existing features of existing capabilities							
DS08	After changing existing capabilities or integrating new capabilities, we pay a great attention on monitoring the efficiency of new processes							

DZ05	Our business unit periodically circulates codified knowledge in form of documents (e.g., reports, newsletters) to update other departments							
DR04	We can effectively recombine existing capabilities into novel combinations							
DZ07	Our employees have the capabilities to produce many novel and useful ideas							
DR03	Our employees are able to identify valuable capability elements, connect, and combine them in new ways							
DZ09	We have the capabilities to effectively develop new knowledge or insights that have the potential to influence product development							
DZ10	When solving problems, we can rely on good cross-departmental support							

DR05	Employees integrate new and existing ways of doing things without stifling their efficiency							
DZ06	When something important happens (market or technological development), the whole business unit knows about it in a short period							
DR07	We can successfully integrate the new knowledge acquired with our existing knowledge							
DZ08	Within this business unit, we have the capabilities successfully to learn new things							
DS06	We regularly check the quality of our functional capabilities in comparison with companies in different industries							
DS02	We quickly understand new opportunities to serve our clients							
DS04	We periodically review the likely effect of changes in our business environment, on our customers							

PART 2: To be completed by the Manager/Officer in charge of:-
HR/ IT/Factory/ Marketing

Dear Sir/Madam,

My name is Thomas Nyachanchu, a PhD student from the school of Business and Economics, Moi University. I am in my research year of post graduate studies focusing on Dynamic Capabilities, Leadership Behaviour and Firm Performance of manufacturing firms. I have selected you as my study respondent. Kindly spare a few minutes to answer the questions in the attached questionnaire. Your participation is entirely voluntary. Your responses will be kept confidential and used specifically for the purpose of this academic study. No respondent's identity will be published or released to anyone. Your participation in facilitating this study will therefore be highly appreciated.

SECTION A

Organizational Profile

Kindly fill in the correct information

DM01	Name of Firm (Optional)
DM02	Age of Respondent years): *Tick as appropriate.* Under 30 ( ) More than 30 up to 40 ( ) More than 40 up to 50 ( ) More than 50 up to 60 ( ) More than 60 ( )
DM03	Gender ……. (Male/Female)
DM04	Department: ……. (Human Resources, Information Technology /Factory/ Marketing etc.)

SECTION B

Leadership Behaviours

Please tick the single most appropriate response for each of the items below: The extent to which you agree with the following statements about your leader –the CEO /MD

Note: *1: Not at all; 2: To a very slight extent; 3: To a small extent; 4: To a moderate extent; 5: To a considerate extent; 6: To a great extent; 7: To an extreme extent.*								
Scale items		1	2	3	4	5	6	7
LD1	My leader instills pride in me for being associated with him/her							
LM2	My leader talks enthusiastically about what needs to be accomplished							
LD3	My leader acts in ways that builds my respect							
LA3	My leader keeps track of all mistakes							
LS2	My leader seeks differing perspectives when solving problems							
LD4	My leader displays a sense of power and confidence							
LD8	My leader emphasizes the importance of having a collective sense of mission							
LS4	My leader suggests new ways of looking at how to complete assignments							
LD7	My leader considers the moral and ethical consequences of decisions							
LM4	My leader expresses confidence that goals will be achieved							
LM1	My leader talks optimistically about the future							
LP2	My leader waits for things to go wrong before taking action							
LA1	My leader focuses attention on irregularities, mistakes, exceptions, and deviations from standards							
LM3	My leader articulates a compelling vision of the future							
LS3	My leader gets me to look at problems from many different angles							
LF1	My leader avoids making decisions							
LS1	My leader re-examines critical assumptions to question whether they are appropriate							
LC4	My leader helps me to develop my strengths							
LR6	My leader discusses in specific terms who is responsible for achieving performance targets							

Please tick the single most appropriate response for each of the items below: The extent to which you agree with the following statements about your Leader.

Note: *1: Not at all; 2: To a very slight extent; 3: To a small extent; 4: To a moderate extent; 5: To a considerate extent; 6: To a great extent; 7: To an extreme extent.*								
Scale items		1	2	3	4	5	6	7
LC1	My leader spends time teaching and coaching							
LR7	My leader makes clear what one can expect to receive when performance goals are achieved							
LC3	My leader considers me as having different needs, abilities, and aspirations from others							
LR5	My leader provides me with assistance in exchange for my efforts							
LC2	My leader treats me as an individual rather than just as a member of a group							
LR8	My leader expresses satisfaction when I meet expectations							
LF1	My leader avoids getting involved when important issues arise							
LD6	My leader specifies the importance of having a strong sense of purpose							
LA2	My leader concentrates his/her full attention on dealing with mistakes, complaints, and failures							
LP4	My leader demonstrates that problems must become chronic before taking action							
LA4	My leader directs my attention toward failures to meet standards							
LP1	My leader fails to interfere until problems become serious							
LP3	My leader shows that he/she is a firm believer in “if it isn’t broken, don’t fix it.”							
LF1	My leader is absent when needed							
LD2	My leader goes beyond self-interest for the good of the Team							
LF1	My leader delays responding to urgent questions							
LD5	My leader talks about his/her most important values and beliefs							

List of Firms

Count	Name of Firm
1	Alpha Line Foods
2	Quality Meat Packers Limited
3	Covenant Investments Agencies
4	S M Thiani Slaughter House
5	Lyntano
6	HY-Q Enterprises Ltd
7	Season Kenchir
8	Kenchic Limited
9	Samaki 2000 Limited
10	Prinsal Enterprises Ltd
11	W.E Tilley (M) Limited
12	Wondernuts (K) Limited
13	Highlands Canners Limited
14	Razco Limited
15	Scan African
16	Globalfresh Limited
17	Gonas Best Limited
18	Macuisine
19	EA Chappanina
20	Frigoken Limited
21	Energy Food Ltd
22	Everest Enterprise Ltd
23	Value Park Food Ltd
24	Cofresh Confectioners
25	Juicee Juice It Up Ltd
26	Premier Oil Mills Ltd
27	Banoda Oil Limited
28	Towrit Oil Limited
29	Erthoil Kenya PTY EPZ Ltd
30	Vector International Limited
31	White Dezert Limited
32	New KCC Limited
33	Bio Food Products Ltd
34	Innovative Ingredients Solutions Ltd.
35	Glacier Product Limited
36	Savco Millers Limited
37	Muharata Food Company Limited
38	Uzuri Foods Limited
39	Winnies Pure Health
40	Incas Health International Ltd
41	Panafrican Grains Millers
42	Kamili Packers Ltd
43	Spice World Limited
44	United Millers
45	OM Millers Ltd
46	Prosoya K Ltd
47	Paff Enterprises
48	Ukeli Flour Mills
49	Star Millers Ltd
50	Belt Poshomill
51	Faj Safe Way Foods
52	Gitembura Millers Limited
53	Maisha Bora Millers
54	Manyatta Millers
55	Pointex (K) Limited
56	Solai Flour Mills
57	Breakfast Cereal Co Limited
58	Raen Posho Mill
59	Aum Maize Millers
60	Soy Afric Ltd
61	Aberdares Maize Milling Ltd
62	Cateress Milling Company Limited
63	Khusmi Millers Limited
64	Ngara Flour Mills
65	Pioneer Foods
66	Norda Industries Ltd
67	Duluexe Food Industry
68	Wheat Bee Ltd
69	Dolly's Bakery Limited

70 Devkan Enterprises Ltd
71 Bakers Corner Company Limited
72 Enterprise Road Branch
73 Books First
74 Hongs Bakery Restaurant
75 Linset Industries Ltd
76 Rose Gardens Confectioners
77 Well Bache Products
78 Alexandre Chocolating Ltd
79 Gold Wheat Bakers
80 Bakers Gardens
81 Avon Industries Ltd
82 Kambakers
83 Bakers Den 2006 Ltd
84 Plum Bakers
85 Valentine Cake House Ltd
86 Bake N Bite (NBO) Ltd
87 Burhani Bakery
88 French Bakery
89 Ticktack
90 Korn Bakers Nairobi Ltd
91 Kuster Bakers
92 Gal Baking Services Limited
93 Mibisco Limited
94 Mill Bakers Ltd
95 Mini Bakeries (Nairobi) Limited
96 Caperins Enterprises
97 Innscor Kenya Ltd
98 The Windmill Limited
99 Fresh Bake Ltd
100 Nanjala Limited
101 Chapban Bhog Ltd
102 Hometown Bakery Ltd
103 Celebrate Cakes
104 Tausi Cake & Candy Shop
105 The Wrigley Company EA Ltd
106 Pearl Industries
107 Patco Industries Limited
108 Thakker Sweets
109 Kenya Sweets Ltd
110 Sweety Sweets Ltd
111 Jambo Biscuits (K) Limited
112 Wrigley Company EA Ltd
113 Kibwari Limited
114 Deepa Industries Ltd
115 Melyin Marsh Ltd
116 Supacosm Products Limited
117 Al-Mahra Industries Ltd
118 Propack Kenya Limited
119 Dormans Coffee Ltd
120 Agro Chemical & Food Co Limited
121 Nature's Health Ltd
122 Chirag (Kenya) Ltd
123 RLPIS Industries Ltd
124 Bizari Packers and Grinders 2008
125 Nestle Foods Kenya Limited
126 Dandora Millers Ltd
127 Economy Farm Products Ltd
128 Pioneer Feeds Ltd
129 Hemco Feeds (K) Ltd
130 Tarime Supplies
131 Super Animal Feeds
132 Global Environmental Solutions Ltd
133 Dajan Millers
134 Stanpur K Limited
135 By Grace Farm Feed Ltd
136 Maridadi Harvest Ltd
137 Healthier Feeds
138 Sigma Feeds Ltd
139 Cleanwell Products Ltd
140 Carevet Systems Limited
141 Tamfeeds Limited
142 Kengrow Limited
143 Wann Feeds
144 Patiala Distillers (K) Ltd
145 Cryway Enterprises Limited
146 Ozzbeco Kenya Limited
147 Vineyard Holdings Limited

148 Kenya Breweries Ltd
149 Vinepack Limited
150 Keviann Kenya Ltd
151 Beverage Services Kenya Limited
152 Vilcos Foods Products
153 The Good Water Co. Ltd.
154 Villos Food Prioducts
155 Modular Products Limited
156 Victoria Juice Powder
157 Giant Capital Technologies
158 Maasai Mineral Waters Limited
159 Aviano Eastafrica Limited
160 Wandomist Supplies
161 Wotafina Springs
162 House of Aloe Limited
163 Juice Paradise
164 Ragos Trading Company Ltd
165 Aquamist Limited
166 Aqua Minerals & Beverages Ltd
167 Afia Commodities (Kenya) Ltd
168 Nestle Equatorial African EPZ Ltd
169 Kathini Spring Mineral Water Ltd
170 Udv (Kenya) Limited
171 The Spinners Ltd
172 Migotiyo Plantation Ltd
173 African Cotton Industries Ltd
174 Wildlife Works (EPZ) Limited
175 Spinners & Spinners Ltd
176 Oriental Mills Ltd
177 Interweave Craft
178 Dimple Tailorig and Boutique
179 Kaajal Textiles Limited
180 Pinacle Promotions & Advertising
181 Shuang Hong Limited
182 Sunrise Textile & Knitwear Mills
183 Tikoo and Company Limited
184 The Limited Textile Industries (K)
185 Tarpo Industries Limited
186 Vikrut Prerequisites Ltd
187 Crown Tent and T
188 Edges & Metals Services
189 Executive Curtains and Furniture Ltd
190 Azad Automobile Trymmings Ltd
191 Kema Tents Enterprises
192 Oasis Tents & Shades
193 Noor Relief Services Ltd
194 Nyabitange Tents & Camp. Logistics
195 Tally Creations
196 ABC Tents
197 Mohanlal Naran & Bros
198 Mosman Enterprises
199 Chalange Industries Ltd
200 Classsic Uniform Makers Ltd
201 Wananchi Clothing Factory (K) Ltd
202 Trio Craft & Rugs Ltd
203 Kamba Manufacturing
204 Wild Elegance Fashions Ltd
205 Polo Industries Ltd
206 Kiboko Leisure Wear
207 Crown Clothing K Ltd
208 Distinct Garment Factory
209 Kawa Garments Ltd
210 Nishit and Co Ltd
211 Chandaria Industries Ltd
212 Ngecha Industries Limited
213 Nets Limited
214 United Aryan EPZ Ltd
215 LO-Stud Ltd
216 Brother Shirts Factory Ltd
217 Straight Line Enterprises Limited
218 Tinga Ntina Lifestly Limited
219 Dynamic Drapers Limited
220 Bronx Ltd
221 Manchester Outfitters Ltd
222 Kana Garments Ltd
223 Bestfoam Company Limited
224 Nairobi Drapers Kenya Limited
225 Aziz Tanneries Ltd

226 Zungo Investments Ltd
227 Goldrock Int.Enterprises Co. (K) Ltd
228 East African Tanners K Ltd
229 Faaso Exporters Limited
230 Zingo Investments
231 Abdulwadood Tanners Limited
232 Sandstorm (Africa) Limited
233 Donglang Compant Ltd
234 Ark Tents & Leather Ltd
235 Kenafric Industries Ltd
236 Topen Industries Ltd
237 Kenya Suitcase Manufactyrers Ltd
238 Best Choice Shoes
239 Italshoe (K) Limited
240 Weagals E.A Limited
241 Woodtex (K) Ltd
242 Wood Manufacturers Ltd
243 Exotic Wood Products Limited
244 Woodquip Industries Ltd
245 Jalaram Timber Hardware Ltd
246 Ramdev Timber Yard Limited
247 Shah Saw Mills Limited
248 Sarma Enterprise Limited
249 Nairobi Timber Projects Ltd
250 Tim Joint Ltd
251 Gopi Furniure & Joinery Ltd
252 Techoro Systems Ltd
253 Wooland Art & H/W Ltd
254 Kenice Investment
255 Wood Oak Enterprises
256 Woodoak Enterprises Ltd
257 Jaswood Works
258 Tumac Alluminium & Interiors Ltd
259 Woodlands Art & Hardware Ltd
260 Furniture International Ltd
261 Kings Kichen Kenya Limited
262 Cherry Interior
263 Woodcharm
264 Jubilee Woodsales Ltd
265 Wedgewood Kenya Ltd
266 Pentagon Interior Ltd
267 Mobilcasa
268 The Paper House of Kenya Ltd
269 Vimit Convertors Ltd
270 Tissue Kenya Limited
271 Int. Paper& Board Supp. Ltd
272 Wonderpac Industries Limited
273 Tetra Pak
274 Harman Products
275 Transpaper Kenya Ltd
276 Interlabels Africa Ltd
277 Express Systems Company Limited
278 D.L Patel Press Kenya Limited
279 Kimfay E.A Ltd
280 Paper Converters (K) Limited
281 Stamet Products (K) Ltd
282 Press Master Limited
283 Karsan Serviettes Co.Ltd
284 Colour Packaging Ltd
285 Stallion Stationery Manuf. Ltd
286 Ekotech Ltd
287 Top Rank Suppliers
288 Print Options Limited
289 Printbase Limited
290 De La Rue Curr. & Security Print
291 General Printers Ltd
292 Sitima Printers & Stationers Limited
293 Print Fast Kenya Ltd
294 Printfast Kenya Limited
295 The Rodwell Press Ltd
296 Brand Printers Ltd
297 Icon Builders Limited
298 Manipal Int. Printing Press Limited
299 Color Creation Limited
300 Taws Ltd
301 Daisy Print Ltd
302 Adpak International Ltd
303 Para Print Limited

304 Yastat Kenya Ltd
305 Bomata Enterprises
306 Prodex East Africa Limited
307 Inkit Solutions Limited
308 Wileun Enterprises Ltd
309 Giant Printers
310 Sian King Enterprises Limted
311 Pan Printers Stationers
312 Tesha (K) Ltd
313 Hills Converters Kenya Limited
314 Impress Comm. Print. & Stationers
315 The Creative Print House Ltd
316 Starbright Services Ltd
317 Evans Brothers Kenya Ltd
318 Orchid Printers & Stationers Ltd
319 Universal Signs Limited
320 Paper Presentation Ltd
321 Paperline Limited
322 Pop Digital Centre K Ltd
323 Repute Services Limited
324 Maritak Enterprises Ltd
325 Mary Land
326 Print Point Suppliers
327 Typtronic Typesetters Ltd
328 Promo Factory Ltd
329 Beehive Press Limited
330 Fabulous Printers Ltd
331 Georfath Enterprises
332 Gooba Printing Services Limited
333 Hopeland Advertising & Designs Ltd
334 Identisys Limited
335 Liberty Graphics & Prints
336 Birds Printers O/Stationery & Eq Ltd
337 Double G Enterprises
338 Horizon Setters Ltd
339 Junior Printing Services
340 Acromedia Graphics (K) Limited
341 Bunish Enterprises
342 Downtown Printing Works Limited
343 Geo-Graphics Limited
344 Jay Products Limited
345 Topad Graphics Ltd
346 Viewright Concepts
347 Elegant Alternatives Ltd
348 Emicus Stationers and Printers
349 Excel Enterprises
350 Ideas & Places Media Ltd
351 Joycate Photocopy Bureau
352 Ndelex Digital Technology
353 Robbin Print. Stat & Educ Boosters
354 The Papercraft Company Ltd
355 Zeks Printers & Stationary
356 East Coast Printers Ltd
357 Geo Tek Papers
358 Grasy Photo Enterprises Ltd
359 Immaculate Stationers
360 Metro Printers & Stationers
361 Prevanol Agencies
362 Printbase Solutions
363 Quicknet Enterprises
364 Savannah Printers Ltd
365 Step by Step Printers
366 Top AD Graphics Limited
367 Danmon Printers
368 Digitech Computers Ltd
369 Herna Promos. Print. & Stationers
370 Hill Hopes Enterprises
371 Javdocksers Enterprises
372 Kenmax General Suppliers
373 Luciwa Printers & Stationers
374 Perie Printers & Stationers
375 Plusman Agencies
376 Point Image
377 Qualigraphix
378 Realtime Communications Ltd
379 Spear Promotions
380 Star Printers (1975) Limited
381 Texlab Mega

382 Three Knights Production
383 Zihom Enterprises
384 Avant Premier Ltd
385 Axis Printers
386 Black Brand Enterprises
387 Delux Printers Ltd
388 Myrmidon Agencies
389 Sensitae Image
390 Wem Enterprises Ltd
391 New Ivory Press
392 Scarlet Procures & Prints
393 Grapevine Creation
394 EA Educational Publishers Ltd
395 Execurive Printing Works Ltd
396 Fast Signs Aduerts Ltd
397 Kul Graphics Ltd
398 Mfangano Printing Press Ltd
399 Mbuthia Production Service
400 Nairobi Express Litho
401 Nick Creations Ltd
402 Ex-Sec Printers Ltd
403 Paper Line Limited
404 Newtec Concept Limited
405 Kar Designs Ltd
406 English Press Limited
407 Colourlabels Limited
408 Clement W. Aliki Print. & Stationers
409 Epitome Press Limited
410 Acme Press K Ltd
411 Capital Printers
412 Joypet Services & Printers Ltd
413 Colortunes Kenya Ltd
414 Plas-Kit Kenya
415 Morven Kester (EA) Ltd
416 Reality Printers Limited
417 City Imaging Ltd
418 Signal Press Ltd
419 Greenwood Printers & Stationers
420 Fortune Printers and Stationers
421 Sunking Printers and Enterprises Ltd
422 Pawn Printers & Stationary Ltd
423 Capgrade Technologies
424 Centenary Printers Ltd
425 Ruzamin Graphics
426 Industrial Forum Limited
427 Graphic Images Ltd
428 Rainbow Printographics K Ltd
429 Zahur Printers Ltd
430 Siwam Stationers Ltd
431 Lawcat Enterprises
432 Joesally Printers & Gen Suppliers
433 Majestic Printing Works Ltd
434 Advance Litho Ltd
435 Lauh Print Company Limited
436 Chrysalis Ltd
437 Columbus 2000 Ltd
438 Karusan Enterprises
439 Image Design Africa
440 Prolink Agency
441 Cartridge Workshop Limited
442 Zakuna Printers Ltd
443 Maten Productions
444 United Chemicals Industries Ltd
445 Total Kenya Ltd - Bitumen Plant
446 Jakharia Packers
447 Ocenn Lubricants Ltd
448 Lean Energy Solutions Ltd
449 Modern Oil Processors Limited
450 Midland Energy Ltd
451 Colas East Africa Ltd
452 Metoxide Africa Ltd
453 Welding Alloys Ltd
454 Bio Medica Laboratories Ltd
455 Decase Chemicals Ltd
456 Polyblend Ltd
457 Kel Chemicals Ltd
458 Boc Kenya Limited
459 Afa Chemicals Ltd

460 Kemia International Limited
461 Kenbro Ind Ltd
462 Ken Aluminium Products Ltd
463 Synresins Limited
464 Polythene Industries Ltd
465 Afro Plastics Kenya Ltd
466 Africa Polysack Limited
467 Naivasha Plastics Limited
468 Bayer East Africa Limited
469 Dera Chemical Ind (K) Ltd
470 Nova Industries Ltd
471 Kenya Wood Products Ltd
472 Seweco Ind. Coatings Co Ltd
473 United Paints
474 East African Inks
475 Ken Nat Inks & Chemicals Ltd
476 Smart Coating Limited
477 Alpha Paints Ltd
478 Revolution
479 Rehsi Ventures
480 Molar Paints & Chem Ltd
481 Easy Paints Ltd
482 Euro Better Paint
483 Suron Prints
484 Prime Coatings Ltd
485 Kenind Products (K) Limited
486 Sunchem Enterprises
487 Taiga Paints
488 Deco Paints Limited
489 Lunar Paints
490 Elmco Paints and Hardware Ltd
491 EA Synjans & Chemicals Ltd
492 Shivam Enterprises Ltd
493 Deluxe Inks Limited
494 Inks Kenya Limited
495 Kamdev Enterprise Ltd
496 Seweco Paints Ltd
497 Henkel Kenya Limited
498 Rumorth Group of Companies
499 Orbit Chemicals Industries Ltd
500 Triclover Induustries K Ltd
501 Buyline Industries Limited
502 Diversy E & Central Africa Ltd
503 Syner Chemie Ltd
504 Dove-Way Industries Ltd
505 East African Ventor Co Ltd
506 Oasis Limited
507 Blue Ring Products Limited
508 Sudi Chemical Industries Ltd
509 Stalite Systems Company Ltd
510 Nanychem Products Ltd
511 Ecolab East Africa (K) Ltd
512 Nightrose Cosmetics (1972) Ltd
513 Beauty Plus Trading East Africa
514 Emem Enterprises Ltd
515 Robico Chemicals
516 Nyumbani Soap Factory
517 The House of Marashi
518 Diarim Enterprises Ltd
519 Expan Chemicals Lab Equipment
520 Sureclean Products Ltd
521 Halide Chemical Industries
522 Sheer Magic Cosmetics
523 Interconsumer Products Ltd
524 PZ Cussons East Africa Ltd
525 European Perfumes & Cosmetic Co.
526 Elex Production (EA) Ltd
527 Jet Chemical (K) Ltd
528 Century Clening Products Ltd
529 Soiler Prosolue Ltd
530 Doric Industries Limited
531 Chemkleen Products Ltd
532 Paragen Chemical Industries Ltd
533 Farm Chemicals
534 Ball Chemicals
535 Tiger Brands (K) Limited
536 Haw Industries Limited
537 Sara Lee Kenya Ltd

538 Odex Chemicals Ltd
539 Continental Products Ltd
540 Xpert Adhesives Ltd
541 Kam Industries Ltd
542 High Chem Industrials Africa Ltd
543 Match Masters Limited
544 Leons Chemicals
545 Teckote Enterprises
546 Maikar Quality Products
547 Murphy Chemicals
548 Balm Industries Limited
549 Assia Pharmaceuticals
550 Eastleigh Pharmaceutical Co Ltd
551 Sigma Laboratories
552 Earthoil Kenya Proprietary EPZ Ltd
553 Nerix Pharma Limited
554 Gestro Pharmacueticals
555 Vicente Chemicals Ltd
556 Behea Pharmacy Ltd
557 Infusion Medicare Limited
558 Vetcare Kenya Limited
559 Revital Healthcare (EPZ) Ltd
560 Megascope Laboratories Limited
561 Laboratory & Allied Ltd
562 Manhar Brothers (Kenya) Ltd
563 Legal Phermaceuticals Ltd
564 Regal Pharmaceuticals Ltd
565 Cooper K Brands Ltd
566 Dawa Ltd
567 Comet Healthcare Ltd
568 Concept (Africa) Limited
569 Tawazon Chemicals Co. (EA) Ltd
570 Twokay Chemicals Limited
571 Two Families Limited
572 Oline Retreads Ltd
573 Treadsetters Tyres Ltd
574 Rubber Products Limited
575 Dajoveter Enterprise
576 Precision Rubber Stamp Studio
577 Thermopak Limited
578 General Plastic Ltd
579 Elgon Kenya Limited
580 Haco Industries Ltd
581 Packaging Industries Ltd
582 Techpak Industries Ltd
583 Eslon Plastics of Kenya Ltd
584 Paper Bags Ltd
585 Laneeb Plastic Ltd
586 Plastic Industries Limited
587 Polyflex Industries Ltd
588 Spring Box K Ltd
589 Plastic Electronics
590 Sunplast Ltd
591 Viking Industries Ltd
592 Samura Engineering Ltd
593 Dentex Industries Ltd
594 Coninx Industries Ltd
595 Kinrash Entrprises Ltd
596 Hydraulic Hoses & Pipes Ltd
597 Ish Plast Ltd
598 Polypipes Ltd
599 Fosters Packaging Ltd
600 Thorn Tree Production
601 Speccon Company Limited
602 Hi-Plast Ltd
603 Statpack Industries Ltd
604 Spring Board Kenya Limited
605 Plastic Products Co Ltd
606 Agro Irrigation & Pump Services Ltd
607 Shrink Pack Ltd
608 Premier Industries Limited
609 Asnoplastics (K) Ltd
610 Metro Plastics Kenya Ltd
611 Nairobi Plastics Ltd
612 Laneeb Plastic Industries Ltd
613 Platinum Packaging Ltd
614 Complast Industries Ltd
615 Specialiased Fibreglass Ltd

616 Friendship Container Limited
617 Packaging Masters Ltd
618 A-Plus PVC Technology
619 Kip Melamine Company Ltd
620 Dunlop Industries Limited
621 Rushabh Industries Limited
622 Cerapak Products Limited
623 Chui Manufactures
624 Alankar Manufacturer Limited
625 Kenpoly Manufacturers Limited
626 Uni - Plastics Limited
627 A-One Plastics Ltd
628 Jojo Tanks Limited
629 Wilmag (K) Limited
630 Super Manufacturers Limited
631 Specialised Fibre Glass Ltd
632 Glass Manufacturing
633 Sai Raj
634 School Equipment Production Unit
635 Saj Ceramics Limited
636 Kenya Clay Products Ltd
637 Rak Ceramics (K) Ltd
638 Sterling Craft Kenya Ltd
639 Tile City Limited
640 Pottery Africa
641 Clay Artisan S.H.G
642 Mombasa Cement Limited
643 Kenya Builders and Constr. Ltd
644 Eagle Tiles
645 National Concrete Ltd
646 Bilco Ingineering
647 The Dogra Engineering Co. Ltd
648 Bhimji Ramji & Sons (K) Ltd
649 Quality Bitumen Products Ltd
650 Devki Steel Mills Ltd
651 Turn O Metal Eng Ltd
652 Insteal Limited
653 New World Stainless Ltd
654 Emco Billets & Steel Ltd
655 Mabati Rolling Mills Ltd
656 Steel Structures Ltd
657 Rom East Africa Ltd
658 Dominion Engineering Works Ltd
659 Kenya Steel Fabricators Ltd
660 East African Metal Works Ltd
661 Specialized Aluminium Renovators
662 Jagjiwan Hirji & Bros
663 Bantaram and Co Ltd
664 Brass and Allied Intl Ltd
665 Trera Engineering Ltd
666 Velka Engineering Ltd
667 Donvic Steel
668 Halai Engineering Co Ltd
669 New Utaati & Utagwa Fabrications
670 Jaimen Mechanical Engineers
671 Essential Structures Africa Ltd
672 Frera Engineering Ltd
673 Samphic Engineering Gen Work
674 Hitech Fabricators Ltd
675 Lucas Engineering Works
676 Prime Aluminium Casements Ltd
677 Dynamics General & Ind. (K) Ltd
678 High Hope Steel Fabrics Woodwork
679 Wrought Iron Design
680 Tononoka Rolling Mills Ltd
681 Chuma Fabricators Limited
682 City Engineering Works Ltd
683 Canton Steel Fabrications Ltd
684 Jantech Engineering Ltd
685 Habi Singh Co Ltd
686 Zedco Radiators & Cooling Syst. Ltd
687 East Africa Spectre Limited
688 Specialised Engineering Co. EA Ltd
689 Span Fabricators Limited
690 Draft & Develop Engineers
691 Workhaus Fabricators Ltd
692 Benesho
693 Donholm Metal Fabricators

694 Esaco Engineering Services
695 Millian Auto-Accessories& Welding
696 Assa Abloy (EA) Ltd
697 Jegat Singh & Sons Ltd
698 Kamco Stainless Steel Works Ltd
699 Tin Can Manufacturers Limited
700 Wire Products Ltd
701 Iron Art Ltd
702 Falcom Commercial (K) Ltd
703 Gurdev Eng & Const Works Ltd
704 Zahra Sign Systems Ltd
705 East Africa Cans &Closures Ltd
706 Northstar Packaging Ltd
707 Housemark Co Ltd
708 Cosmic Engineering Ltd
709 Spie Engineering Works Ltd
710 Aquva Fabricators Ltd
711 Kenmet Engineering Works
712 Jey Rabricators
713 Pentagon Steel & Wood Fabricators
714 G.M Metal Works
715 Modern Reliance Industries Ltd
716 Heavy Engineering Limited
717 Bells Associates Limited
718 Garage and Industry Ltd
719 Jagat Singh & Sons Ltd
720 Reliable Electrical Eng. (NRB) Ltd
721 Pctl Automation Limited
722 Sintronics Ltd
723 Infocard Africa Ltd
724 Zumtd Communication Ltd
725 T and D Group Ltd
726 East Africa Cables Ltd
727 Afro Cables Industries Limited
728 Power Protection Ltd
729 Kenshades Limited
730 Nationwide Elecrticals Industries Ltd
731 Craftskills EA Limited
732 Pelican Signs Limited
733 Sen Tech Limited
734 Kenya Hydraulics Ltd
735 Bhamra Gears Ltd
736 Italproduct Ltd
737 Jostechno East & Central Africa Ltd
738 Victo Hydrotech and Radiator Serv.
739 Timwood Product Ltd
740 David's Scales and Equipment
741 Pipe Manufacturers Ltd
742 JF Mccloy Limited
743 Holman Brothers (EA) Ltd
744 Farm Engineering Industries Ltd
745 Associated Casket Manuf. Ltd
746 D.K.Engeneering Co.Ltd
747 Balwart Didar Engineers Ltd
748 Kirinyaga Flour Mills
749 Jaydees Knitting Factory Limited
750 Kickstart International
751 Troika Limited
752 Highland Tourist Ind. Garage Ltd
753 Axel Eng. and Manufacturing Ltd
754 Banbros Ltd
755 Patmose Technical Services
756 Two Auto Tech Kenya Limited
757 Dynacorp Motors Ltd
758 Kehar Enterprises Ltd
759 Wananchi Industries Ltd
760 Dodi Autotech K Ltd
761 Diaster Auto Care Centre Ltd
762 Jodacom Fabricators
763 Admart Africa Limited
764 African Trailers Ltd
765 Labh Singh Harnam Singh Ltd
766 Choda Fabricators Limited
767 Agro Manufacturing Co Ltd.
768 Associated Motors Limited
769 Kenya Motors and Equpment Motors
770 Motor Mania Body Shop Build. Ltd
771 Saikam Fabricators (K) Ltd

772 Spring Industries Limited
773 Primetech Industries EA Limited
774 Vileo (K) Ltd
775 Silent Flow Exhaust Manuf. Ltd
776 Trichamp Industries K Limited
777 Hill Products Kenya Ltd
778 Setlak 2000 Motor Cycles
779 Megh Cushion Industries Ltd
780 Hans Kenya Ltd
781 Chui Auto Springs Industries Ltd
782 Unifilters Kenya Limited
783 Sagoo Holdings
784 Champion Radiators
785 Kingsway Tyres Limited
786 Jarrow Road Metal Enterprises
787 Charger Engineers Limited
788 Mugih Wheel Chair Manufactures
789 Indian Spary Painters Ltd
790 Ndani Interiors Limited
791 Veneer Industries Limited
792 Odds and Ends Limited
793 Ramboo Colour Cane Limited
794 Hwansung Industries (K) Ltd
795 Panesar's Kenya Limited
796 Shan Timbermart Limited
797 Sitaram Wood Manufacturers Ltd
798 Italian Design Furnitureltd
799 Neo Inferior Decorations Ltd
800 New Line Ltd
801 Furniture Masters Ltd
802 Orbit Engineering Ltd
803 Satjoiners Ltd
804 Orienza Limited
805 Tomhogany
806 Elite Interiors & Office Supplies Ltd
807 Indian Ocean Creations Ltd
808 Sospa Enterprises
809 Komolo General Woodwork
810 Metro Wood Ventures
811 Adix Plastics Ltd
812 Marvelous Furnitures
813 Ikinu Furniture
814 Unity Timber and Wood Works
815 Zana Zindukana Limited
816 Tidy Homes
817 Alpha Seats and Fittings
818 Mbagathi Furniture Centre
819 Mica Furniture Mart
820 Alesitwa Furniture
821 Elyonabi Furniture
822 Faith Base Furniture Land
823 Juliet Wood Furnitures
824 Palma Art Production and Designs
825 Sammy's Workshop
826 Sou Furnitures
827 Good Will Furnitures
828 Jats Furnitures
829 Reflection Furniture Ltd
830 Timu Furniture
831 Woodart K Ltd
832 Khush Furniture
833 Amukune & Sons Furnitures Mart
834 Mugaka Workshop
835 Mibm Ltd
836 East End Metal Fabricators
837 Sheffield Steel Systems Ltd
838 Mekan E.A. Ltd
839 Mecol Limited
840 Slumberland Kenya Limited
841 Seiwa Furniture Interior Design. Ltd
842 Viable Deco Solutions Ltd
843 Bucon Furnitures Limited
844 Renacon
845 Orienza Furniture Ltd
846 Bush Furniture Enterprises
847 Tim Furniture and Timber Merchant
848 Mango Ltd
849 Vaughan Limited

850 Rana Art Jewellers
851 Kenya Cuttings Limited
852 Sportex Investments Ltd
853 Zenith Steel Fabricators Ltd
854 The Regal Press Kenya Ltd
855 Eurocon Tiles Products Ltd
856 Aqua Farm Producers
857 Arrow Plastics Limited
858 Bijal Textile
859 Bloomingdale Ltd.
860 Crystal Chemical Company Ltd
861 D.T. Dobie & Co Kenya Ltd
862 Dipkatex
863 Dodwell & Company (EA) Ltd
864 E.A Syntans & Chemicals Ltd
865 Essence Limited
866 The Ice Man Limited
867 The Image Centre Limited
868 Three Cube Printing Limited
869 Ved Office Set Limited
870 Vermont Flowers (EPZ) Limited
871 American Bottling Company Ltd
872 Arif Mido Paints Company Ltd
873 Aua Industria
874 Bahati Industries Ltd
875 Bhachu Industries Ltd
876 Biashara Emporium
877 Brass and Allied Works Ltd
878 Continental Brands Ltd
879 Counterstrike Ltd
880 Crown Rockshield Kenya Ltd
881 Dafra Pharma Limited
882 Delinton Kenya Limited
883 Derby Rubber Conveyors (K) Ltd
884 Dettar Kenya
885 Ean Kenya Limited
886 Ebony Wood Designs Ltd
887 Enest Solutions Limited
888 Eqstra East Africa Limited
889 Equator Apparels Company Ltd
890 Olympic Manufacturers Ltd
891 Pinechem Kenya Ltd
892 Plastico Industries Ltd
893 Pots and Pans (2002) Ltd
894 Premier Fresh Limited
895 Quinn Peaks Limited
896 Well Baked Wheat Products
897 Wood Touch Options Ltd
898 Alltex EPZ Limited
899 Arax Mills Lmited
900 Bavaria Auto Limited
901 Beverage Industries Africa Ltd
902 Costek Alma Limited
903 Critical Mass Growth Ltd
904 Dearly Born Limited
905 Deluxe Food Industries Ltd
906 Denova East Africa
907 Dentmed (K) Limited
908 Desang Limited
909 Designwear Limited
910 Diamond Ceramics & Interiors Ltd
911 Druck Machines International Ltd
912 Ellams Products Limited
913 Energy Pak (K) Limited
914 Orchard Juice Limited
915 Phamerline Products Ltd
916 Pozzolana Stones Ltd
917 Pressure Vessels Ltd
918 Productivity Plus Ltd
919 Protea Polymers EA Ltd
920 Quickpack Limited
921 Tesben Workshop
922 Woodrock Furniture Mart Ltd
923 Anti-Split Metal Plates (E.A) Ltd
924 Associated Bitumen Ltd
925 Blantyre Steel Limited
926 Brooms Limited
927 Coseke (K) Limited

928 Derby Registrars Limited
929 Dhanjal Panel Beaters
930 Esgray Company Limited
931 Esolutions Limited
932 Essential Pharmaceuticals Ltd
933 Phoeni Paper Ltd
934 Technology Auto. Concept Ltd
935 The Mug Company Limited
936 Trishul Stationers Limited
937 Vacu-Lug Traction Tyres (K) Ltd
938 Ama Industries Ltd
939 Anchor Polythene & Sweet Dealer
940 Asiana (Kenya) Ltd.
941 Azad Cushion Maker Ltd
942 Bag and Envelope Converters Ltd
943 Basco Products Kenya Ltd
944 Biba Limited
945 Blinds Masters Ltd
946 Crom Impex Ltd
947 Cugini Limited
948 Cunningham Lindsey Kenya Ltd
949 Cynkey Limited
950 Dawaline Kenya Ltd
951 Delta Dunes Ltd
952 Dextron Tools Limited
953 Digi-Tel R F Solutions Ltd
954 Dilpak Kenya Limited
955 Dubuit Kenya Limited
956 Nitro Chemicals Ltd
957 Protex Kenya EPZ Ltd
958 Rafiki Plastics Ltd
959 Techno - Plast Limited
960 Time Chemicals Limited
961 Triple Tee Facilitators Ltd
962 Vartus Company Ltd
963 Yorpower Manucturing Ltd
964 Aquatech Industriies Ltd
965 Bader Paper Convertors Ltd
966 Big Five Breweries Ltd
967 Brazafric Industries (K) Ltd
968 Bullpak Limited
969 Cruise East Africa Ltd
970 Cruising Cruisers Ltd
971 Damco Logistics Kenya Ltd
972 Delta Corp East Africa Ltd
973 Eslys East Africa Ltd
974 Paceseter Services Ltd
975 R.A.K Ceramic (K) Ltd
976 Radiance Pharmaceuticas Ltd
977 Rafiki Industries Ltd
978 The Scotts Company Kenya Ltd
979 Tripac Chemical Industries Ltd
980 Tuffsteel Limited
981 Urban Iron Fabricators
982 Verecom Company Limited
983 Alanwood Limited
984 andiron Aluminium Ltd
985 Azingo Enterprises Limited
986 Bakers Oven Limited
987 Budget Shoes Limited
988 Creative Manufacturers Ltd
989 Deeps Scissors Crew
990 Dovecote Company Ltd
991 DPL Festive Industries Ltd
992 D'zine Limited
993 Essemmars (EA) Ltd
994 Kaluworks Limited
995 Nova Chemicals (NCL) Ltd
996 Novel Paints Limited
997 Novelty Manufacturing Ltd
998 R & R Plastics Ltd
999 Tiger Tinga Productions Ltd
1000 Willart Production Limited
1001 Wire Form & Metal Prod. (K) Ltd
1002 Woodmakers Kenya Ltd
1003 Alpha Wollens Kenya Ltd
1004 Antiqa Furniture Limited
1005 Asiaguard Float Glass Co Ltd

1006 Bett Company (K) Limited
1007 Bora Services Limited
1008 Denamal Garments Factory (K) Ltd
1009 Desbro (Kenya) Limited
1010 Dialfreight East Africa Ltd
1011 Diamond Chemicals Ltd
1012 Dotsavvy Limited
1013 Dune Packaging Ltd
1014 Dura Roofing Products (E.A) Ltd
1015 Eggen Joinex Limited
1016 Elephant Pepper Camp Ltd
1017 Emmerdale Limited
1018 Faima Ventures Limited
1019 Kenido Agencies Ltd.
1020 Oss-Chemie (K) Limited
1021 Parkline Industries Ltd
1022 Plexchem Limited
1023 Prom-Tech Limited
1024 Strategic Industries Ltd
1025 Trutex Ties Limited
1026 Ultra Chemical Industries
1027 Unique Metalbeds Metal Ltd
1028 Alpha Knits Limited
1029 Areva T & D Limited
1030 Auto Spring Manufacturers Ltd
1031 Bags & Balers Manuf. (K) Ltd
1032 Bi-Am Steel Products (K) Ltd
1033 Bilkhu Steel Works
1034 Bliston Textiles Limited
1035 Bunny Industries Limited
1036 Consolidated Timber Ltd
1037 Daisy Creative Publishers Ltd
1038 Dambusters 77 Limited
1039 D'souza and Company
1040 Duorop Cycle Farm Ltd
1041 Ennsvalley Bakery Ltd
1042 Excloosive Limited
1043 Express Company Ltd
1044 Patcom Company Ltd
1045 Qplast Industries Ltd
1046 Sphinx Pharmaceuticals Ltd
1047 Termiterion TCS Limited
1048 Themescape Media Limited
1049 Treasures and Crafts Ltd
1050 Worth Oil Processors Ltd
1051 Aquaplast Limited
1052 Bahati Ventures
1053 Bids Garment Limited
1054 Black Diamond Limited
1055 Britind Industries Limited
1056 Compict Systems Limited
1057 Custom Aluminium EA Ltd
1058 Dharamshi and Company Ltd
1059 Dhruv Ceramics Limited
1060 DK & West Limited
1061 Dormel Gowns Limited
1062 Engen Kenya Ltd
1063 Enreal Limited
1064 Modern Ways Limited
1065 New Market Leather Factory Ltd
1066 Parco Kenya Limited
1067 Penmain Company Ltd
1068 Qayrat Foods Limited
1069 The Print Exchange Ltd
1070 Twiga Clothing Factory
1071 Arpi Limited
1072 Black Petals Limited
1073 Complete Autocentre Ltd
1074 Deekos Bakers
1075 Dew CIS Solutions Ltd
1076 Diopex (K) Limited
1077 Exotics Kenya Limited
1078 Our Choice Bread
1079 Penguin Labs Co. Ltd
1080 Picasso Chemicals
1081 Pratap Auto Fabric
1082 Priority Electrical Engineering Ltd
1083 Prolab Limited

1084 Promofood (K) Limited
1085 Stuart Printers Limited
1086 The Candle House
1087 Vermiculite Industries (K) Ltd
1088 TingaTinga Intern. Clothing Ltd
1089 Power Megger
1090 Nairobi Imaging Centre Ltd
1091 Someni Industries Ltd
1092 Reckitt Benckiser East Africa Ltd
1093 Panchavati Brand Ltd
1094 Synergy Pro
1095 Switchcraft Limited
1096 Bell Industries Ltd
1097 Jencons (Scientific) Ltd
1098 Afro Homes Ltd
1099 Packtech Supplies and Agencies
1100 Jaribu Emporium
1101 Unique Imprints Kenya
1102 Kariobangi Light Industries
1103 Marvel Lifestyle Limited
1104 Kenya Tents Limited
1105 Clayworks Limited
1106 Black & Beauty Products
1107 Shri Genesha Manufacturers Ltd
1108 Ivee Aqua EPZ Limited
1109 Nasib Industrial Products Ltd
1110 Ramani Designs Company Ltd
1111 Twinchem Limited
1112 Nairobi Tanneries Limited
1113 Kemta Manufacturers Limited
1114 Nairobi Rubber Stamp Works Ltd
1115 Afrodane Industries Ltd
1116 Nairobi Elevator Services (K)
1117 Nairobi Shaft Grinders
1118 Napro Industries Limited
1119 Time Plastics
1120 Newland Industries Ltd
1121 Sema Limited
1122 Kasol Paints Limited
1123 New Wave Industries Ltd
1124 Three Pyramids Company Ltd
1125 Abcos Industrial Limited
1126 Nanak Crankshaft Grinders Ltd
1127 Eskay's Smartpark
1128 Elami Limited
1129 Emetic (K) Ltd
1130 Elle Interior Designers Ltd
1131 Alloy Steel Castings Ltd
1132 Envision Tarizi Limited
1133 Express DDB Kenya Limited
1134 Faedis Company Limited
1135 Evolve It Africa Ltd
1136 East African Solutions Ltd
1137 Alafdin Blacksmith and Sons
1138 Erdemann Company (Kenya) Ltd
1139 Eastern Coatings and Chemicals Ltd
1140 D.R.C. Tavern
1141 Betratrad (K) Ltd
1142 East Africa Tanners Kenya Ltd
1143 Elegant Affair Limited
1144 Eversweet Bakery Ltd
1145 Eedi Kenya Ltd
1146 Etang (Kenya) Limited
1147 Falcon Tanners Company Ltd
1148 Ernie Campbell and Company Ltd
1149 Europarts Company Limited
1150 E.D.G & Atelier
1151 Euro - Dent Laboratory Ltd
1152 Elsa Iraldo
1153 Balco K Ltd
1154 Alliance One Tobacco (K) Ltd
1155 Equator Kenya Ltd
1156 Essential Africa Limited
1157 Alive and Kicking Kenya Ltd
1158 Economic Industries Limited
1159 Allpack Industries Limited
1160 East Africa Glassware Mart Ltd
1161 Eateries Limited

1162 Elisters 2000 Ltd
1163 Equatorial Nut Processors Ltd
1164 Al-Mumtaz Polythene Limited
1165 Ebay (K) Limited
1166 East African Canvas Co. Ltd
1167 Eniphares Gneicho Ltd
1168 East & West Pharmaceuticals Ltd
1169 Elelct & Carbon Prod. Marketing Ltd
1170 Eagle Distillers Ltd
1171 Echarlemagne Kenya Ltd
1172 Esem Laboratories
1173 Escpades Limited
1174 Emex (Africa) Ltd.
1175 Evamay Kenya Limited
1176 Eastobac (K) Kenya Limited
1177 Edil Ital Kenya Ltd
1178 Express Bakery Limited
1179 Embwen Limited
1180 Empee Impex (K) Limited
1181 Elementaita Pharmaceutical Ltd
1182 Curvature Limited
1183 Extreme Africa Ltd
1184 Estwin Ltd
1185 Empire Afrika International Ltd
1186 Encompas (E.A.) Limited
1187 Doralco Kenya Luimited
1188 Dama Limited
1189 Design Solutions Limited
1190 Cordial Limited
1191 Corn Products Kenya Limited
1192 Crisky Limited
1193 De Deby Green Ventures Capital Ltd
1194 Continental Outfitters
1195 Crystal Tiles Ltd
1196 Victoria Clothing Factory
1197 Doctor Pharma Kenya Ltd
1198 Continental Holdings Ltd
1199 Dental Ceramics Ltd
1200 Datoo's Glassware Mart Ltd
1201 Donwoods Company Ltd
1202 Daproim Africa Limited
1203 Victoria Steelwares Limited
1204 Magnum Engineers Limited
1205 Famos Engineering Ltd
1206 Boiler Consortium Africa Ltd
1207 Mahan Engineering Limited
1208 Mimasa Ltd
1209 Geff Refrigeration Ltd
1210 Tui Agricultural Engineers Ltd
1211 Drugs Machines International Ltd
1212 Frametech Equipment Ltd
1213 Sihra Coffee Machinery Service Ltd
1214 Reset Enterprises
1215 Crystal Office Technology
1216 Helnic Enterprises
1217 Zak-Young Eng. Services
1218 Vio-Tech Limited
1219 Destiny Electronics
1220 Microskils Inform. Techn (K) Ltd
1221 Pilot Technical Service Ltd
1222 Separations International
1223 Ditech Engineering Services
1224 Alstom Limited
1225 Automatemad Ltd
1226 Ferguson Power East Africxa Ltd
1227 Eastlands Refreg. & Elect. Services
1228 Metro Super Cool Aircore & Alarms
1229 Bermwa Electricals
1230 Transcorners (K) Limited
1231 Electrocom Power Int Limited
1232 Bram Electro Services
1233 Kinja Electrical Repair
1234 Jandu Electrical Works
1235 Rehal Mechanical Works
1236 Phoenix Aviation Ltd
1237 Aircraft Engineering Services Ltd
1238 Avion Care Ltd
1239 Instrumentation Limited

1240 Titan Air Limited
1241 Vector Aerospace Engine Services
1242 Titan Avionics Limited
1243 Ladylori Kenya Ltd
1244 Aim International
1245 Cmc Aviation Ltd
1246 Seven Four Eight Airforce Ltd
1247 Kasas Limited
1248 Kenya Surgical Engineers Limited
1249 Scientronics International Ltd
1250 Unique Diesel Systems Limited
1251 Paramount Diesel Services Ltd
1252 Danland Engineering Works
1253 Safari Auto Tools
1254 Bashir Awam Ltd
1255 Expan Enterprises
1256 Nascotech Technologies
1257 Signal Excel Systems Ltd
1258 Kenjet Stationers
1259 Nabeel Enterprise
1260 Agro Industrial Tods Co.
1261 Metal Equipment Company Limited
1262 Auto Number Plate Company
1263 A Plus Pvc Technology Co.Ltd
1264 Aberdares Water Ltd
1265 Africa Apparels EPZ Ltd
1266 Africa Spirits Limited
1267 African Express Airways
1268 Aker Eng. and Manufacturing Ltd
1269 Akyda (2000) Ltd
1270 All Africa Timber Industries
1271 Alliance Garment Industries Limited
1272 Alliance Steel Works
1273 Aloans Industries Ltd
1274 Aloona Industries (K) Limited
1275 Alpha Dairy Products Ltd.
1276 Alpha Medical Manufacturers Ltd
1277 Alpire Cooles Ltd
1278 androclovi Chemicals Agencies
1279 Angelica Industries Ltd
1280 Annum Trading Co Ltd
1281 Apex Sttel Ltd
1282 Aplus Puc Technology Co. Ltd
1283 Arihant Industries Ltd
1284 Ashut Engineers Limited
1285 Asl Limited
1286 Asl Limited Packaging Division
1287 Asl Ltd-Trading Division
1288 Asp Company Limited
1289 Associate Basket Manufacturers
1290 Assoc. Battery Manuf. (E.A) Ltd
1291 Associated Paper and Stationary Ltd
1292 Atrpoint Printing Solutions
1293 Auto Ancillaries Ltd
1294 Autolitho Ltd
1295 Beiersdorf East Africa Ltd
1296 Belfast Millers Ltd
1297 Beta Health Care Int. Limited
1298 Biodeal Laboratories Ltd
1299 Blowplast Ltd
1300 Bobmil Industries Ltd
1301 British American Tobacco (K) Ltd
1302 Brother Knitwear Factory Ltd
1303 Brush Manufacturers Ltd
1304 Business Forms Systems Ltd
1305 C and P Shoe Industries Limited
1306 Cabroworks (Ea) Ltd
1307 Carton Manufucturers Ltd
1308 Chemid Kenya Ltd
1309 City Radiators Ltd
1310 Comet Plastics Ltd
1311 Cosmos Limited
1312 Crown Berger Allied Industies Ltd
1313 Crown Industries Limited
1314 Cylinder Works Ltd
1315 Dahya Chemicals Limited
1316 David Engineering Limited
1317 Dera Chemical Industries (K) Ltd

1318 Dodhia Packaging Limited
1319 Dodhice Packaging Ltd
1320 Dodhill Perkaging Ltd
1321 East Africa Malting Ltd
1322 East Africa Metal Works Ltd
1323 East Africa Packaging Industry Ltd
1324 East Africa Sea Food Ltd
1325 East Africa Star Bakery
1326 East African Chains Limited
1327 East African Foundry Works (K) Ltd
1328 East African Maltings Limited
1329 Edible Oil Products Limited
1330 Elegance Packaging Limited
1331 Elephant Soap Industries Limited
1332 Elite Offset Limited
1333 Elys Chemical Industries Ltd
1334 Endeavour Instrument Africa Ltd
1335 Ethical Fashion Africa Ltd
1336 Europack Industries Limited
1337 Eurotech Industrial Supplies Ltd.
1338 Excel Chemicals Ltd
1339 Farmchem Ltd
1340 G.N and Company Polythylene Ltd
1341 Gahir Engineering Works Ltd
1342 Galaxy Paints & Coating Ltd
1343 General Industries Limited
1344 General Motors East Africa Ltd
1345 Ghanshiam Wood Ent.Ltd
1346 Giloil Company Ltd
1347 Glaxosmithkline Eastern Africa
1348 Golden Biscuits (1985) Ltd
1349 Golden Harvest Mills
1350 Gopitesh (K) Ltd
1351 Grain Drop Product Ltd
1352 Grand Pain Ltd
1353 Graphics and Allied Ltd
1354 Halal Industries Limited
1355 Halar Industries Ltd
1356 Hwan Sung Industries (K) Ltd
1357 Ideal Manufacturing Company Ltd
1358 Impala Glass Industries Ltd
1359 Intercool Ventilation Sytems Ltd
1360 Joeliz Bone Meal Limited
1361 Josper Ltd
1362 Kabansora Millers Limited
1363 Kapa Oil Refineries Limited
1364 Karatasi Industries Ltd
1365 Karsam Serviettes Co Ltd
1366 Kenafric Diaries Manufacturing Ltd
1367 Kenapen Industries Ltd
1368 Kenco Aluminium Works Ltd
1369 Kennat Inks & Chemicals Ltd
1370 Kens Metal Industries Limited
1371 Kentainers Ltd
1372 Kenya Inks & Coating Industries Ltd
1373 Kenya Builders & Concrete Co Ltd
1374 Kenya Canvas Ltd
1375 Kenya Stationers Ltd
1376 Kenya Veterin.Vaccines-Prod Inst.
1377 Kenya Wine Agencies Limited
1378 Kenya Yuncheng Plate Making Ltd
1379 Khetshi Dharamshi & Co. Ltd
1380 Kifaru Grain Millers
1381 Kinetics Eng Ltd
1382 Kingplastic Industries Limited
1383 Komal Manufacturers Ltd.
1384 Komco Stainless Steel Worils Ltd
1385 Krishna Woods & Furniture Ltd
1386 Landmawe Limited
1387 Leather Masters Limited
1388 Lino Typesetters Kenya Ltd
1389 Load Trailers (Ea) Ltd
1390 London Distillers (K) Ltd.
1391 Madhupaper Kenya Limited
1392 Makiga Engineering Services Ltd
1393 Maloo Polymers Ltd
1394 Malva Coach Builders Ltd
1395 Manet Engineering Works

1396 Manji Food Industries Limited
1397 Mann Manufucturing Co. Ltd
1398 Manzi Food Industries Ltd
1399 Mareba Enterprises Limited
1400 Markat Engineering Limited
1401 Markmann and Company Ltd
1402 Maroo Polymers Limited
1403 Marshall Fowler Engineers Ltd
1404 Maruba Enterprise Limited
1405 Master Platers Limited
1406 Mastermind Tobacco (K) Ltd
1407 Merchant Manufacturers
1408 Metal Crowns Limited
1409 Metco Ltd
1410 Metsec Cables Limited
1411 Midco Textile East Africa Ltd
1412 Mildsteel Engineering Works Ltd
1413 Mimosa Design Limited
1414 Modern Casement Ltd
1415 Modern Kahawa Enterprise Ltd
1416 Modern Lithographic (K) Ltd
1417 Mombasa Maize Millers (NBI) Ltd
1418 Mordern Casements Ltd
1419 Morison Engineering Ltd
1420 Morris and Company (2004) Limited
1421 Mount Engineers Limited
1422 Nails & Steel Products Ltd
1423 Nairobi Bottlers Limited
1424 Nairobi Flour Mills Limited
1425 Najamuddin Sons Kenya Ltd
1426 Nas Plastic Ltd
1427 Nasa Products Ltd
1428 Nayan Products (Kenya) Ltd
1429 Numerical Machining Complex Ltd
1430 Nzuri Foods Limited
1431 Orbit Enterprises
1432 Orion E.A Ltd
1433 Osho Chemical Industries Ltd
1434 Osho Grain Millers Ltd
1435 Pak Space Ltd
1436 Paperbags Ltd
1437 Paras Industries Limited
1438 Pegant Limited
1439 Pembe Flour Mills Ltd
1440 Penta Converters Limited
1441 Plastics and Rubber Industries Ltd
1442 Polytanks Limited
1443 Power Technics Ltd
1444 Premier Cookies Ltd
1445 Premier Flour Mills Ltd
1446 Primier Oil Mills Ltd
1447 Print Pak (Multipackaging Ltd)
1448 Proctor & Allan (E.A) Ltd
1449 Rainbow Manufacturing Ltd
1450 Raj Metals Ltd
1451 Rajan Gen Eng Workshop
1452 Ramco Printing Works Ltd
1453 Ramji Haribhai Devani Ltd
1454 Real Beverages EPZ Ltd
1455 Re-Suns Spices Limited
1456 Ritz Enterprises Limited
1457 Rolmil Kenya Limited
1458 Rosewood Furniture Manuf. Ltd
1459 Roto Moulders Limited
1460 Rt. East Africa Limited
1461 Safari Image Ltd
1462 Sajo Technologies Limited
1463 Sembi Body Buliders
1464 Semeer Agric. & Livestock (K) Ltd
1465 Shachu Wood Products (K) Ltd
1466 Shah Timber Mart Ltd
1467 Shree Sai Indusriies Ltd
1468 Silentflow Manufucturers Ltd
1469 Silentnight (Kenya) Ltd
1470 Silpack Industries Ltd
1471 Softa Bottling Company Ltd
1472 Spectra Chemicals (K) Ltd
1473 Styroplast Ltd

1474 Sumaria Industries Limited
1475 Supa Snacks Ltd
1476 Supra Textiles Limited
1477 Switch Gear & Controls Ltd
1478 T.S.S Spinning & Weaving Ltd
1479 Teita Estate Limited
1480 Tetta Estate Repeworks
1481 Timber Makers Limited
1482 Tononoka Steels Limited
1483 Trufoods Ltd
1484 Tss Spinning and Weaving Ltd
1485 Twiga Chemicals Industries Ltd
1486 Twiga Stationers and Printers Ltd
1487 Ultra Ltd
1488 Ultravetis
1489 Unga Farm Care Ea Limited
1490 Unga Limited
1491 Unighir Limited
1492 Unilever Kenya Limited
1493 Uzuri Manufactures Ltd
1494 Vaja's Manufacturers Ltd
1495 Vita Foam Products Ltd
1496 Wood Products K Ltd

Study Time Schedule

Activity	Sep-15	Mar-16	Apr-16	May-16	Jun-16	Sep-16	Mar-17	Jun-17
Budget financing and resources mobilization								
Put together and training research assistants								
Pilot survey								
Firm up research instruments								
Collection of data								
Data analysis								
Production of report								

Study Budget Estimates

Count	Description	Value (Kshs)
1	Internet subscription	38,000
2	Subscription to academic Journal sources	25,000
3	Printing and stationery	158,400
5	Research assistant(s)	150,000
6	Field expenses (travelling, fuel etc.)	40,000
7	Miscellaneous expenses	50,000
8	College fees	300,000
	Total	761,400