# INFLUENCE OF STRATEGIC CONTINGENCY FACTORS ON PERFORMANCE OF LARGE MANUFACTURING FIRMS IN KENYA

## ALLAN SAMUEL NJOGU KIHARA

## DOCTOR OF PHILOSOPHY

## (Business Administration)

## JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

## 2016

# Influence of Strategic Contingency Factors on Performance of Large Manufacturing Firms in Kenya

**Allan Samuel Njogu Kihara**

**A Thesis Submitted in Partial Fulfillment for the Degree of Doctor of Philosophy in Business Administration of Jomo Kenyatta University of Agriculture and Technology**

**2016**

# DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

Signature _____     Date        _____

    **Allan Samuel Njogu Kihara**

This thesis has been submitted for examination with our approval as the University Supervisors.

Signature _____     Date        _____

    **Dr. Patrick Karanja Ngugi**

    **JKUAT, Kenya**

Signature _____     Date        _____

    **Dr. Kennedy Ogollah**

    **University of Nairobi, Kenya**

## DEDICATION

To my parents for instilling in me the passion for knowledge, hard work, dedication and determination for success. In your eyes nothing is impossible, a trait I picked and will keep the embers glowing. I owe it to you and to God. To my spouse Peris, son Armstrong and daughter Angeline for believing in my passion for knowledge and moral support. May Almighty God bless you all.

# ACKNOWLEDGEMENTS

**TABLE OF CONTENTS**

**LIST OF TABLES**

# LIST OF FIGURES

# LIST OF APPENDICES

# ABBREVIATIONS AND ACRONYMS

**AMT**        Advanced Manufacturing Technology

**ANOVA**        Analysis of Variance

**DRC**        Democratic Republic of Congo

**EAC**        East African Community

**EC**        European Commission

**ERP**        Enterprise Resource Planning

**GDP**        Gross Domestic Product

**HRM**        Human Resource Management

**ICT**        Information and Communication Technology

**IT**        Information Technology

**JIT**        Just In Time

**KAM**        Kenya Association of Manufacturers

**KNBS**        Kenya National Bureau of Statistics

**KPMG**        Klynveld Peat Marwick Goerdeler

**LPC**        Leader Preferred Coworker

**MMR**        Moderated Multiple Regression

**OCBO**        Organizational Citizenship Behaviour toward Organizations

**OECD**        Organization for Economic Co-operation and Development

**PBT**        Profit Before Tax

| **PLS** | Partial Least Squares |
|---|---|
| **R & D** | Research and Development |
| **RBV** | Resource Based View |
| **ROA** | Return On Assets |
| **ROK** | Republic Of Kenya |
| **ROE** | Return On Equity |
| **SBU** | Strategic Business Unit |
| **SCP** | Structure Conduct Performance |
| **SIC** | Standard Industrial Classification |
| **SLT** | Situational Leadership Theory |
| **SPSS** | Statistical Package for Social Scientists |
| **TFD** | Total Factor Productivity |
| **USA** | United States of America |
| **WB** | World Bank |

## OPERATIONAL DEFINITION OF TERMS

**Contingency Factors:** Contingency theory defines contingency factors as those features that under different circumstances provide different solutions which may always prove effective towards a given goal (Dobák, 2010).

**Dynamic Capabilities:** Dynamic capabilities are defined as a firm's behavioral orientation to constantly integrate, reconfigure, renew and recreate its resources and capabilities upgrade and reconstruct its core capabilities in response to the changing environment to attain and sustain competitive advantage (Teece *et al,* 1997).

**Firm Performance:** Firm performance has been defined as the result of activity and the appropriate measure selected to assess corporate performance as considered to depend on the type of organization to be evaluated and the objectives to be achieved through the evaluation that includes both financial and non-financial outputs and services of a firm (Ostroff & Schmitt, 1993).

**Information Technology:** Information Technology consists of the techniques that are used in workflow activities providing goods and services directly (Morton & Hu, 2008).

**Leadership Characteristics:** Leadership Characteristics is the ability to make strategic decisions using communication and the human resource skills of interpersonal relationship, motivation, decision making and emotional maturity to mobilize project team members towards achievement of organizational objectives (Yukl, 2011).

**Legal and Regulatory Environment:** Legal and Regulatory Environment is defined in terms of myriad of contingent forces that are beyond the control of management in the short run and thus pose threats as well as opportunities to firms (Harris, 2004; Ward et al, 2007).

**Manufacturing Sector:** It is the sector that is involved in the production of merchandise for use or sale using labour and machines, tools, chemical and biological processing or formulation. The sector encompasses a range of human activities from handicraft to high tech but is most commonly applied

to industrial production in which raw materials are transformed into finished goods on a large scale (Kalpakjian *et al*, 2005).

**Organizational Contingency Factors:** The contingency theory of Organizations defines organization's factors such as its structure, information technology, dynamic capabilities and leadership characteristics as those core factors of a firm that determine its performance under influence of the operating environment and are dependent upon the level of their contingent nature (Donaldson, 2006).

**Organizational Structure:** It is defined as the way responsibility and power are allocated inside the organization and work procedures are carried out by organizational members. It is considered as a higher-order resource or capability whose relevance is derived from organization of other resources and capabilities (Ljungquist 2007; Newbert, 2008).

**Strategic Contingency Factors:** These are defined as components of a firm which enables it to adapt to a dynamic and volatile environment in order to apply the techniques of manufacturing flexibilities effectively to enable it to realize benefits towards performance (McDougall 2006; Anderson, 2013; Schmenner & Tatikonda, 2005; Hutchison & Das, 2007).

# ABSTRACT

Even though Kenya has been praised for its robust economy and that is set to become one of the top five fastest-growing in sub-Saharan Africa, manufacturing output remains low compared to other sectors. Kenyan manufacturers have registered stagnation and declining profits of over $330 million annually. It is estimated that manufacturing firms have lost 70 per cent of their market share in East Africa and this has resulted in some firms announcing plans to shut down their plants and shift operations to Egypt. The general objective of the study was to establish the influence of strategic contingency factors on performance of large manufacturing firms in Kenya by reviewing organizational structure, information technology, dynamic capabilities and leadership characteristics as the study variables with legal and regulatory environment as the moderating variable. The study adopted a cross-sectional research design and descriptive survey design and the research philosophy was positivism. The study population study was 499 large scale manufacturing firms where a sample size of 217 firms was selected. Data was collected through the administration of questionnaires to operations managers. The study findings revealed that organization structure has a significant influence on performance of large manufacturing firms in Kenya. Organization structure was found to be positively related to performance of large manufacturing firms in Kenya. Dynamic Capabilities was also found have a positive and significant influence on performance of large manufacturing firms in Kenya. On the relationship between leadership characteristics and organization performance, the study findings revealed that leadership characteristics have a positive and significant influence on performance of large manufacturing firms in Kenya. Based on these findings and conclusions the study recommended that large manufacturing firms in Kenya should put in place better organizational structure strategies as it leads to high performance. Furthermore, the study recommended that the firms should ensure they have a specialized organization structure, high nature of the span of control, centralized structure and have departmentalization. On the importance of IT, the study recommended that large manufacturing firms in Kenya should have an improved information technology system in terms of having written down IT policy, high rate of both IT software and hardware adoption and frequently sharpen IT skills of the employees through training. The study further recommended that large manufacturing firms should also invest more in research and development, training, networking and innovation. On the leadership characteristics, the study recommended that large manufacturing should put in place strategies that encourage their leaders to have leadership characteristics as it has a positive influence on performance. To do that, the firms should encourage and put in place measures that promote idealized influence, intellectual stimulation, inspiration motivation and individualized consideration as they influence performance positively. The study established an optimal model which indicated that organization structure, information technology; dynamic capability and leadership characteristics have a significant influence on firm performance.

**CHAPTER ONE**

**INTRODUCTION**

## 1.1 Background of the Study

The study sought to establish the influence of strategic contingency factors on performance of large manufacturing firms in Kenya. This chapter presents the background of the study. The concept of the study in terms of the study variables namely organizational structure, information Technology, dynamic Capabilities, leadership characteristics, legal and regulatory environment as well as the context of the study that is manufacturing firms in Kenya and their performance is discussed. Furthermore, the statement of the problem, research objectives, hypothesis as well as justification of the study is presented. The chapter finally presents the scope of the study as well as the limitations of the study. In the dynamic and volatile environments in which most manufacturing firms operate today, flexibility of organizational factors is a valuable capability for competitive advantage (Schmenner & Tatikonda, 2005; Hutchison & Das, 2007). However, in the process of adopting the techniques of manufacturing flexibilities, firms still find it challenging to realize benefits towards performance (McDougall, 2006; Anderson, 2013). Manufacturing organizational factors flexibility towards performance due to contingencies has emerged as an important source of competitive advantage as firms seek to be responsive to changing customer demands while remaining competitive on the dimensions of cost and quality (Ward, McCrery & Anand, 2007; Hallgren, Olhager & Schroeder, 2011).

Organizational contingency factors such as organizational structure, information technology, dynamic capabilities and leadership characteristics are critical in realization of firm goals. According to Porter (1991) organization structure is key because the way a firm fits into the industry structure is seen as the primary source of competitive advantage. Modern enterprises operate in rapidly changing environments that are hypercompetitive and turbulent where customer preferences are volatile and technology is transforming scenarios.

Information technology is also regarded as an important contingency factor in the current business world where dynamic changes like globalization of the market place, increased business complexity, new sources of competitive advantage and technological breakthroughs demand for a revision of existing management strategies considering the influence of contingencies on a firm's performance (Wongrassamee, Gardiner& Simmons, 2003; Medori & Steeple, 2000; Hoque, 2005). Galan and Sanchez-Bueno (2009) as well as (Teece, Pisano & Shuen, 1997) argue that the dynamic capabilities view is especially applicable for the firms operating in dynamic and unpredictable environments requiring them to continually revise their routines.

The role of leadership characteristics cannot be understated either. Studies by Researchers at Ohio State University regarding organizational performance as influenced by contingencies informed that there is no best way to organize a corporation and therefore the optimal course of action is contingent upon the internal and external factors that influence organizational performance (Seyranian, 2009). The importance of the highlighted contingency factors in the operation of firms in the modern world cannot be understated. That is why the current study sought to explore the influence of strategic contingency factors on performance of large manufacturing firms in Kenya.

### 1.1.1   Strategic Contingency Factors

The relationship between an organization's factors such as its structure, information technology, dynamic capabilities and leadership characteristics and it's performance depend upon the level of their contingent nature (Donaldson, 2006). The point to note is that organizational factors cannot be generalized therefore each organization needs to be designed ready to respond to contingencies in order to avoid loss of performance.

According to Thompson (2007) significant challenges for complex organizations are posed by contingencies and therefore a firm should properly design their organizational factors to be contingent in order to specifically address them than operating under earlier strategic arrangement.

2

### 1.1.1.1      Organizational structure

According to the contingency approach and the concept of adjustment or fit, a firm's performance will depend on the degree of adjustment existing between organizational context and organizational structure without forgetting that no single form of organization exists without factoring the influence of contingencies on its performance (Donaldson, 2006 & Zott, 2003). Studies by Ljungquist (2007) asserted that organizational structure is considered as a higher-order resource or capability whose relevance is derived from organisation of other resources and capabilities. These contingency factors of organizational structure owned by the firm must be in a proper combination so that they can acquire competitive value and thus help the firm achieve high performance levels (Newbert, 2008).Following the contingency approach, earlier studies have demonstrated that the external environment and strategic decisions influence the factors of organizational structure in order to implement strategies successfully (Okumus, 2003).

Studies by Mintzberg (1979) on contingency theory indicate that effectiveness of organizational factors arise from a correspondence (or fit) between the context (contingency factors) and the organizational structure and therefore in designing an organization's structure, contingency factors should be factored in since they directly influence performance.

Okumus (2003) argues that the effect of strategy on firm performance is channeled through organizational structure. Organizational structure does not directly influence firm performance but how contingent it is ultimately influences the performance of firms because contingencies directly influence costs and revenues (Eriksen, 2006).

### 1.1.1.2 Information Technology

Sedera, Gabble and Chan (2003); Morton and Hu, (2004); Lee and Lee, (2004) observed that Information Technology (IT) is an important contingency factor that is known to influence performance of manufacturing firms. It is further argued that IT being contingent in nature, adoption of new technologies should always be adjusted to meet the current needs of a firm thus a necessary requirement to factor in the contingency elements.

Adoption of technologies that are responsive to the dynamic environment demand that they be contingent. This allows easy adoption of automated materials handling systems, robotics, computer-controlled machines and computer integrated manufacturing systems that lead to a programmed flexibility which eventually transforms to manufacturing of variety of products with minimal change-over and set-up disruption, maximizing both flexibility and production.

This helps the firm accrue benefits in terms of flexibility, reduced lead-times, improved quality and customer responsiveness thus impacting positively on performance (Richard & Amrik, 1999). A study by Ifinedo and Nahar (2009) on ERP adoption observed that firms in the context of contingent IT systems, the possession of basic IT and computer skills is insufficient and will not influence success of the software in adopting firms. Accordingly, management must ensure that continuous acquisition of relevant IT skills and expertise is adequately provided for to enhance success with such technologies (Ifinedo & Nahar, 2009).

This is only achievable where managers are able to devise pragmatic ways to migrate the processes and functions that their legacy IT systems support into the new system to elicit higher levels of appreciation with the new system (Laukkanen, Sarpola& Hallikainen 2005). Clearly, the firms' aim in adopting a new system is defeated if key organizational members cannot provide a clear distinction between the advantages of their old IT systems and of the new system. Adoption of proper technology helps to bridge pockets of information existing within an organization whose different departments own and maintain disparate IT systems (Markus & Tanis, 2000; Abdinnour, Lengnick & Lengnick, 2003; Mabert, Soni & Venkataramanan, 2003). Consistent with the contingency theory, management can achieve higher levels of success in firm's performance with their IT systems by matching organizational factors with relevant contingencies (Mabert *et al*., 2003).

Adaptation to fit the environmental demands makes information technology contingent and therefore organizational IT factors cannot be dealt with in isolation without factoring the influence of contingencies while determining the performance of an organization (Davenport, 2000; Markus & Tanis, 2000; Willcocks & Sykes,

2000). Current business activity is characterized by intense international, rapid product innovation, increased use of automation and significant organizational changes in response to new manufacturing and information technologies (Dirks, 2005). The research suggests that IT should be considered as a critical factor to competitive advantage which is an ingredient to profitability and the survival of a firm (Dirks, 2005). Studies by Albadvi and Keramati (2006) indicate that successful implementation of IT which is contingent in nature can lead to increased firm's productivity and therefore improved firm's performance.

### 1.1.1.3 Dynamic Capabilities

The dynamic capabilities view is especially applicable for firms operating in dynamic and unpredictable environments requiring them to continually revise their routines (Teece *et al*., 1997). According to Bradley, Aldrich, Shepherd and Wiklund (2011); Wilson and Eilertsen (2010) in their study regarding contingent dynamic capabilities, they observed that there is a need by organizations to pay greater attention to positioning themselves against contingencies rather than relying on the strategies already in place. Further studies by Helfat and Winter (2011); Barretto (2010); Helfat (2007) in their study of dynamic capabilities informed that dynamic capabilities are contingent and are critical internal and external drivers of performance. Studies by Zott, (2003); Eisenhardt and Martin, (2000); Helfat and Peteraf, (2003); Teece, (2007); Zahra, Sapienza& Davidsson (2006) regarding contingency factors inform that dynamic capabilities have the ability in the contingency context to utilize resources that have critical effects on organizational performance. They assert that dynamic capability is a key aspect of contingency factors that indirectly influences firm's performance.

Adner and Helfat (2003) observed that new capabilities can be created through the addition of new knowledge to the firm's knowledge stock. Hitt (2011) also points out that creation of capabilities by aligning the needs of a firm and the changing environment can provide knowledge that can be used by the manufacturing firms aimed at building dynamic capabilities for high performance in a turbulent operating environment.

Dynamic capabilities are classified into absorptive capacities and desorptive capacities (Grant & Baden-Fuller, 2004; Lichtenthaler & Lichtenthaler, 2009). They are both related to knowledge transfers between firms. Absorptive capacity relates to exploring external knowledge while desorptive capacity relates to exploitation of external knowledge (Lichtenthaler & Lichtenthaler, 2009). According to Senge (1990) in the study of organizational learning as a component of contingent dynamic capability, a firm needs to master five disciplines namely personal mastery, mental models, shared vision, team learning, and system thinking all meant to position the employees towards the achievement of the goals of a firm.

### 1.1.1.4 Leadership Characteristics

Bass (1985) introduced a theory of transformational leadership that was based on Burn's (1978) classification of transactional and transformational political leaders. Bass argued that leadership is generally conceptualized as a transactional exchange process. Transformational leaders motivate subordinates to perform beyond expectations by developing intellectually stimulating and inspiring followers to transcend their own self-interests for a higher collective purpose, mission or vision (Geyer & Steyrer, 2010).

Idealized influence (charisma) is the degree to which a leader is seen as a role-model by followers. Such leaders are admired, respected and trusted because they inspire power and pride in their followers by going beyond their own individual interests and focusing on the interests of the group and of its members (Bass & Avolio, 1999). Some of the components of idealized influence include charisma, ethics and articulation of the organization vision (Bass, 1985).

Inspirational motivation is the capacity of the leader to articulate in simple ways the goals and objectives of the organization. It also refers to the capacity to create a mutual understanding of what is right and what is wrong. Transformational leaders provide visions of what is possible and how to attain it. They enhance meaning and promote positive expectations about what needs to be done (Bass, 1988).

Inspirational motivation refers to transformational leaders sharing a compelling vision or goal with their followers and constantly motivating them to reach for the goal while boosting their confidence and reassuring them that barriers faced can be overcome (Bass & Avolio, 1985). Intellectual stimulation is the degree to which leaders encourage their followers to be innovative and creative. Through intellectual stimulation, transformational leaders encourage followers to question their own beliefs, assumptions and values and when appropriate, those of the leader which may be outdated or inappropriate for solving current problems (Bass & Avolio, 1999). Through intellectual stimulation, transformational leaders draw the interest of their followers by promoting creativity and innovative thinking, whereby followers are encouraged to view situations or problems in new perspectives in order to discover different methods of doing things or in finding new solutions to the problems (Bass & Avolio, 1999).

Individualized consideration is the degree to which the leader responds to each individual's specific needs in order to include everybody in the "transformation" process (Simic, 1998). A transformational leader by individualized consideration builds follower self-confidence and heightens personal development which in turn leads to the empowerment of followers (Conger, 1999). Transformational leaders also enhance followers' empowerment by providing meaning and challenge to their work (Avolio et al., 2004). Transformational leaders pay attention to their followers where they act as coaches and mentors in recognizing and developing their followers (Bass & Riggio, 2006). They treat their followers as individuals and not only members of a team and thus establish a one to one relationship with the followers in order to listen to and understand their needs and goals (Bass & Avolio, 1999).

### 1.1.1.5 Legal and Regulatory Environment

According to Matyusz (2012), environment being a contingency factor that influences a firm's performance consists of relationships between the firm and the government's by-laws, professional bodies, regulating and other government legal and regulatory apparatus which are all contingent in nature and therefore firms have to align their strategies for successful performance.

Studies by Neely, (2000); Kaplan and Norton, (2004); and McGovern *et al*., (2004) asserted that the key contingency approach by firms while considering both financial and non-financial factors that influence performance is the capability to align these factors which involves matching organizational behavior, structure, systems, and other contingency factors with the strategic plans aimed at improving competitive edge of a firm towards performance.

According to Neely (2000), in developing a balanced set of measures, a contingency approach stimulates the right performance driven behaviors that enable firms to realize their business objectives and help then to achieve a sustained competitive advantage. In essence, fitting a manufacturing firm's practices and routines to its environmental context is crucial to developing operations as a competitive advantage (Hayes, Pisano, Upton & Wheelwright, 2005). Hallgren (2007) found that higher levels of flexibility are found to be generally associated with high levels of performance along the other dimensions of operational performance when addressing all types of manufacturing environments. Doz and Kosonen (2008) indicated that in order to maintain continued growth firms need to make efficient and effective adjustment on organizational factors to changing legal and regulatory environment.

### 1.1.2 Manufacturing Firms in Kenya

The manufacturing sector is the third biggest industrial sector after agriculture and transport and communication (KPMG, 2014). It is the third leading sector contributing to GDP in Kenya. Although Kenya is the most industrially developed country in East Africa, the manufacturing sector constitutes merely 10 per cent of the industrial sector contribution to GDP (RoK, 2014). The growth in manufacturing industry has declined to 3.3 per cent in 2011 as compared to 4.4 per cent in the year 2010 mainly due to a challenging operating environment (KNBS, 2012). Furthermore, the manufacturing sector has high yet untapped potential to contribute to employment and GDP growth. As an important sector in the overall economic growth, manufacturing sector requires an in depth analysis at industry as well as firm level. According to a report by KPMG (2014), Kenya's manufacturing sector's share in output has continued to decline in recent years.

This has exposed a gap in the country's ability to achieve a fully industrialized economy by 2030. The report argues that there is still a lot of room for expansion in Kenya's manufacturing sector but for this to happen, reforms to the operating environment need to be made to factor in the influence of contingencies in the sector (KPMG, 2014). After a long period of virtual stagnation, Kenyan economy went through a strong phase of performance over the period 2003-2007 since the rate of economic growth accelerated up to 7 per cent. During the same period Total Factor Productivity in manufacturing sector increased by as much as 20% (WB, 2007). As an important sector in the overall economic growth, manufacturing sector requires in depth analysis at industry as well as firm level.

According to KPMG (2014), real growth in the manufacturing sector averaged 4.1% p.a. during 2006-2013 which is lower than the average annual growth in overall real GDP of 4.6%. As a result, the manufacturing sector's share in output has declined in recent years. According to the US Department of State, this exposes a gap in the country's ability to achieve a fully industrialized economy by 2020. It argues that there is still a lot of room for expansion in Kenya's manufacturing sector, but for this to happen, reforms to the business environment need to be made to factor in the influence of contingencies in the sector (KPMG, 2014). The manufacturing sector has a great potential on promoting economic growth and competiveness in the country like Kenya. According to the World Bank (2014), sluggish growth in the manufacturing sector is pulling down economic growth in Kenya and is also losing grip on the East Africa Community market where it was dominant, due to inefficiencies and the unpredictable operating environment. The share of manufactured goods imported by EAC from Kenya declined from 9 per cent in 2009 to 7 per cent in 2013 (WB, 2014).

Kenya was the largest exporter of various manufactured goods to the EAC. Its market share has declined for a range of products including plastics, chemicals and paper (RoK, 2014).The report spelt out the main influence being uncertainties in the operating environment and lack of preparedness by these manufacturing firms to adjust and cope with the dynamic environment (RoK, 2014).

KAM membership constitutes 40 per cent of manufacturing value-add industries in Kenya and comprises of small, medium and large enterprises as small firms are those firms having assets under Kshs 40 Million. The large manufacturing firms were 499 in number by year 2014 (KAM, 2014).Over 80 per cent of these large scale enterprises are based in Nairobi while the rest are located in other major towns and regions including Coast, Nyanza, Nakuru, Eldoret, Athi River, Nyeri and Thika (KAM, 2014).

### 1.1.3 Performance of Large Manufacturing Firms in Kenya

Statistics from World Bank show that Kenyan manufacturers have registered stagnation and declining profits for the last five years due to unpredictable operating environment (WB, 2014). Further statistics from Kenya Association of Manufacturers have shown that certain firms announced plans to shut down their plants and shift operations to Egypt as a result of reduced profits (KAM, 2014).

Cadbury Kenya announced that it will close down its manufacturing plant in Nairobi by the end of October 2014 (RoK, 2014a). In the full-year to September 2013 results, Eveready's net profit fell 58.7 per cent to $493,237 from $784,783 the previous year. Its production capacity dropped to 50 million units annually down from a previous high of 180 million per year mainly caused by contingencies (RoK, 2014a). Tata Chemicals Magadi scaled down its operations by closing down its main factory (Kandie, 2014).

Manufacturers in the region lose over $330 million annually and the government loses $67 million in potential tax revenue due to unforeseen uncertainties. It is estimated that manufacturing firms have lost 70 per cent of their market share in East Africa (RoK, 2014a) due to contingencies. Reckitt & Benkiser, Procter & Gamble, Bridgestone, Colgate Palmolive, Johnson & Johnson and Unilever have all relocated or restructured their operations opting to serve the local market through importing from low-cost manufacturing areas such as Egypt therefore resulting in job losses (Nyabiage & Kapchanga, 2014) as a result of turbulent operating environment and high operating costs.

According to a World Bank report, in spite of Kenya being praised for its robust economy that is set to become one of the top five fastest-growing in sub-Saharan Africa, manufacturing output remains low compared to other sectors. An economic growth rate of 4.3 per cent lagged the average expansion of the economy at 6.2 per cent between 2010 and 2013 due to a challenging operating environment (WB, 2014). This has resulted in Kenya being a heavy consumer of goods produced in the Far East. Moreover, the relative size of Kenya's manufacturing sector has been stagnant and the sector has lost international competitiveness and is struggling with low productivity and structural inefficiencies (WB, 2014).

## 1.2 Statement of the Problem

Kenya has been experiencing turbulent times with regard to its organizational practices and this has resulted in declining profits in the manufacturing sector of the economy (Mutindi, Namusonge & Obwogi, 2013). Statistics from World Bank show that large scale manufacturers operating in Kenya registered stagnation and declining profits for the last five years due to a turbulent operating environment (WB, 2014). It is estimated that large manufacturing firms have lost 70 per cent of their market share in East Africa largely attributed to contingencies (RoK, 2014a). Further statistics from Kenya Association of Manufacturers have shown that some firms announced plans to shut down their plants and shift operations to Egypt due to negative influences of contingencies (KAM, 2014). In 2014, manufacturing sector in Kenya contributed barely 10% to the GDP which represented 3.4 per cent growth to Sh.537.3 Billion indicating a decline from the previous year 2013 where it had reported a 5.6 per cent growth mainly due to a challenging operating environment and high operational costs (KNBS, 2014).

Many large Manufacturing firms have relocated or restructured their operations opting to serve the local market through importing from low-cost manufacturing areas such as Egypt therefore resulting in job losses (Nyabiage & Kapchanga, 2014) citing turbulent operating environment and high operating costs. This is an indication that many manufacturing firms in Kenya are experiencing performance challenges with many reporting profit warnings due to challenges in the operating environment (RoK, 2014).

Previous studies have shown that strategic contingency factors are critical drivers to performance of organizations (Brewster & Mayrhofer, 2012). Organizations seek to fit their organizational factors to contingencies in order to achieve high performance and to avoid any losses resulting from the misfit when contingencies change (Donaldson, 2006). In addition, previous empirical findings show that strategic contingency factors measures have lacked precision and consistency by providing no clear direction on the influence of contingency factors on firm's performance (Walters & Bhuian, 2004; Lee & Runge 2001). Studies have focused on financial performance measures ignoring non-financial indicators like environment (Kargar & Parnell 2009).

Furthermore, previous studies have used different methodological approaches for instance a study by Pertusa-Ortega (2008) used Partial Least Squares (PLS) technique to analyze the internal factors of organizational structure which had an influence on the firm performance, Mouelhi (2008) used firm level panel data to examine the extent to which the use of information and communication technology has contributed to efficiency growth in Tunisian manufacturing firms while Jekel (2009) used generalized least square regression model in a study on the quality aspect of dynamic capabilities based on successful practices of 61 German manufacturing firms in China. This presented methodological research gaps in the previous studies conducted on the topic.

It is therefore inadequate to merely analyse firm's performance by financial performance especially under today's changing operating environment (Qi, 2010) using a different methodology from the previous studies. The manufacturing sector in Kenya has a huge untapped potential contribution to employment and GDP if the challenges facing this sector are properly addressed (Wagana & Kabare, 2015). The study would eventually help in determining what is needed to stop manufacturing firms from failing, stagnating in performance or relocating from Kenya resulting to job losses and therefore continue in operation to the foreseeable future.

## 1.3 Research Objectives

### 1.3.1 Main Objective

The general objective of the study was to establish the influence of strategic contingency factors on performance of large manufacturing firms in Kenya.

### 1.3.2 Specific Objectives

i. To establish the influence of organizational structure on performance of large manufacturing firms in Kenya.

ii. To assess the influence of information technology on performance of large manufacturing firms in Kenya.

iii. To determine the influence of dynamic capabilities on performance of large manufacturing firms in Kenya.

iv. To analyze the influence of leadership characteristics on performance of large manufacturing firms in Kenya.

v. To explore the moderating effect of legal and regulatory environment on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya.

## 1.4 Study Hypotheses

The study sought to test the following null hypotheses:

i. $H_0 1$: Organizational structure does not influence the performance of large manufacturing firms in Kenya.

ii. $H_0 2$: Information Technology does not influence the performance of large manufacturing firms in Kenya.

iii. $H_0 3$: Dynamic capabilities do not influence performance of large manufacturing firms in Kenya.

iv. $H_0 4$: Leadership characteristics do not influence performance of large manufacturing firms in Kenya.

v. **$H_0$5:** Legal and regulatory environment does not have a moderating effect on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya.

## 1.5 Justification of the Study

The study findings were expected to provide information on the influence of strategic firm's factors which are contingent on the performance of large manufacturing firms in Kenya. The findings of the study are expected to be useful to various groups of interested parties as outlined.

### 1.5.1 Policy makers in the Government

Policy makers in the government are expected to find useful the findings of the study. They can use the information to make effective policies and regulations which shall ensure high performance and growth of the firms in the manufacturing sector. Macroeconomic factors like legal and regulatory framework which are determined by the government can be relooked so as to enhance attraction of investors into the sector.

### 1.5.2 Firm's Management

Management of the firms are also expected to use the information and the findings on the influence of strategic contingency factors on firm performance to make better policies and decision for their firms which can guarantee successful growth. Having established the influence of the factors on performance, the management can make use of the findings in order to oversee turnaround of their firms and improve the performance. This is because the environment of operation is becoming more and more dynamic.

### 1.5.3 Researchers and Scholars

The findings of the study are expected to add value to the existing body of knowledge on the profitability of firms in the manufacturing sector. Scholars can use the findings of the study to build on the theoretical aspect of contingencies. The findings are also expected to be useful to the scholars, academicians and future researchers as they shall use the findings as a point of reference.

## 1.6 Scope of the Study

The study sought to establish the influence of strategic contingency factors on performance of large manufacturing firms in Kenya. The study specifically sought to establish the influence of organizational structure, information technology, dynamic capabilities and leadership characteristics as contingency factors on performance of large manufacturing firms in Kenya. The study population was 499 large scale manufacturing firms. According to KAM (2014), there were a total of 499 large scale manufacturing firms operating in Kenya where 80 per cent of their members are based in Nairobi.

The study used a formula to sample 217 large manufacturing firms from the total population. The researcher collected data from operations managers in each of the 217 firms because they are believed to have the necessary skills and knowledge in key areas of the study and could therefore give correct information. Data was collected through the administration of questionnaires to operation managers. The choice of large manufacturing firms was because of their stagnating performance since the government supports the small manufacturing firms.

## 1.7 Limitations of the Study

The limitation of lack of information coming from the various large manufacturing firms' staff for fear of information confidentiality not being honored by the researcher as well as victimization was delimited by the researcher obtaining permission from the management of the firms before proceeding to collect data as well as assuring the respondents of their confidentiality by asking them not to indicate their names on the questionnaires. The researcher also obtained a letter of introduction from Jomo Kenyatta University of Agriculture and Technology. This aided in assuring the respondents that the information obtained was purely for academic research purposes and would be treated with utmost confidentiality. The limitation of the respondents not giving accurate information due to respondents' divided attention to questionnaires and the desire to safeguard the reputation of the organization was delimited by informing the respondents of the magnitude and importance of the data to be collected as well as the ethical requirements expected of them upon consenting to participate in the study.

# CHAPTER TWO
# LITERATURE REVIEW

## 2.1 Introduction

A review of both theoretical and empirical literature on contingency factors and firm's performance was presented. The chapter starts by looking at the theoretical literature review where the theories that anchor the study namely contingency theory, contingency theory of fit, dynamic capabilities theory and situational leadership theory were discussed. The chapter further presents conceptual framework, empirical literature review, critique of existing literature and the research gap. The chapter presents the linkages between theoretical and empirical literature to establish the existing relationships among the variables. The chapter lastly presented the chapter summary.

## 2.2 Theoretical Review

A theory is a generalization about a phenomenon, an explanation of how or why something occurs. It is any statement that explains what is measured or described about cause or effect implicitly (Frey, Botan, Friedman, & Kreps, 2007). Theories describe, explain, predict, or control human phenomena in a variety of contexts. According to McMillan and Schumacher (2006), a "theory is an explanation, a systematic account of relationships among phenomena. This study is guided by the Contingency Theory, the Contingency Theory of "Fit", Dynamic Capabilities Theory and the Situational Leadership Theory.

### 2.2.1 Contingency Theory

Contingency theory is an organizational theory that claims that there is no best way to organize a corporation, to lead a company, or to make decisions. Instead, the optimal course of action is contingent (dependent) upon the internal and external situation. Different contingent leaders effectively apply different styles of leadership to the right situations. The term was coined by Lawrence and Lorsch (1967) in 1967 who argued that the amount of uncertainty and rate of change in an environment impacts the development of internal features in organizations.

The contingency theory presently provides a major framework for the study of organizational design (Donaldson, 2001). It holds that the most effective organizational structural design is where the structure fits the contingencies. The contingency theory of organizational structure may be referred to more succinctly as structural contingency theory (Pfeffer, 1982). A challenge is that structural contingency theory is static and fails to deal with organizational change and adaptation (Galunic & Eisenhardt, 1994). The heart of structural contingency theory is static in the sense that it deals with how a static state of fit between structure and contingency causes high performance (Woodward, 1965).

However, contingency theory supposes that under different circumstances different solutions may prove effective (Dobák–Antal, 2010). This can be considered as one of the primary insights of the theory because instead of propagating universally applicable organization management principles, the theory tries to demonstrate that different circumstances require different organizational structures (Baranyi, 2001). The fact that Dobák (2010) used the contingency approach (with the opportunity for strategic choice) also highlights the theory's relevance. The term 'contingency theory' was first mentioned in the literature by Lawrence and Lorsch in 1967, in the context of organizational structure. Unfortunately, the exact date of the concept's origination is unknown (Donaldson, 2001).

Contingency theory played a leading role in the organizational practice of the 1970s. It examined the relationship between organizational structure and the operating conditions using the method of empirical comparative analysis. Pugh and Hickson (1976) studied 52 large organizations (employing more than 250 people) with different environmental and ownership backgrounds from the Birmingham area. The study found that organizational bureaucracy systems were not standardized and that different organizations were structured in different ways. Contingency theories dealing with organizational structure (so-called 'structural contingency theories') consider the environment, the organizational size and the strategy of the organization as contingency factors.

These are the factors that an organizational structure must be adapted to. There are other contingency factors as well. However, only these three are significant from this perspective. This analytic approach emphasizes the interaction between the organization and the environment and the importance of adaptation to the environment. This theory underpins the study and also instigates research hypothesis one:

**$H_01$: Organizational structure does not influence the performance of large manufacturing firms in Kenya.**

### 2.2.2 The Contingency Theory of "Fit"

This theory was proposed by Robert Drazin and Andrew H. Van de Ven in 1985 in their study of the concept of fit in structural contingency theory (Van de Yen & Drazin 1985). The present research introduces a third strand of research for investigating fit that focuses on the organizational level as compared to the group or individual performance level. In doing so, it is necessary to start with Van de Yen and Drazin (1985) summary of the structural contingency theory of fit where fit is broadly described in terms of "congruence, internal consistency of multiple contingencies, structural and performance constructs." The concept of "fit" in contingency theory is well documented in various areas of organizational behavior research.

According to Van de Yen and Drazin (1985), the key thread common to all scholarly research in this area is that an organizational outcome is the consequence of a "fit" or match between two or more factors. There are three ways to define and test the concept of fit namely selection, interaction and the systems approach. Due to its relevance to this study, focus is on their description of the systems approach. Under the systems approach, "fit is a feasible set of equally effective, internally consistent patterns of organization and context and structure". Furthermore, they argue that "organization design can only advance if we address, in simultaneous manner, the many contingencies, structural alternatives and performance criteria inherent to organizational life" (Van de Yen & Drazin, 1985).

The concept of fit has broad utility to various areas of theory development wherein "organizational performance is a function of match, congruence, intersection or union of two or more factors" (Lee & Runge, 2001). Fit as matching in this research context implies that there is a match between two theoretically related variables without reference to a criterion variable (Zigurs & Buckland, 1998),thus consistent with the systems approach for defining and assessing "fit," in the context of the present research study, the notion of Information Technology (IT) appropriateness is described as consisting of the conditions under which a business should consider itself a likely candidate for (new) IT implementation.

Appropriateness is thus an issue of determining the "readiness" of a firm for new IT implementation. It goes to the question of "fit" between current environmental business conditions faced by a candidate firm and the nature of IT being considered for adoption/implementation and its potential impact on organizational performance. This theory instigates the second research hypothesis:

**$H_0$2: Information Technology does not influence the performance of large manufacturing firms in Kenya.**

### 2.2.3 Dynamic Capabilities Theory

Teece *et al.* (1997) define dynamic capabilities as 'the ability to integrate, build and reconfigure internal and external competencies to address rapidly-changing environments'. The concept of dynamic capabilities arose from a key shortcoming of the resource-based view of the firm. The RBV has been criticized for ignoring factors surrounding resources instead assuming that they simply "exist". Considerations such as how resources are developed, how they are integrated within the firm and how they are released have been under-explored in the literature. Dynamic capabilities approach attempt to bridge these gaps by adopting a process approach by acting as a buffer between firm resources and the changing business environment. Dynamic resources help a firm adjust its resource mix and thereby maintain the sustainability of the firm's competitive advantage which otherwise might be quickly eroded.

While the RBV emphasizes resource choice or the selecting of appropriate resources, dynamic capabilities emphasize resource development and renewal. According to Wade and Hulland (2004), resources may take on many of the attributes of dynamic capabilities, and thus may be particularly useful to firms operating in rapidly changing environments. However, reviewing key articles in this academic field, Zahra *et al*. (2006), Salvato (2003) as well as Schreyögg and Kliesch-Eberl (2007) uncover inconsistencies, overlapping definitions and contradictions in the differentiation of dynamic capabilities from other capabilities. Zahra and George (2002) regard dynamic capabilities neither as a firm's abilities nor as processes but as capabilities to match customer demands and competitor strategies.

A central concern of a firm's overall strategy and management is to maintain a dynamic fit between what the firm has to offer and what the environment dictates (Miles & Snow, 1978). Achieving this fit again requires that the firm is able to change its processes. As such, a firm has to possess a dynamic capability which besides increasing firm's opportunities to survive, often provide organizations with the potential for growth (Helfat *et al.,* 2007). The roots of dynamic capabilities are based in evolutionary economics (Nelson & Winter, 1982) and briefly the essence of dynamic capabilities approach is that competitive success arises from the continuous development, alignment and reconfiguration of firm-specific assets (Teece *et al.,* 1997; Augier & Teece, 2006). In other words, dynamic capabilities impact the resource base of the firm which in turn is the source of the firm's competitive advantage (Ambrosini & Bowman, 2009). However, dynamic capabilities are typically the outcome of experience and learning within the organizations. This theory instigates the third research hypothesis:

**$H_0$3: Dynamic capabilities do not influence performance of large manufacturing firms in Kenya.**

**2.2.4 Situational Leadership Theory**

The situational leadership theory put forth by Paul Hersey and Ken Blanchard in 1969 proposes that effective leadership requires a rational understanding of the situation and an appropriate response rather than a charismatic leader with a large group of dedicated followers (Graeff, 1997; Grint, 2011). The theory evolved from task-oriented versus people-oriented leadership continuum (Bass, 2008; Conger, 2011; Lorsch, 2010). The continuum represented the extent that the leader focuses on the required tasks or focuses on their relations with their followers. Various authors have classified SLT as a behavioral theory (Bass, 2008) or a contingency theory (Yukl, 2011). Both conceptions contain some validity. SLT focuses on leaders' behaviors as either task or people focused. This supports its inclusion as a behavioral approach to leadership similar to the leadership styles approach (autocratic, democratic, and laissez-faire), the Michigan production-oriented versus employee oriented approach, the Ohio State initiation versus consideration dichotomy and the directive versus participative approach (Bass, 2008; Glynn & DeJordy, 2010).

It also portrays effective leadership as contingent on follower's maturity. This fits with other contingency-based leadership theories including Fiedler's contingency theory, path-goal theory, leadership substitute theory and Vroom's normative contingency model (Glynn & DeJordy, 2010; Bass, 2008; Yukl, 2011). This theory instigates the fourth research hypothesis:

**$H_0$4: Leadership characteristics do not influence performance of large manufacturing firms in Kenya.**

## 2.3 Conceptual Framework

This is defined differently by various scholars mostly based on the subject under review but all point to the same type of methodology or maps of processes and procedures followed in solving a problem. Smyth, (2004); Miles and Huberman, (1994) for instance, define conceptual framework as a group of concepts that are broadly defined and systematically organized to provide a focus, a rationale and a tool for the integration and interpretation of information. It is considered as a visual or written product, one that "explains either graphically or in narrative form the main things to be studied, the key factors, concepts or variables and the presumed relationships among   them". Conceptual framework can also be described as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Reichel & Ramey, 1987).

Conceptual framework provides a snapshot of the objectives of this study. It considers the theoretical and conceptual issues surrounding research work and forms a coherent and consistent foundation that underpin the identification and development of existing variables (Kothari 2004). The conceptual framework attempts to bring into focus the following variables; the independent variables namely; organizational structure, information technology, dynamic capabilities leadership characteristics and legal and regulatory environment as the moderating variable. The dependent variable was the performance of manufacturing firms in Kenya.

**Strategic Contingency Factors**

**Organization structure**
- ✓ Degree of Specialization
- ✓ Span of Control
- ✓ Degree of Centralization
- ✓ Departmentalization

**Information Technology**
- ✓ IT Policy
- ✓ IT software adoption
- ✓ IT hardware adoption
- ✓ Employee IT skills

**Dynamic Capabilities**
- ✓ Sensing Capability (Research & development)
- ✓ Learning Capability (Training)
- ✓ Networking Capability
- ✓ Innovation Capability

**Leadership Characteristics**
- ✓ Idealized influence
- ✓ Intellectual stimulation
- ✓ Inspiration motivation
- ✓ Individualized consideration

**Firm's Performance**
- ✓ ROE
- ✓ ROA
- ✓ PBT

**Legal and Regulatory Environment**
- ✓ By-Laws
- ✓ Professional bodies
- ✓ Government Policies

**Independent variables**          **Moderating Variable**          **Dependent variable**

**Figure 2.1:    Conceptual Framework**

23

## 2.4 Conceptual Review

The variables in the conceptual framework are discussed under this section. This is to explain how they are related to each other. The conceptual framework linked the independent variables to the dependent variable.

### 2.4.1 Organizational Structure

For Thompson (2007), organizational structure is the organization's internal pattern of relationships, authority and communication. Similarly Goldhaber, Dennis, Richetto and Wiio (2004) define organizational structure as "the network of relationships and roles existing throughout the organization". The primary relationships that have been studied by organizational theory scholars are those relating strategy and structure, structure and performance and the congruence of strategy and structure with performance (Jeminson, 2003). The general conclusions are that organizations must fit structure and processes if the strategy has to produce positive results (Chandler, 1962; Channon, 1971).

Organizational structure is concerned with work division, distribution of tasks, activities and coordination mechanisms which includes standardization and formalization. Organizational structure seems to appear as a fundamental element in the achievement and maintenance of a competitive advantage thanks to its function of organizing and coordinating all the resources available with the aim of meeting customer demands satisfactorily. Nevertheless, resources are not valuable in themselves (Porter, 1991), since their value largely depends on the extent to which they can give support to the strategy pursued (Spanos & Lioukas, 2001). This argument seems to suggest that the influence exerted by organizational structure on performance is going to be indirect through the competitive strategy (Edelman, Brush & Manolova, 2005).

**2.4.2 Information Technology**

The great expansion of information and communication technologies that has taken place during the last decade has set the stage for a new age of opportunities and challenges in many economic regions. IT provides speedy, inexpensive and convenient means of communication. The adoption of technologies such as Internet, mobile telephony has been found to have positive effect on the organization's performance (Hoque, 2005).

According to the World Bank (2006), "firms that use ICT grow faster, invest more and are more productive and profitable than those that do not". Many studies that cover the experience of developed countries conclude to a positive relationship between ICT use and superior performance (Baldwin & Sabourin, 2007). However, based on the findings of many other studies, Lefebvre and Lefebvre (1996) conclude that "IT–productivity connection remains elusive with contradictory results from study to study".

**2.4.3 Dynamic Capabilities**

Dynamic capabilities aim at the perpetual adjustment of resource configurations. As every firm regularly undergoes modifications of its resource configuration, it is valid to assume that every firm possesses dynamic capabilities (Eisenhardt & Martin, 2000). Accordingly, the impact of a firm's dynamic capabilities on its performance is a matter of the configuration of the dynamic capabilities it utilizes (Zahra *et al.,* 2006). Differences in the performance among a set of firms result from the individual configuration of their dynamic capabilities. Assuming that every profit-orientated organization aims at achieving good performance, there arises the question of whether the individual configuration of dynamic capabilities serves this purpose (Teece *et al.*, 1997).

The degree of usefulness of the individually configured dynamic capabilities for the firm shapes its competitiveness in its operating environment (Eisenhardt & Graebner, 2007). The quality aspect allows the classification of a dynamic capability according to its quality level. Every firm has various dynamic capabilities as it also possesses various processes which result in a modification of a resource or a set of resources (Eisenhardt & Martin, 2000). The assessment of a distinct dynamic capability is therefore particular and depends on the nature of the process in which it is embedded.

A configuration of the dynamic capability with a high and positive effect on performance is of high quality while those with a lower positive or even negative effect on performance are of lower quality. Firms which possess dynamic capabilities of high quality outperform their competitors with dynamic capabilities of low quality (Daniel & Wilson, 2003). Despite increasing interest in dynamic capabilities in the academic world, there still exists confusion about their precise definition, identification, function and impact on firm performance (Zahra, Sapienza, & Davidson, 2006). As every firm reconfigures its resources, every firm owns dynamic capabilities. However, reconfiguration of the resources per se does not ensure firm's performance. The way reconfigurations are conducted defines whether new configuration of resources responds better to environmental opportunities. Jekel (2009) argued that characteristics of dynamic capabilities are what impacts firm performance and not their mere existence.

In measuring dynamic capabilities, this study measured technology transfer propensity using the firm-level information technology practices (training and coaching) that facilitate problem solving, absorptive capacity and desorptive capacity was measured using R&D intensity (R&D expenditure divided by sales), extent to which firms adapt their product-market scope to respond to external opportunities, to scan the market, monitor customers and competitors and allocate resources to marketing activities and to respond to changing market conditions in a speedy manner (Oktemgil & Gordon 1997) and organizational learning capacity was measured using learning-based improvements that provide important and enduring advantages.

Kamoche (2000) holds that "the extent to which an organization is prepared to invest in training its employees by way of developing them is indicative of whether employees are seen as a cost to be rationalized or as a resource that has the potential to contribute meaningfully to the organization". Training as a means to change or strengthen the culture of the organization is meant to build demonstrable skills that directly improve job performance. Training also enhances the probability of job satisfaction. It is in the interest of employers to have a skilled and a productive workforce hence many of them assist their staff to acquire skills by providing them with the appropriate training and also career development opportunities. In the long run, the organization will benefit by positing high performance.

Training increases employee motivation to work better because of newly acquired skills; and enhances their behavior necessary to perform their jobs well as it also helps them to advance in their chosen career paths. Training increases employee motivation, confidence and commitment of staff to an organization and especially where the expected or anticipated rewards are given (Kiprotich, 2006).Innovation researchers have empirically examined several types of capabilities related to innovation that can serve as the important determinants of firm performance. A research by Lee et al (2001) indicates that technological capabilities are important determinants of a firm's performance since the capabilities comprise of patents protected by law, technological knowledge and production skill that are valuable and difficult to imitate by competitors.

Dutta, Narasimhan and Rajiv (2006) argue that a high technology firm with R&D capability will enjoy superior performance in the market because an important characteristic of R&D is a significant learning by doing effect which makes it difficult for competitors to imitate and replicate.Metcalfe (1998) stated that when the flow of newness and innovations desiccates, firm's economic structure settles down in an inactive state with little growth. Therefore, innovation plays a significant role in creating the differences of performance and competition among firms, regions and even countries. Innovative performance can exert positive effects on firm's production, market and financial performances in the long-term.

However, in the short run, initiated investments and internal resource usages might cause possible losses at first. Lawless and Anderson (1996) stated that adoption of new technologies for innovations involves an initial penalty. Similarly Damanpour and Evan (1984) emphasized that generally a serious time period may pass to observe positive impacts of innovations on firm's performance. For this reason, impacts of innovative performance are firstly associated to the non-financial aspects of corporate performance such as increased customer satisfaction or production speed which will lead to higher financial returns later on.

In brief, once the innovative performance improves, production and marketing performances will also ameliorate and then through their mediation the financial performance will start to improve. Han et al.,(1998) emphasized that innovative performance as the synergetic combination of the results of technical and administrative innovations contributes positively to organizational growth and profitability. They assert also that innovative performance is the missing link between organizational strategic orientations and performance. Xin et al. (2010) found that technologically innovative products have a statistically significant positive influence on operating performance. Damanpour and Evan (1984) indicated that organizations can cope with environmental challenges by successfully integrating technical or administrative changes into their organizational structure that improve the level of achievement of their goals.

## 2.4.4 Leadership Characteristics

Ubben, Hughes and Norris (2001) assert that leadership is characterized by change and constant improvement. The leader persistently analyzes the standard to ensure that the organization is accomplishing its goals; otherwise the leader initiates change to improve the standards. In this regard, Bennis and Nanus (2005) argue that 'managers are people who do things right and leaders are people who do the right thing'. Ubben *et al*, (2001) posit that leadership is problem-finding as well as problem-solving oriented.

In effect, leaders do manage but use their management skills from a leadership viewpoint asserting that leadership is 'providing vision and direction in a school whereas management is 'ensuring that organizational goals are achieved' (Ubben *et al.,* 2001).Importance and value of leadership varies across cultures and therefore leadership is culturally contingent (Den Hartog & House 2002,; House, Hanges, Javidan, Dorfman & Gupta. 2004).Researchers and theorists have likewise emphasized that leadership cannot be studied meaningfully in isolation from its environment (Trompenaars & Hampden-Turner 1997, House *et al*. 2004, Trompenaars & Woolliams, 2007). The more multicultural the environment, the more varied the outcome of the assessment. The more aware and experienced the leader is, the more the leader is able to anticipate and deal with culturally contingent conflicts (House *et al.*, 2004).

Substantial empirical evidence indicates that leader's attributes, behaviour, status and influence vary considerably as a result of culturally unique forces in the countries or regions in which the leaders function (Javidan *et al*., 2006). Such culturally contingent leadership attributes can be understood in terms of the distinction between etics (culture general or universal), and emics (culture specific) forwarded initially by Pike (2007) and extolled by numerous scholars like (Den Hartog & House 2002, House *et al*. 2004). Nature of environment in which interpersonal group relationship occurs also affects the quality of leadership. A leader's success and failures is affected by the environment which in turn is also affected partly by other external factors like government policy (Cleland, 2008). Among the environmental factor is the hygienic factor, supervision, working condition, wages, policies, interpersonal relation, policies and job security are easy to come by during prosperity. During adversity, hygienic factors may gradually reduce in volume, scope and quality and therefore benefits and salaries are reduced. However, human relations and supervision may improve, certain efforts may yield better results than the others and there may be shift of attention as the case may be. At this point, it may be important if reward and self-development aspects of motivation system become prominent (Cleland, 2008).

Whatever the environment is, leaders emerge to make decisions and make positive impacts (Dubrin, 2007). Simpkins (2009) concluded that organizational leaders must make sure that there is a proactive contingency plan in place that incorporates impact-controlling and alternative actions to ensure success of the strategic plan's objectives and overall goals of a firm. In measuring leadership characteristics, the present study adopted clarity of the vision, creativity, attention, decision-making of the leader in measuring the degree of being visionary. According to Milburn (2012), there are eight specific and measurable outcomes to evaluate leadership effectiveness. Effectiveness is measured by the leader's ability to exhibit each behavior consistently over a period of time and within a variety of circumstances. These eight outcomes can be used as a measurement tool (reflect on past actions) or a mentoring tool (prepare for future actions).

These are divided into two categories: self and others. The first four focus on self-leadership. The second four deal with our leadership and interactions with others (Milburn, 2012). Self-leadership outcomes include: positive view of self, engaged in one's position of influence, willingness to invest discretionary effort and ability to self-regulate. Outcomes of leadership and interactions with others include connecting with others, healthy relational skills, openness to diversity and contribute to the lives of others (Milburn, 2012).Fausing *et al*. (2013) presents a review of recent survey-based research looking at the contribution of teamwork which is an aspect of inspirational motivation to organizational performance. In particular, it focuses on empirical studies in which both teamwork and performance are directly measured in a quantitative way.

The paper begins by identifying four interrelated dimensions of teamwork effectiveness: attitudinal, behavioral, operational and financial. The first two represent transmission mechanisms by which organizational performance can be improved. The latter two provide direct measures of organizational outcomes. The review shows that team working has a positive influence on all four dimensions of performance. It also reveals that when teamwork is combined with structural change, performance can be further enhanced.

Fausing *et al.* (2013) presents a review of recent survey-based research looking at the contribution of teamwork as a measure of inspirational motivation to organizational performance. In particular, it focuses on empirical studies in which both teamwork and performance are directly measured in a quantitative way. The paper begins by identifying four interrelated dimensions of teamwork effectiveness: attitudinal, behavioral, operational and financial. The first two represent transmission mechanisms by which organizational performance can be improved. The latter two provide direct measures of organizational outcomes.

The review shows that team working has a positive impact on all four dimensions of performance. It also reveals that when teamwork is combined with structural change, performance can be further enhanced. A transformational leader by individualized consideration builds follower self-confidence and heightens personal development, which in turn leads to the empowerment of followers. Transformational leaders also enhance followers' empowerment by providing meaning and challenge to their work (Bass & Riggio, 2006).

Through intellectual stimulation, transformational leaders encourage followers to question their own beliefs, assumptions and values and when appropriate, those of the leader which may be outdated or inappropriate for solving current problems (Bass & Riggio, 2006). Samad (2012) presented the findings of a study which examined the relationship between innovation, transformational leadership and performance. Data in the study was collected from a sample of 150 managerial staff in Malaysian logistics firms. The study found that transformational leadership and innovation were related to organizational performance. Both transformational leadership and innovation were found to be the significant influence to organizational performance.

## 2.4.5 Legal and Regulatory Environment

The environment needs to be differentiated into distinct sectors as they differ in importance and uncertainty (Daft, Sormunen & Parks 2008). Choosing the right emphasis for every sector is key to successful scanning activities for the firm (Garg, Walters & Priem, 2003). The academic management literature classifies environmental sectors into sectors of the task environment and the general environment (Bourgeois, 2000; Garg, Walters & Priem, 2003).

According to Daft *et al.* (2008), the task environment includes sectors which are external to the organization but with which the organization transacts directly. The task environment includes for example the sectors customers, competitors and suppliers (Daft *et al.*, 2008) as well as the technological sector (Garg, Walters & Priem 2003). In contrast, the general environment includes organization-external sectors with indirect influence on the firm. The general environment includes for example the social sector, economic sectors or the regulatory sectors (Garg *et al.*, 2003). During the last four decades, management control systems literature has been dominated by the contingency paradigm.

This contingency factor is presented as a powerful explanatory variable of its diversity (Hartmann, 2005). The uncertainty is "a change of the conditions of the environment which affects the controlled process. Jabnoun, Khalifah and Yusuf (2009) studied environmental uncertainty, strategic orientation and quality management using a contingency model and found that businesses operate in an ever-dynamic environment and therefore must adjust and adapt to environmental dynamism through a variety of strategic orientations. Strategy therefore is instrumental to the survival of the firm. The study also found that firms that match their situation to the environment can improve their performance, while those that do not court failure. Jabnoun, Khalifah and Yusuf (2009) observed that strategies should be formulated to adapt to, respond to or shape the environment.

With any significant change in the level of uncertainty, a change in strategy is necessary to keep the organization in harmony with its environment. Environmental uncertainty plays a central role in strategy formulation for it affects not only the availability of resources to the firm and the value of its competencies and capabilities, but also customer needs and requirements as well as the competition and the overall performance (Jabnoun *et al*., 2009).

### 2.4.6 Performance of Manufacturing Firms

Performance in an organization reflects the result of effects of implementation of various strategies adopted by firms. It is difficult to fairly assess manufacturing performance. Different organizations use varying measures of performance. These measures may be quantitative or qualitative. Majority of the organizations employ quantitative measures to assess the effect of strategies chosen and success of their implementation. Performance variables are both financial and non-financial. Financial measures such as ROI and profitability are usually plant level measures that are subject to many factors outside the scope of manufacturing operations (Flynn & Flynn, 2004).

One of the goals of every firm is to make profits and other financial benefits. Ramanujam and Camillus (2006); Krager and Parnell (2005) conceptualized financial measurements as an objective of a firm. According to these authors, variables of financial measures include prediction of future trends, improving short-term performance, improving long-term performance, direct impact on firm performance and enhancing development management. Kaplan and Norton (2008) concur with these authors and contend that Balanced Scorecards Strategy considers financial indicators as one of the critical measures of firm performance. An attempt to isolate the performance of the operations function is to utilize measures where the management of operations plays an integral part like in operational performance measures (Boyer & Lewis, 2002; Flynn & Flynn, 2004). Dimensions used conveniently coincide with the common set of competitive priorities like quality, delivery, flexibility and cost performance.

Important to acknowledge is that every dimension to some extent is vital for all operations which one is the most important is just a matter of competitive positioning (Porter, 1981; Treacy & Wiersema, 1993). Swink, Narasimhan and Kim (2005) noted that managers of the manufacturing firms were intent on implementing the best manufacturing to improve their performance. However, the relationship between manufacturing practices and performance is only partly understood. According to Swink *et al.* (2005), despite the propositions of Skinner and his adherents, there is little documented evidence to prove the relationship between certain practices and performance. The study focused on the effect of strategic integration. Strategic integration represents the degree to which a manufacturing plant cooperates with other inter-organizational divisions to harmonize its goals and manufacturing practices with the internal and external requirements. Since there is no single measure that effectively captures the performance outcomes of different strategic types, several researchers have suggested that financial measures must be used in conjunction with market based measures (Dess & Davis, 2004; Hambrick, 2003; Schendel & Patton, 2002).

Pearce, Robbins and Robinson (2007) suggested that the effect of firm strategic factors on performance is contingent upon the level of turbulence a firm faces. Kaplan and Norton (2008) argue that executives in firms facing turbulent environment should not arrange for high levels planning because future states of turbulent environment are impossible to predict. Kim, Hwang and Burgers (2009) studied the impact of global diversification strategy on corporate profit performance. Their study of 62 multinationals suggests that the profit performance impact of related and unrelated diversification (Primarily based on product diversity) varies contingent upon the extent of a firm international market diversification. Grant, Jammine & Thomas (2008) looked at the relationship between diversity, diversification (increases in diversity over time), and profitability for 304 larger British manufacturing firms. Their results indicated that in general, diversity was positively related to profitability. The measure used was return on assets.

Accounting measures of performance have been widely used in the diversification research (Grant et al, 2008; Kim, Hwang & Burgers 2009). Return on assets reflects firm's relative efficiency in the utilization of its assets. The impact of corporate strategy in firms' performance may be more directly reflected in accounting profit than in stock price, which measures investors' expectation about future profits (Grant *et al*, 2008). Ramanujam, Ramanujam & Camillus (2006) are advocates of multidimensional view in organizational practices and argue that performance should be measured in a multidimensional manner.

Krager and Parnell (2005) also contributed to the multidimensional view of firm factors debate and provided the same argument that indicators of performance are multidimensional, that is, they are not only financial superiority elements but also organizational ability to adapt to changes that are occurring and will occur in its environment (qualitative). A realistic model of organizational performance must reflect a highly complex paradigm and require more than a single criterion. These studies identified financial performance and organizational effectiveness-qualitative attributes dimensions associated with the planning process (Krager & Parnell, 2005).

## 2.5 Empirical Review

This section discusses past studies according to the objectives of the study. The section reviews literature on the influence of strategic contingency factors on performance of large manufacturing firms in Kenya. According to Kothari (2004), the review of similar studies is used along with empirical data collected. The review of empirical literature plays a key role in establishing research gaps upon which a study can aim to build on.

### 2.5.1 Organizational Structure

Pertusa-Ortega (2008) analyzed the internal factors of organizational structure which had an influence on the firm performance. The study examined a sample of large Spanish firms belonging to different sectors by means of the Partial Least Squares (PLS) technique using formative dimensions for competitive strategy and organizational structure.

The results revealed that the strategies which simultaneously emphasize high differentiation and low cost levels influence firm performance positively and that the possible organizational support needed to reach an appropriate hybrid strategy may be in the form of design of organic flexible organizations with mechanical components (Pertusa-Ortega, 2008). Odita et al (2015) studied how strategic intent and it dimensions related with organizational performance. The design of the study was cross-sectional survey. A self-report questionnaire was used for data collection.

Mission dimension of strategic intent explained 47% variance in organizational performance, vision dimension of strategic intent explained 19% variance in organizational performance, and objective dimension of strategic intent explained 58% variance in organizational performance. It was concluded that overall strategic intent positively and significantly relate with organizational performance and that the various dimensions of strategic intent vary in the degree of variation they account for in organizational performance.

**2.5.2 Information Technology**

Mouelhi (2008) examined the extent to which the use of information and communication technology contributed to efficiency growth in Tunisian manufacturing firms and how it varied according to the roles played in different branches. The study used a firm level panel data for the manufacturing sectors in Tunisia to investigate whether adoption of ICT impacts on the efficiency in factors use and adopted principally the stochastic frontier approach. The results indicated that the variables included in the technical inefficiency model contributed significantly to the explanation of the technical inefficiencies.

The effect of ICT use on technical inefficiency (technical efficiency) was reflected by the coefficient of ICT variable which was negatively (positively) significant at 5% level. A clear positive relationship was found between the efficiency and ICT variable. ICT, by exposing firms to greater information on product characteristics, updated technologies and market trends, provided firms with learning opportunities that allow them to get on a steeper learning curve than firms that do not use ICT (Mouelhi, 2008).

### 2.5.3 Dynamic Capabilities

Jekel (2009) in a study on the quality aspect of dynamic capabilities based on successful practices of 61 German manufacturing firms in China understood dynamic capabilities as organizational processes which modify a firm's resource configuration to address environmental opportunities or threats. The study resulted in a comprehensive, generalized model summarizing the quality aspects of dynamic capabilities with the highest influence on firm performance. The study recommended that identification of those dynamic capabilities with highest impact on firm performance is an additional contribution to academia (Jekel, 2009).

Shelton (2001) conducted a study to analyze the impact of employee development programs and training on job satisfaction and performance with regard to business success. The study found out that training and development increases employee satisfaction and interest to remain in the organization. The results found out that there is significant positive relationship between training perception and effective commitment and significant negative relationship between effective commitments with employee turnover. It means that availability of training and development programs shows care from the organizations for their employees and this makes them to perform better thus improving the overall performance of the organization. A survey on the effects of employee training and development (2005) by the Society for Human Resource Management and Catalyst revealed that employee training programs are of strategic importance to both organizations and employees. It further noted that organizations that offer employees opportunities to evolve increases the likelihood of retaining them and in turn, create a cadre of workers equipped to grow within the organizational structure.

This is echoed by (Lachnit, 2001) who argued that many firms train workers because they believe it strengthens the firm's performance and also serves as a retention tool. For instance, a study by Fagerberg et al.,(2004) revealed that innovative countries had higher productivity and income than the less-innovative ones. OECD reports pointed out that firms that developed innovations in a more decisive way and rapidly had also more qualified workers, paid higher salaries and provided more conclusive future plans for their employees.

The effects of innovations on firm performance differ in a wide spectrum from sales, market share and profitability to productivity and efficiency (OECD Oslo Manual, 2005). McAdam and Keogh (2004) investigated the relationship between firm's performance and its familiarity with innovation and research. They found out that firm's inclination to innovations was of vital importance in the competitive environment in order to obtain higher competitive advantage. Geroski (1995) examined the effects of the major innovations and patents to various corporate performance measures such as accounting profitability, stock market rates of return and corporate growth. The observed direct effects of innovations on firm performance are relatively small and the benefits from innovations are more likely indirect. However, innovative firms seem to be less susceptible to cyclical sectorial and environmental pressures than non- innovative firms.

**2.5.4 Leadership Characteristics**

Hoogh (2014) examined relationships between idealized influence leadership and performance outcomes. Results revealed that idealized influence leadership was positively related to common-source and multi-source perceptual performance outcomes (subordinate's positive work attitude) and to organization's profitability but unrelated to organization liquidity and solvency. Samad (2012) presented the findings of a study which examined the relationship between innovation, transformational leadership and performance. Data in the study was collected from a sample of 150 managerial staff in Malaysian logistics firms. The study by Samad (2012) found that transformational leadership and innovation were related to organizational performance. Both transformational leadership and innovation were found to have a significant influence on organizational performance.

Femi (2014) examined the significant relationship between communication as a way of inspiration and worker's performance in some selected organizations in Lagos State, Nigeria. Data for the study was collected through questionnaire with sample population of 120 respondents. The result of the study revealed that a relationship exists between effective communication and worker's performance, productivity and commitment.

Navqi et al (2013) studied the effect of job autonomy on job satisfaction and organizational commitment in Pakistan. A sample of 107 employees was considered for the study. Results showed that an increase in job autonomy results in an increased level of job satisfaction and organizational commitment and organizational culture moderates this relationship. Some of the components of idealized influence included charisma, ethics and communication/articulation of the organization vision (Manteklow, 2011).

Hoogh (2014) examined relationships between charismatic leadership and performance outcomes. Results revealed that charismatic leadership was positively related to common-source and multi-source perceptual performance outcomes (subordinate's positive work attitude) and to organization profitability but unrelated to organization liquidity and solvency. Wilderom et al (2012) investigated the effects of charismatic leadership and organizational culture on perceived and objective company performance using a longitudinal design. Employees (N = 1214) in 46 branches of a large Dutch bank rated branch management on charismatic leadership, organizational culture in terms of work practices, as well as perceived organizational performance. Results revealed that charisma improved performance.

Walumbwa (2014) investigated the link between ethical leadership and performance using data from the People's Republic of China. Consistent with social exchange, social learning and social identity theories, the study examined leader–member exchange, self-efficacy and organizational identification as mediators of the ethical leadership to performance relationship. Results from 72 supervisors and 201 immediate direct reports revealed that ethical leadership was positively and significantly related to employee performance as rated by their immediate supervisors and that this relationship was fully mediated by leader-member exchange, self-efficacy and organizational identification controlling for procedural fairness.

Kombo, Obonyo and Oloko (2013) focused on the influence of delegation as a form of individualized consideration on employee performance with teamwork, employee commitment and participation and employee satisfaction as elements of delegation whose objective was to find out whether or not delegation impacts employee performance. Primary data was collected using a questionnaire with both open and closed ended questions on 5 point likert scale. The study established that effective delegation in organizations improves performance. Sentuya (2013) empirically investigated how the level of authority delegation is related to the performance of an organization. The effect of authority delegation is studied using empirical data from the banking sector. Different specifications were used to estimate the effect of authority delegation on performance characteristics. Estimates demonstrated that more authority delegated had a positive effect on performance.

Huang et al (2013) examined whether participative leadership behavior is associated with improved work performance through a motivational process or an exchange-based process. Based on data collected from 527 employees from a Fortune 500 company, the study found that the link between superiors' participative leadership behaviors and subordinate's task performance and organizational citizenship behavior toward organizations. (OCBO) was mediated by psychological empowerment (motivational mediator) for managerial subordinates. Yet, for non-managerial subordinates such as supporting and front-line employees, the impact of participative leadership on task performance and OCBO was mediated by trust-in-supervisor (exchange-based mediator).

Merhabi et al (2013) studied the effect of leader's participative behaviors on employee's perception of effectiveness and performance. The statistical population of this study was 105 employees. 83 employees were chosen as sample members. Regressions test and Pearson correlation test was the main statistical test that was used for the purpose. The results of the study indicated that there are significant relationships between leader's participative behavior and employee's performance. In addition, the results showed that there are significant relationships between perception of collective effectiveness and employee's performance.

### 2.5.5 Legal and Regulatory Environment

In Virginia, USA, Simpkins (2009) did a viewpoint study on how leaders can benefit from adoption of situational leadership style in an uncertain environment. The implications of the study were that it would help managers develop and implement better strategic contingency decisions faced by unknowns. In the findings, Simpkins (2009) found that a form of contingent leadership approach in an uncertain environment would results to more benefits to a firm. Small (2007) studied the advanced manufacturing technology (AMT) implementation and performance of 82 American firms from the SIC 35-37 industries by analyzing their questionnaire responses. Questionnaire data was analyzed using regression analysis. The results indicated that firms with more employees apply more complex technologies in uncertain environments.

Jabnoun et al, (2009) studied environmental uncertainty, strategic orientation and quality management using a contingency model and found that businesses operating in an ever-dynamic environment adjust and adapt to environmental dynamism through a variety of strategic orientations. The study also found that firms that match their situation to the environment can improve their performance while those that do not court failure.

### 2.6 Critique of Existing Literature

Various empirical works have linked strategic contingency factors to performance of firms globally and locally. Various studies have come up with different results concerning the relationship. Of the reviewed studies, no study has combined information technology, leadership characteristics, dynamic capabilities and organization structure jointly in relation to performance. In as much as there are various strategic contingency factors, the unique combination of the four in one study had not been done despite the importance of the four in the ever changing and dynamic environment which firms operate in today. Furthermore, the use of a moderating variable that is from outside and not internal has not been given much consideration. Most studies use firm size as moderating.

This study hence purposed to combine the four factors together with legal and regulatory environment as the moderating variable. Even though the influence of the contingency factors on performance  has been investigated in isolation in the previous studies, not combining them as the current study purposed, the results of their influence on performance have not been conclusive either. For instance a study by Jekel (2009) concluded that there are various dynamic capabilities with different ranking according to their influence on performance which indicated that in as much dynamic capabilities influence performance, their level of influence varies among them. Contrastingly, Geroski (1995) indicated that dynamic capabilities like innovation may not necessarily influence performance positively as they may also influence it negatively by subjecting innovative firms to cyclical sectoral and environmental pressures and risks than non- innovative firms.

## 2.7 Research Gap

Theoretically, there is a research gap in the field of strategic management concerning strategic contingency factors (Sousa & Voss, 2008). There are numerous contradictory statements within the existing knowledge of strategic contingency factors, which raise questions about the generalizability of certain theories. There are also numerous untested hypotheses, models, propositions and concepts within theories that consider contingencies and those that are not necessarily related to manufacturing (Matyusz, 2012). There are existing conceptual research gaps in the previous studies that have focused on the relationship between contingency factors and firm performance. Studies that actually investigated performance in relation to contingency factors have found contradicting results on the relations between these factors and performance (Amit & Schoemaker, 2009).

Majority of the reviewed studies are of a descriptive and predictive nature or they focus on one aspect of structure (Pugh & Hickson, 1976). Most studies on the influence of strategic contingency factors focus mainly on a limited number of developed countries. There are contextual research gaps in the reviewed literature as most of the reviewed studies have been undertaken to analyse productivity gains in the whole economy, but few studies have tried to analyse the influence of strategic contingency factors at the sectorial or firm level.

Furthermore, very few studies exist in the local context. The review of literature also presented the methodological research gap as the methodologies used by the previous studies vary. For instance, a study by Pertusa-Ortega (2008) used Partial Least Squares (PLS) technique to analyze the internal factors of organizational structure which had an influence on the firm performance, Mouelhi (2008) used firm level panel data to examine the extent to which the use of information and communication technology had contributed to efficiency growth in Tunisian manufacturing firms while Jekel (2009) used generalized least square regression model in a study on the quality aspect of dynamic capabilities based on successful practices of 61 German manufacturing firms in China. This presented methodological research gaps in the previous studies conducted on the topic. Motivated by these conceptual, contextual and methodological research gaps, the current study sought to establish the influence of strategic contingency factors on performance of large manufacturing firms in Kenya.

## 2.8 Summary of Literature

The chapter reviewed various theories on which the study is anchored on. The study reviewed the contingency theory, contingency theory of fit, dynamic capabilities theory and situational leadership theory. The empirical review of literature indicated that there are numerous contradictory statements as well as untested hypothesis within the existing knowledge of strategic contingency factors which raise questions about the generalizability of certain theories. The review also presented conceptual, contextual and methodological research gaps. The conceptual research gaps were present because some of the reviewed studies did not necessarily use similar variables used by the current study in the same study. Furthermore, contextual research gaps were presented since some of the reviewed studies were conducted in different contexts from the context of the current study. The literature reviewed indicated the need to add more knowledge in the discipline of strategic contingency factors.

**Table 2.1 Summary of Literature and Research Gaps**

| Author | Focus of the study | Methodology | Findings | Knowledge Gap |
|---|---|---|---|---|
| Pertusa-Ortega (2008) | Internal factors of organizational structure which had an influence on the firm performance | Partial Least Squares (PLS) | Strategies which simultaneously emphasize high differentiation and low cost levels influence firm performance positively | Contextual Conceptual Methodological |
| Odita et al (2015) | Strategic intent and its dimensions related with organizational performance. | Cross-sectional survey | Strategic intent positively and significantly relate with organizational performance | Contextual Conceptual Methodological |
| Mouelhi (2008) | Relationship between the use of information and communication technology and efficiency growth in Tunisian manufacturing firms | Panel data | A clear positive relationship was found between the efficiency and the use of ICT | Contextual Conceptual Methodological |
| Jekel (2009) | Quality aspect of dynamic capabilities based on successful practices of 61 German manufacturing firms in China | OLS | Quality aspects of dynamic capabilities were ranked in order of their influence on firm performance. | Contextual Conceptual |

| Author | Focus of the study | Methodology | Findings | Knowledge Gap |
|---|---|---|---|---|
| Shelton (2001) | The impact of employee development programs and training on job satisfaction and performance with regard to business success. | OLS | Availability of training and development programs shows care from the organizations for their employees and this makes them to perform better thus improving the overall performance of the organization | Contextual Conceptual |
| McAdam and Keogh (2004) | The relationship between firms' performance and its familiarity with innovation and research. | OLS | The firms' inclination to innovations was of vital importance in the competitive environments in order to obtain higher competitive advantage. | Contextual Conceptual |
| Hoogh (2014) | Relationships between idealized influence leadership and performance outcomes. | OLS | Idealized influence leadership was positively related to common-source and multi-source perceptual performance outcomes (subordinates' positive work attitude) and to organization profitability | Contextual Conceptual |

# CHAPTER THREE
# RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter discusses the methodological approach that was used to provide answers to the research hypothesis. The main focus of this chapter is collection of data that concerns the variables under study and the analysis of the same to verify whether the hypotheses are true or not. Jackson (2009) defines a research methodology as a part of research that explains the research procedures in a manner appropriate for the audience. In particular the section discusses the research design, research philosophy, population of the study, sampling and sampling techniques, data collection instruments, data collection procedures, pilot study, reliability of the instrument, data validity and data analysis.

## 3.2 Research Philosophy

The research philosophy for this study was positivism. Research philosophy relates to the foundation of knowledge upon which important assumptions and predispositions of a study are based. There are two main research philosophies, namely; positivism (scientific) and phenomenology (interprevitism) which may also be viewed in terms of two perspectives, namely quantitative and qualitative approaches (Cooper & Schindler, 2006). Positivist philosophy premises that knowledge is based on facts and that no abstractions or subjective status of individuals is considered. Positivism thus derives a quantitative perspective which holds that there is an objective reality that can be expressed numerically, with explanatory and predictive power (Neuman, 2006; Furrer, Thomas & Goussevkaia, 2008).

Under this paradigm, knowledge is valid only if it is based on values of reason and facts, gathered through direct observations and experience measured empirically through quantitative methods and statistical analysis. Under this paradigm, theoretical models can be developed that are generalizable to explain cause and effect relationships (Saunders, Lewis & Thornbill, 2007).

Consequently, problem solving under this approach follows a pattern of formulating hypotheses in which assumptions of social reality are made and hypotheses tested often using quantitative techniques (Buttery & Buttery, 1991; Stile, 2003). On the other hand, interprevitism is benched on the belief that social reality is not objective but highly subjective because it is shaped by the researcher's perceptions. It is any type of research where the findings are not derived from statistical analysis (Collins & Hussey, 2009). Thus the philosophical foundation of the study was positivism where scientific processes were followed in hypothesizing fundamental laws then deducing the observations so as to determine the truth or falsify the solid hypotheses.

## 3.3 Research Design

The study adopted both cross-sectional research design and descriptive survey design. Cross-sectional studies are designed to collect data once over the same period of time, analyzed then reported while descriptive survey design is designed to collect primary or secondary data from a sample with a view of analyzing them statistically and generalizing the results to a population (Cooper & Schindler 2006). Using cross-sectional design, the researcher was able to obtain research data over the same period of time. While descriptive research design was used to establish the cause and effect relationship between the dependent variable (Firm Performance) and the independent variables (Strategic Contingency factors). Waithaka, Mburu, Koror and Muathe (2012) used mixed research design of cross-sectional design and descriptive survey design in their study on environmental factors that influence supply chain management implementation in the manufacturing industries in Kenya.

## 3.4 Population of the Study

Cooper and Schindler (2003) define population as the total collection of all the elements about which the study wishes to make some inference. KAM membership constitutes 40 per cent of manufacturing value-add industries in Kenya and comprises of small, medium and large enterprises (KAM, 2014). The size is measured by their total assets. Large-sized firms are the firms with total assets of above Kshs.100 million, medium-sized have between Kshs40 Million and Kshs100 million by total assets; whereas small firms are those firms having assets under Kshs

40 Million, Over 80 per cent of these large scale manufacturing firms are based in Nairobi, while the rest are located in other major towns and regions including Coast, Nyanza, Nakuru, Eldoret, Athi River, Nyeri and Thika (KAM, 2014). According to KAM (2014), there were a total of 499 large scale manufacturing firms operating in Nairobi where 80 per cent of their members are based. The large scale manufacturing firms were chosen because as Awino (2007) indicated, these firms are likely to exhibit an elaborate contingency philosophy and management strategies best practices. The 499 large scale manufacturing firms represented the total population for this study. A list of the large manufacturing firms in Kenya considered in the study is presented in appendix IV.

## 3.5 Sampling Frame

The sampling frame defines the population of study. For this study the sampling frame included the operations managers in each of the 217 firms because they have the necessary skills and knowledge in key areas of the study and could therefore give correct information.

## 3.6 Sampling and Sampling Technique

A sample is the actual number of elements to be physically reached by the researcher to extract data. Stratified random sampling method was applied to come up with the sample size since the population is heterogeneous. This, according Cooper and Schindler (2006) ensures that each manufacturing subsector is represented. According to Mugenda and Mugenda (2003), at least 10 percent of the target population is important for the study. The study used a sample size of 217 large manufacturing firms as shown in the Table 3.1. In a descriptive survey a sample enables a researcher to gain information about a population (Kothari, 2004; Mugenda & Mugenda, 2003). Generally, the larger the sample, the more likely the scores on the variables will be representative of the population scores. However, researchers recommend a rule of thumb in determining sample size. For example, Gall, Gall & Borg (2007) indicated a minimum number of 15 in experimental research, 30 in correlational research and a minimum of 100 in survey research.

In this study, the following formula was used to determine the sample size (Mugenda & Mugenda, 2003).

$$N = \frac{Z^2 pq}{d^2}$$

Where:

**N** = the desired sample size (if the target population is greater than 10,000)

**P** = the proportion in the target population estimated to have characteristics being measured. This is placed at 50% (0.5).

**q** = (1-p), that is the proportion in the target population estimated to have characteristics being measured, (1-0.5) = 0.5

**d** = margin of error

**Z** = the standard normal deviate at the required confidence level.

In this study, this was placed at 95% confidence interval. Since there was no estimate available of the proportion in the target population, the target proportion that is assumed to have the characteristics of interest (population) was placed at 50% that is p = 0.5 (Kothari, 2004).

This proportion was based on personal judgment as proposed by among others (Kothari, 1990; Fisher, 1983) and this enabled the researcher to trade-off between cost and benefit of large and small samples in research. The selected margin of error was 5%. According to Mugenda and Mugenda (2003) the following formula for determining sample size as mentioned earlier is recommended;

$$n = \frac{Z^2 pq}{d^2}$$

$$n = \frac{1.96^2(0.5)(0.5)}{0.05^2}$$

$$= 384$$

**n** = 384 sample size for target population greater than 10,000

In the current study, the target population was less than 10,000 (499): therefore, calculating the final sample estimate ($n_f$) required the following formula:

$$n_f = \frac{n}{1 + n/N}$$

Where;

$n_f$ = the desired sample size (when the population is less than 10 000)

$n$ = the sample size (when the population is greater than 10,000).

$N$ = the estimate of the population size (499 in the case of the current study).

Applying the formula therefore, yields the following results;

$$n_f = \frac{384}{1 + 384/499}$$

$$= 217$$

Cooper & Schindler, (2006); Mugenda & Mugenda, (2003) pointed that a sample of at least 10% of the population is usually acceptable in the study. In quantitative research, mathematical procedures can be used to make precise estimates especially when hypotheses need to be tested and they involved statistical power analysis. Saunders *et al.,* (2009), concluded that a sample size is almost a matter of judgment rather than calculation. Based on this contention, a sample size of 217 firms were targeted for investigation as articulated in Table 3.1.

The researcher collected data from operations managers in each of the 217 firms because they are believed to have the necessary skills and knowledge in key areas of the study and could therefore give correct information. This means that the unit of analysis was 217 large manufacturing firms while the unit of observation was 217 operational managers. Proportionate sampling was used.

**Table 3.2     Sample Size**

| Sector | No. of Firms | Unit of Analysis Sample Size | Percentage |
|---|---|---|---|
| Building | 20 | 9 | 4% |
| Chemical | 70 | 31 | 14% |
| Energy | 34 | 14 | 6% |
| Food | 71 | 31 | 14% |
| Metal and Allied | 66 | 28 | 13% |
| Motor | 27 | 12 | 6% |
| Leather | 7 | 4 | 2% |
| Paper | 63 | 27 | 12% |
| Pharmaceuticals | 21 | 9 | 4% |
| Plastics | 68 | 29 | 13% |
| Textiles | 35 | 15 | 7% |
| Wood Products | 17 | 7 | 3% |
| Total | 499 | 217 | 100% |

**(KAM, 2014)**

## 3.7 Data Collection Instruments

Data collection instruments refer to the tools used for collecting data and how those tools are developed. This study utilized a questionnaire to collect primary data. A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Lumpkin & Dess, 2001). Primary data was collected using a self-administered questionnaire (Appendix 1).

The questionnaire was used to explore the selected respondents observations, views and opinions on the variables under study. This method was preferred because of the technical nature of items since the scale and the need to ensure reliability of responses from the respondents. Each questionnaire was divided into two sections to obtain information covering various aspects of the study. Section A covered demographic characteristics of the respondent while Section B to Section G covered both independent variables and the dependent variable.

**3.8 Data Collection Procedure**

Primary data was collected through the administration of questionnaires to the operation managers. Kothari (2004) describes primary data as that which is collected afresh and for the first time and thus happens to the original character. Questionnaires were administered by trained research assistants to gather data. Two hundred and seventeen questionnaires were distributed to the relevant managers in each of the sampled manufacturing entity. The filled questionnaires were picked after two weeks. Data was then cleaned, sorted and collated after which it was entered into the computer for analysis and subsequent presentation.

**3.9 Pilot Study**

According to Sekaran (2006), a pilot study is conducted when a questionnaire is given to just a few people with an intention of pre-testing the questions. Pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample (Cooper & Schindler, 2011). It assists the research in determining if there are flaws, limitations or other weaknesses within the questionnaire design and allows him or her to make necessary revisions to the questionnaire prior to the implementation of the study (Kvale, 2003).

A pilot study was conducted among 42 manufacturing firms which constituted 10 per cent of the total population of 499 large manufacturing firms. According to Baker, Veit and Powell (2001), the size of a sample to be used for piloting varies depending on time, costs and practicality, but the same would tend to be 5- 10 per cent of the main survey. The aim was to test the reliability and validity of the questionnaire. It also aimed at determining if there were flaws, limitations, or other weaknesses within the questionnaire design and therefore allow for revisions to be made to the questionnaire prior to the implementation of the study.

**3.9.1 Reliability Test**

Reliability is the consistency of a set of measurement items or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects (Cronbach, 1951). It is the extent to which a questionnaire tests observation or any measurement procedure and produces the same results.

52

That is, the stability or consistency of scores over time or across raters (McNeill, 2005). A measure is considered reliable if a person's score on the same test given twice is similar. Various variables may impinge upon reliability of findings. For instance, respondents may be biased or not be in mood of answering questions with degree of interest.

To minimize such variables, Sekaran (2006) advice that respondents must be carefully chosen to ensure they are willing to participate in the study and will answer questions with minimum degree of bias. Two methods of testing reliability were used in this study: test for equivalence and internal consistency test. Test of equivalence was ensured through questionnaire pretesting with a sample of technically equivalent respondents not participating in the study. Internal consistency of the research instrument used Cronbach's Alpha.

Cronbach's Alpha is a reliability coefficient that indicates how well items in a set are positively correlated to one another (Sekaran, 2006). According to Bryman and Cramer (2005), generally reliability of 0.7 to 1.0 is considered acceptable. For this study an alpha coefficient of 0.7 and above was considered reliable. Reliability was further considered through drawing literature in only tested researches.

**3.9.2 Validity Tests**

Validity can be described as the extent to which instrument measures what it purports to measure (Jankowicz, 2005).Validity concerns the accuracy and meaningfulness of inferences which are based on the research results (Bryman & Cramer, 2005). There are three kinds of validity relevant for this research namely: criterion related validity, content validity and construct validity. Criterion related validity also referred as instrumental validity is used to demonstrate the accuracy of a measure or procedure by comparing it with another measure or procedure which has been demonstrated to be valid. The study relied on instruments developed in other related studies as well as concepts generated from a broad range of appropriate literature. Content validity is based on the extent to which a measurement reflects the specific intended domain of content.

This study used content validity to examine whether the content of the research instrument covers representative sample of construct domain to be measured. The researcher used professional or experts in the strategy field to assess the concept the instrument was trying to measure and also determine whether the set of items or checklist accurately represented the concepts under the study. According to Patton (2002), construct validity seeks agreement between a theoretical concept and a specific measuring device or procedure. Construct validity can be broken into two subcategories: Convergent validity and discriminate validity.

Convergent validity is the actual general agreement among ratings gathered independently for one another where measures should be theoretically related. Discriminate validity is the lack of a relationship among measures which theoretically should not be related. To understand whether this research had construct validity, the researcher followed the following steps. First the theoretical relationships were specified. Second the empirical relationships between the measures of the concepts were examined. Third, the empirical evidence was interpreted in terms of how it clarified the construct validity of the particular measure to be tested.

### 3.10 Data Analysis and Presentation

Data analysis is the process of systematically applying statistical and or logical techniques to describe and illustrate, condense and recap and evaluate data. According to Shamoo and Resnik (2003), various analytic procedures provide a way of drawing inductive inferences from data and distinguishing the phenomenon of interest from the statistical fluctuations present in the data. In this study, data was analyzed using descriptive and inferential statistics. Descriptive statistics included percentages, frequencies, means, and standard deviations while inferential statistics included regression and correlation analysis. Data processing was undertaken through coding the completed questionnaires, entry into SPSS and then checked for accuracy of data input.

Data analysis entailed details about the techniques that were used in the study to analyse and test data. Before processing the responses, data was prepared by coding, cleaning data and checks were made to identify any reverse coded values and missing values. SPSS was used for descriptive and inferential statistics to determine statistical parameters. According to Saunders, Lewis and Thornbill (2009) in business research, structured grids are the appropriate methods of data preparation since it makes it easy for identification and placement of allocation of responses. Data was coded and analyzed simultaneously as collected. The data was analyzed and presented in form of diagrams and graphs prepared from SPSS. The findings were used to test if they answered research questions raised in chapter one.

### 3.10.1 Model

The study hypotheses posit two way interactions between firm's performance (Dependent variable) and the independent variables (Organizational Structure, Information Technology, Dynamic Capabilities and Leadership Characteristics). The identified dependent variable was certain while the independent variables were dichotomous. To test the research hypotheses, the study used an ordinary least square regression model which has been recommended by a number of researchers (Peng & So, 2002; Cohen & Cohen 1983).

A binary logistic regression model was used to establish the relationship between the independent and dependent variables. A coefficient assigned to an independent variable was interpreted as the change in the logit (log odds that is y = 1), for a 1-unit increase in the independent variable with the other independent variables held constant. Logistic regression estimates is the log odds as a linear combination of the independent variables. A predicted logit for case $i$ is obtained from the solved logistic regression equation:

$$\text{Logit}_i = b_0 + b_1 x_{i1} + b_2 x_{i2} + b_3 x_{i3} + \ldots\ldots + b_m x_{ik}$$

The predicted probability model is given by:

$$P_i = \exp(\text{logit}_i) / [1 + \exp(\text{logit}_i)]$$

This value serves as the Bernoulli parameter for the binomial distribution of Y at the values of X observed for case *i*. Logit values can range from -∞ to + ∞ and their associated probabilities range from 0 to 1.Multiple Logistic Regression (MLR) model, the log odds or logit of $p_i$ equals the natural logarithm of $p_i / (1-p)$.

**Logit (p) = β₀ + β₁x₁ +…………+ β ₖxₖ**

Thus for this study, the **Logit (p) = β₀ + β₁x₁+ β₂x₂+ β₃x₃+ β₄x₄**

Where **(β₀, β1, β₂, β₃, β4) =** maximum likelihood estimates of the logistic regression coefficients.

**Xᵢ……Xₖ** = are the column vectors of the values for the independent variables

The formula for the probability itself is as follows:

$$P(Y=1) = \frac{e^{\beta_0 + \beta_1 x_1 + \ldots + \beta_k x_k}}{1 + e^{\beta_0 + \beta_1 x_1 + \ldots + \beta_k x_k}}$$

Where:

**X₁**= Organizational structure

**X₂** = Information Technology

**X₃**= Dynamic capabilities

**X₄** = Leadership characteristics

In this study the dependent variable (Y) was assumed to take value 1 or 0, where 1 refers to high performance and 0 for low performance.

The dependent Variable was in the form:

**Y₁** = Firm Performance

**Y₀** = Firm Non-performance

Where the Logistic function was:

$$P(Y = 0) = \frac{e^{\beta_0 + \beta_1 x_1 + \ldots + \beta_k x_k}}{1 + e^{\beta_0 + \beta_1 x_1 + \ldots + \beta_k x_k}}$$

To achieve the objectives set forth for this research, several analytical tools were applied. Under objectives one to four that seeks to determine the extent to which firm's performance (Dependent variable) is influenced by the independent variables (Organizational Structure, Information Technology, Leadership characteristics and Dynamic Capabilities) correlation analysis was used. The Analysis Of Variance (ANOVA) was applied to test the goodness of fit of the models and significance of the relationship between the dependent variable and independent variables based on a 5 % level of significance. The research hypotheses adapted two primary approaches, one testing the significance of the relationship and the goodness of fit of the relationship. The hypotheses were tested within 95 per cent level of confidence interval or 5 per cent level of significance. Firm strategic contingency factors (Organizational structure, Information technology, Dynamic capabilities and Leadership characteristics) were regressed against variables that capture essential elements of firm's performance, while controlling for other factors of interest. The odds regression model took the form below:

$$\textbf{Odds of Y/ X} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

$Y$ = Firm performance (Binary dependent variable ([High performance = 1, Low performance = 0])

$X_1$ = Organizational Structure

$X_2$ = Information and Technology (IT)

$X_3$ = Dynamic capabilities

$X_4$ = Leadership characteristics

$\beta_1 . \beta_4$ = Regression coefficients for each independent variable

$\varepsilon$ = Random or Stochastic term

### 3.10.2 Testing for the moderating effect of Legal and Regulatory Environment

In testing for the moderating effect of legal and regulatory environment, the study adopted the Moderated Multiple Regression (MMR) analysis. MMR technique consists of two steps. In the first step, the main effects of the predictor (X) and the hypothesized moderator (Z) are estimated using regression.

$$Y = a + B_1X + B_2Z + e\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where $a$ = is the estimate of the intercept, $B_1$ = the estimate of the population regression coefficient for $X$, $B_2$ = the estimate of the population regression coefficient for $Z$, and $e$ = a residual term.

The second step consists of adding the interaction term to the equation (1) as:

$$Y = a + B_1X + B_2Z + B_3X*Z + e\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.. (2)$$

$B_3$ = is the estimate of the population regression coefficient for the product term (X*Z) (Aguinis, 2005). To evaluate the role of the moderator (Z), the procedure outlined in the analytical section is applied.

After running the regression model with the independent variables, moderating variable and interaction term as predictor variables, the significance of the interaction term was used to establish whether there was a significant moderating effect of legal and regulatory environment. If the significance level of the beta coefficient of interaction term is significant (Less than 0.05) at 5% level of significance, then the null hypothesis of no moderation is rejected.

To test whether there existed partial or full moderation, a method proposed by Dawson and Richter (2006) was used. According to Dawson and Richter (2006), a test can be conducted so as to check if the moderator variable supports partial moderation or full moderation. The importance of using MMR in evaluating the effect of moderator variables is evident from the fact that this technique has been extensively used by researchers (Evans, 2001). MMR is particularly a preferred statistical method to detect moderating effects where the predictor variables are continuous (Aguinis, 2005; Stone & Hollenbeck, 2004).

However, MMR has been criticized by a number of scholars (Cohen & Cohen, 2003; Evans, 2001) for resulting in low power, but others (Stone and Hollenbeck, 2004) rejected such criticisms.

### 3.10.3 Hypothesis Testing

The hypothesis was tested by running an ordinary least square regression model for the combined sub-constructs of each independent variable against the combined measures of the dependent variable. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the study fails to reject the $H_0$ but if it's less than 0.05, the Ho is rejected.

### 3.11 Research Ethics

This study adhered to appropriate research procedures and all sources of information were acknowledged as far as possible. Before the questionnaire was administered, consent was sought and given by the respondents. The respondents were informed of their right not to take part in the survey. Full confidentiality was maintained especially when dealing with questionnaires and the identity of the respondents was kept secret.

In this research three principles of ethics were used namely beneficence, respect for human dignity as well as justice (Polit & Beck 2003). Following the three principles, sensitivity to the participants' emotions was observed when probing questions that could psychologically harm the participants as well as protect the participants from adverse situations. The participants were also informed that the information they provided would not be used in any way to harm the participants or exploited for commercial and selfish personal gain but only for academic purposes. Full disclosure, fair treatment and privacy were also practiced.

# CHAPTER FOUR
## RESEARCH FINDINGS AND DISCUSSION

### 4.1 Introduction

This chapter comprises of data analysis, findings and interpretation. Results are presented in tables and diagrams. The analyzed data was arranged under themes that reflect the research objectives. The study findings were compared with the findings of previous studies and the implications were also established.

### 4.2 Response Rate

The results for response rate are as indicated in Table 4.1. The number of questionnaires that were administered was 217. A total of 157 questionnaires were filled and returned. This represented an overall successful response rate of 72.4% as shown on Table 4.2. They fit with the argument of Kothari (2004) that a response rate of 50% or more is adequate for a descriptive study. Babbie (2004) also asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good. Based on these assertions from renowned scholars 72.4% response rate was adequate for the study.

**Table 4.1:     Response Rate**

| Response | Frequency | Percent |
|----------|-----------|---------|
| Returned | 157 | 72.4% |
| Unreturned | 79 | 27.6% |
| **Total** | **217** | **100%** |

### 4.3 Results of Pilot Test

The study conducted a pilot test to test for the instrument reliability. The participants in the pilot test were not included in the final study. The reliability of an instrument refers to its ability to produce consistent and stable measurements. Reliability of this instrument was evaluated through Cronbach Alpha which measures the internal consistency. Cronbach Alpha value is widely used to verify the reliability of the construct. The results are presented in Table 4.2.

The findings in Table 4.2 indicate that organizational structure, information technology, dynamic characteristics, leadership characteristics and legal regulatory environment had Cronbach's alpha of 0.774, 0.711, 0.796, 0.716 and 0.752 respectively. Since they were above the set alpha coefficients cutoff point of 0.7, all the study variables were adopted. This represented high level of reliability and on this basis it was supposed that scale used in this study was reliable to capture the variables. Bagozzi (1994) explains that reliability can be seen from two sides: reliability (the extent of accuracy) and unreliability (the extent of inaccuracy). The most common reliability coefficient is Cronbach's alpha which estimates internal consistency by determining how all items on a test relate to all other items and to the total test- internal coherence of data. The reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more reliable is the test

**Table 4.2    Reliability Coefficient**

| Variables | Cronbach's Alpha | Comment |
|---|---|---|
| Organizational Structure | 0.774 | Accepted |
| Information Technology | 0.711 | Accepted |
| Dynamic Capabilities | 0.796 | Accepted |
| Leadership Characteristics | 0.716 | Accepted |
| Legal and Regulatory environment | 0.752 | Accepted |

**4.4 Demographic Characteristics**

This section analyzes the demographic characteristics of the respondents. This section presents the descriptions of the respondents in terms of their gender, age, level of education, years of experience in the industry, type of organization and age of the organization.

**4.4.1   Gender Composition of Respondents**

The respondents were asked to indicate their gender. Results in Figure 4.1 reveal that a majority of the respondents were male as supported by 69% while 31% were female. The manufacturing firms that are registered members of KAM are male dominated.

In addition, the gender distribution was below the Constitutional of Kenya (2010) threshold of a third, however this did not affect the results of the study as women were under-represented in the management of manufacturing firms.
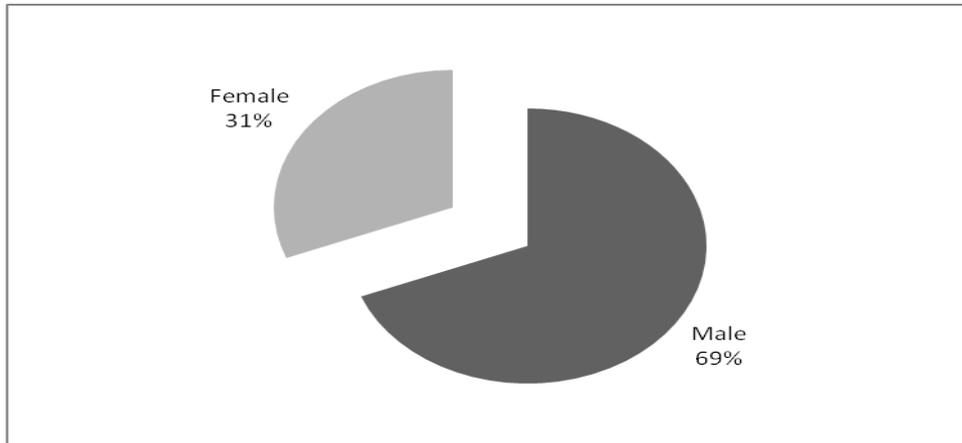


**Figure 4.1:    Gender Composition of Respondents**

**4.4.2   Age of Respondents**

The respondents were also asked to indicate their age. The results are presented in Figure 4.2 reveal that 6% of the respondents were over 50 years, 30% were between 18 and 30 years while those who were between 40 to 50 years were 25%. Majority of the respondents, 39%, were between 30 to 40 years. This implies that majority of the workers at manufacturing firms that are registered members of KAM are between 30 to 40 years of age.
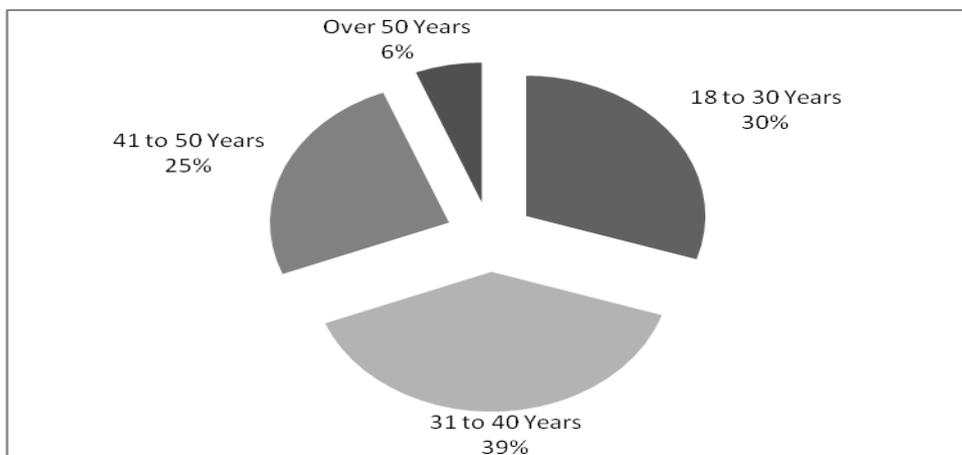


**Figure 4.2:    Age of Respondents**

### 4.4.3 Level of Education

The respondents were asked to indicate their level of education. Results in Figure 4.3 reveal that 13% of the respondents had education up to the secondary school level, 39 % indicated that they had attained education up to tertiary level while 48% of the respondents indicated that they had attained education up to University level.

This implies that workers at manufacturing firms that are registered members of KAM are educated. It also implies that majority of the respondents (48%) had university qualification, and a few others had both tertiary and secondary education levels. This means that majority of the workers at manufacturing firms that are registered members of KAM are knowledgeable and could easily understand the contents of the questionnaire and the concept of contingency factors.
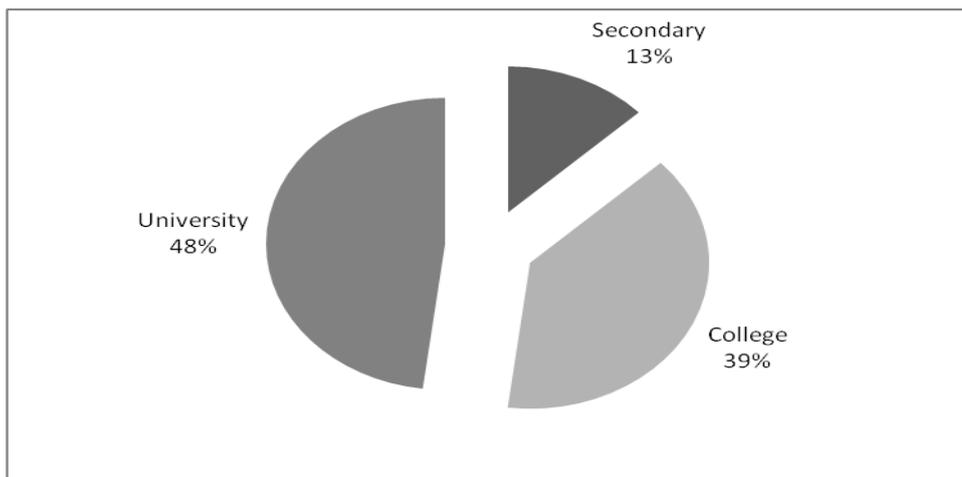


**Figure 4.3:    Level of Education**

### 4.4.4 Years of experience in the industry

The respondents were asked to indicate their years of experience in the field. Results in Figure 4.4 reveal that 33% of the respondents had worked in the field for a period less than 2 years, 24% had worked in the field for a period of three years and those who had worked in the field for over three years were 43%. This implies that the rate of turnover in the sector is low.
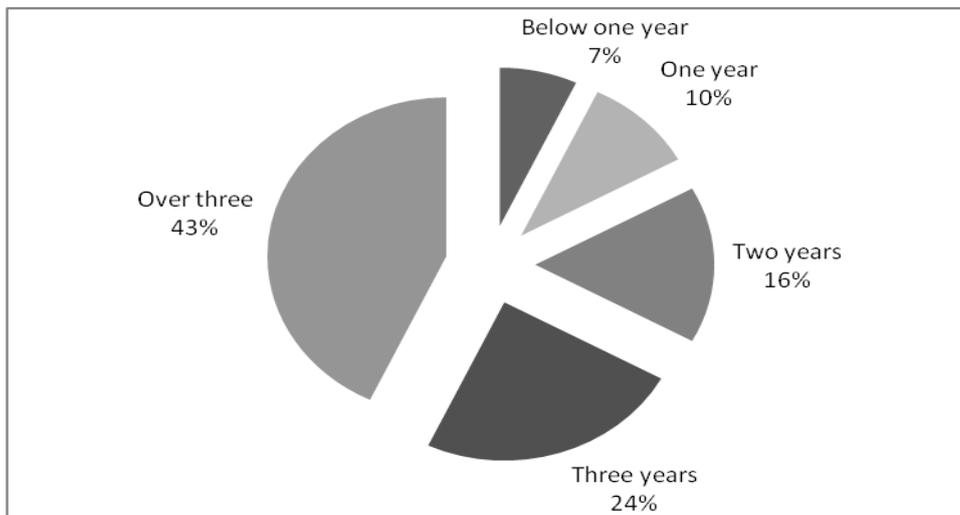
**Figure 4.4:** **Years of Experience**

### 4.4.5 Type of Organization

The study sought to establish the type of manufacturing firms registered by KAM. The results presented in Figure 4.5 reveal that majority of the manufacturing firms that are registered members of KAM (90%) are private while 10% are public. These findings are consistent with those of Kenya association of manufacturers (KAM, 2014) which indicates that KAM is a private sector body.
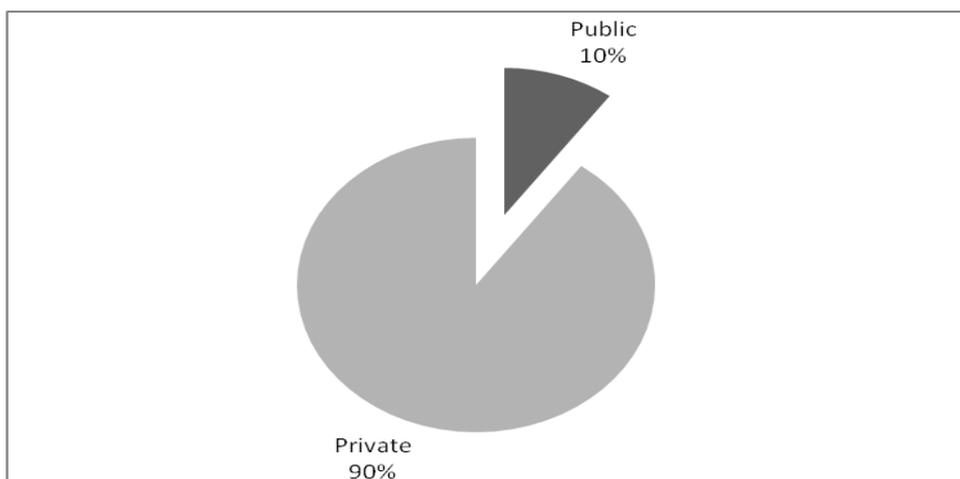


**Figure 4.5:** **Type of Organization**

### 4.4.6 Age of Organization

The respondents were asked to indicate the age of their organization. The findings shows that majority of the organizations (61%) were over three years while 36% were three years old. This implies that most of the manufacturing firms that are registered members of KAM are old enough given that they are over 3 years old.
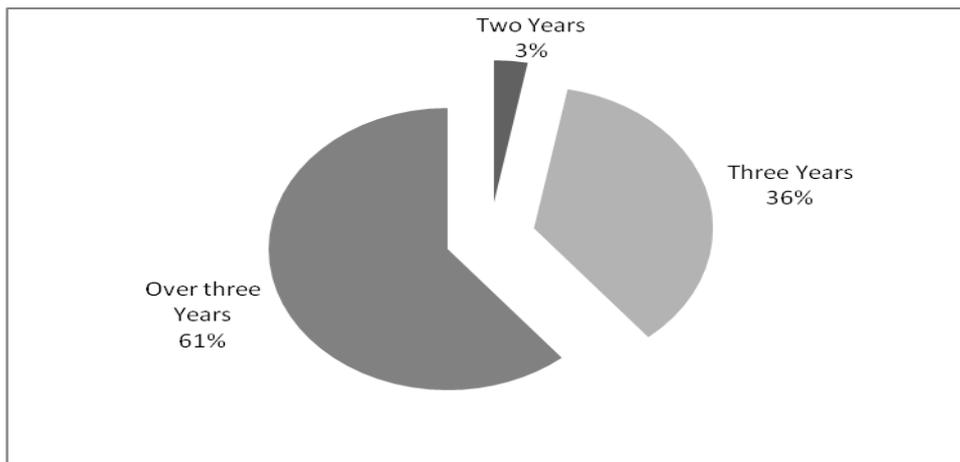


**Figure 4.6:    Age of Organization**

### 4.5 Organization Structure

The study sought to establish the influence of organizational structure on performance of large manufacturing firms in Kenya. The measures of organization structure were Degree of specialization, Span of control, Degree of centralization and Departmentalization

### 4.5.1   Degree of Specialization

The respondents were asked whether their firm had a specialized organization structure. The results in Figure 4.7 indicate that 82% of the respondents indicated that their firm had a specialized organization structure.
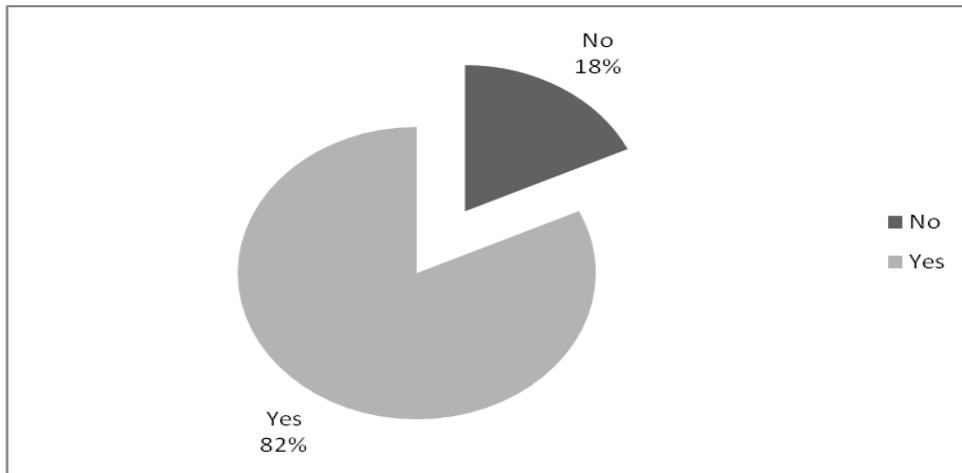
**Figure 4.7:    Specialized Organization Structure**

The respondents were further asked to rate the degree of specialization. The findings indicated that 88% of the respondents who indicated that they have specialized organization structure stated that the degree of specialization was low.
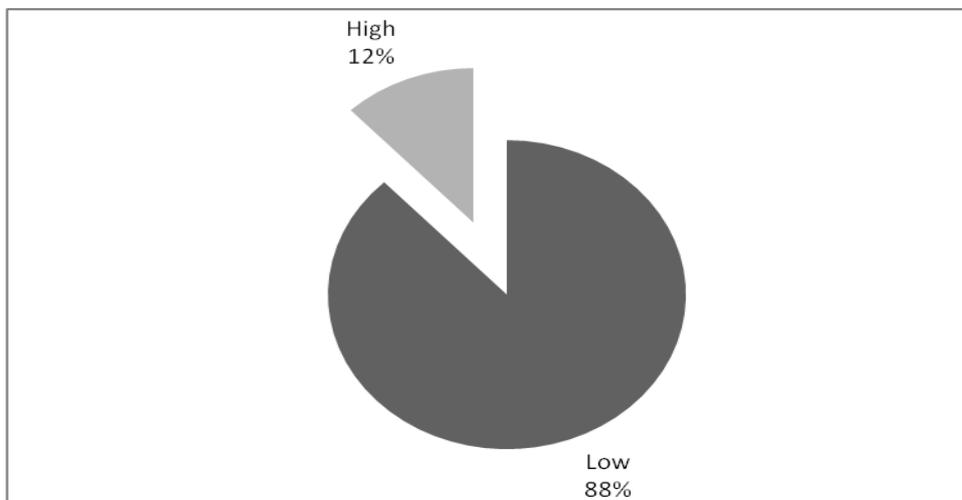


**Figure 4.8:    Rating of the Degree of Specialization**

The respondents were further asked to indicate whether specialized organization structure improved performance. The results in Table 4.3 indicate that 50.4 percent of the respondents admitted that having specialized organization structure improved performance by 6-10% while 50% of the respondents who don't have specialized organization structure indicated that lack of it decreased performance by 6-10%.

Another 50% of these respondents also indicated that lack of specialized structure decreased performance by more than 10%. The implication is that majority of the respondents agreed that having a specialized organization structure improved performance by over 6%. However, the magnitude of improvement differed among the respondents with 50% indicating an improvement of 6-10% while another 49.4% indicating an improvement by over 10%.

The failure by the respondents to indicate a common magnitude of organization structure on performance indicates confirms the argument by Edelman, Brush and Manolova (2005) that the influence exerted by organizational structure on performance is going to be indirect through the competitive strategy. It is not easy to directly establish the effect of organization structure on performance.

**Table 4.3**      **Organization Structure**

|  | Indicator | Percent |
|---|---|---|
| Specialized organization structure and performance | Improved performance by 0-5% | 0.0 |
|  | Improved performance by 6-10% | 50.4 |
|  | Improved performance by more than 10% | 49.6 |
| Lack of specialized organization structure and performance | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 50.0 |
|  | Decreased performance by more than 10% | 50.0 |

### 4.5.2  Span of Control

Respondents were asked to describe the nature of the span of control in their firms. The results in Figure 4.9 shows that majority of the respondents, 73%, indicated that span of control was high. The study defined high span of control as less than five and low span of control as more than five. Furthermore, the respondents were asked to indicate whether having a high span of control improved performance. The results are as presented in Table 4.4.
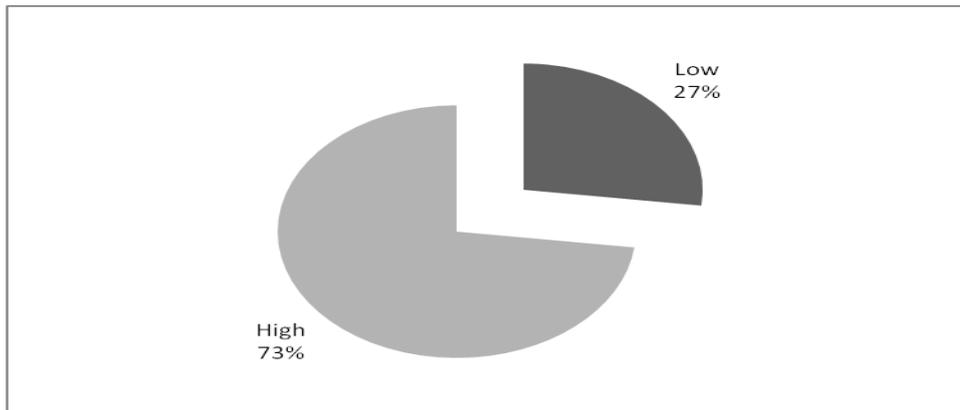
**Figure 4.9:** **Span of Control**

The results in Table 4.4 indicate that majority of the respondents, 59.5%, indicated that having a high span of control improved performance by 6-10%. Majority, 62.8% of those respondents who had admitted to having low span of control indicated that it decreases performance by 6-10%.

**Table 4.4** **Span of Control**

|  | Indicator | Percent |
|---|---|---|
| High span of control and performance | Improved performance by 0-5% | 0.0 |
|  | Improved performance by 6-10% | 59.5 |
|  | Improved performance by more than 10% | 40.5 |
| Low span of control and performance | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 62.8 |
|  | Decreased performance by more than 10% | 37.2 |

### 4.5.3 Degree of Centralization

The study sought to establish the type of structure adopted by their organization. The results in Figure 4.10 indicate that majority of the respondents, 87%, stated that their firms had adopted centralized structure.
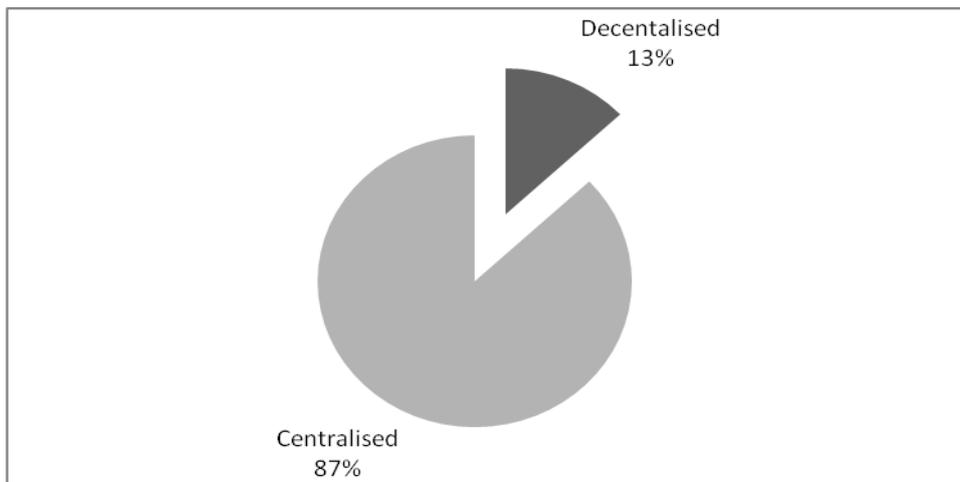
**Figure 4.10:** **Type of Structure**

Furthermore, the respondents who indicated that their firms had centralized structure were further asked to indicate the degree of centralization. The results are presented in Figure 4.11.
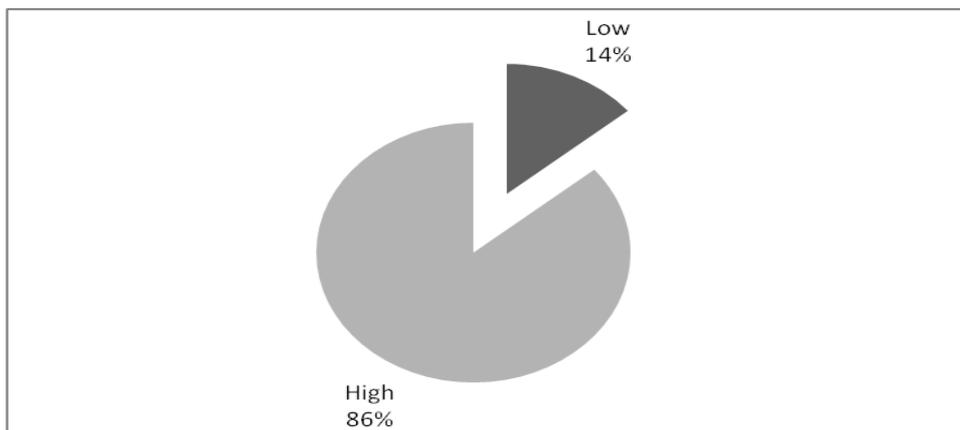


**Figure 4.11:** **Degree of Centralization**

The results presented in Figure 4.11 indicate that majority of the respondents, 86%, indicated that there was high degree of centralization. The study also sought to establish whether centralized structure improved performance. The results in Table 4.5 indicate that majority,52.5%,of the respondents indicated that centralized structure improved performance by 6-10% while majority,55% of those who had decentralized structure believed that it decreased performance by 6-10%.

According to Donaldson (2001) a firm's performance will depend on the degree of adjustment existing between organizational context and organizational structure, without forgetting that no single form of organization exists without factoring the influence of contingencies on its performance. The degree of centralization is believed to have an effect on performance positively as the results confirms. These findings confirms the argument by Spanos and Lioukas (2001) that organizational structure in terms of distribution of tasks and activities and coordination mechanisms, helps to realize more of the resources thus having an improved all round performance.

**Table 4.5       Centralization and Performance**

|  | Indicator | Percent |
|---|---|---|
| Centralized type of structure and performance | Improved performance by 0-5% | 0.0 |
|  | Improved performance by 6-10% | 52.5 |
|  | Improved performance by more than 10% | 47.5 |
| Decentralized type of structure and performance | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 55 |
|  | Decreased performance by more than 10% | 45 |

### 4.5.4   Departmentalization

The respondents were asked to state whether the organization structure in their company was departmentalized. The study findings indicated that majority of the respondents as shown by a percentage of 84% indicated that the structure was departmentalized while 16% indicated that the structure was not departmentalized.
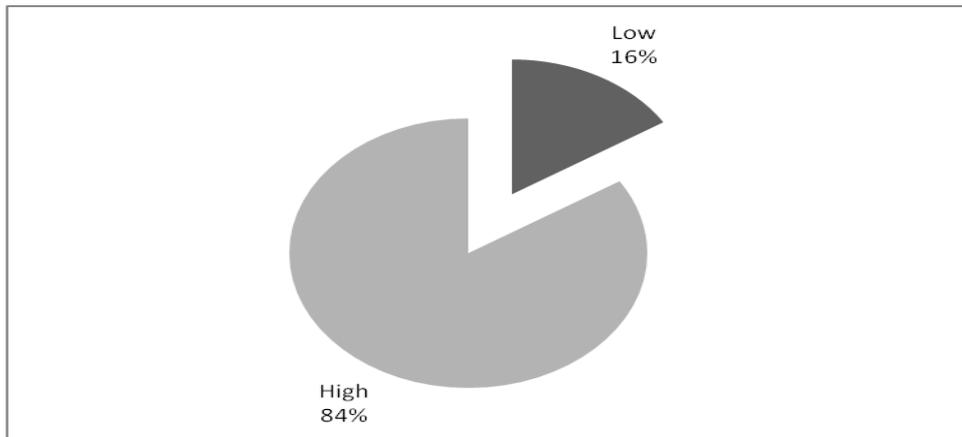
**Figure 4.12:   Departmentalization**

The study further sought to establish whether departmentalization improved performance. The findings are as presented in Table 4.6. The results in Table 4.6 indicate that 51.9% of the respondents indicated that departmentalization improved performance by 6-10%. A majority, 65.4% of those respondents who did not have departmentalization stated that it decreased performance by the same margin. These finding indicates that departmentalization which is part of division of work, has an effect on performance. These findings confirms the argument by Spanos and Lioukas (2001) that organizational structure in terms of division of work helps to realize more of the resources thus having an improved all round performance.

**Table 4.6        Departmentalization and Performance**

|  |  | Percent |
|---|---|---|
|  | Improved performance by 0-5% | 0.0 |
| Departmentalization and Performance | Improved performance by 6-10% | 51.9 |
|  | Improved performance by more than 10% | 48.1 |
| Lack of departmentalization and Performance | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 65.4 |
|  | Decreased performance by more than 10% | 34.6 |

71

### 4.5.5 Relationship between Organizational Structure and Return on Equity

The study sought to establish the relationship between Organizational structure and Return on Equity. The results are as presented in Table 4.7. Results in Table 4.7 show the results of the odd ratio regression with regard to Return on Equity. The results reveal that departmentalization was positively and significantly related to ROE. The odds of observing high ROE was 14.111 times higher for those firms with departmentalized organization structure compared to those firms which had no departmentalized organization structure. This implies that having a departmentalized organization structure results to high ROE. The results also reveal that degree of centralization was positively and significantly related to ROE. The odds of observing a high ROE was 6.736 times higher for those firms with high degree of centralization as compared to those firms with lower degree of centralization. This implies that high degree of centralization results to a high ROE.

Further, the results also show that degree of specialization was positively and significantly related to ROE. The odds of observing a high ROE was 10.245 times higher for those firms with high degree of specialization as compared to those firms with lower degree of specialization. This implies that high degree of specialization results to a high ROE. The findings of the study confirm the findings of a study by Edelman, Brush and Manolova (2005) who argued that organizational structure influences performance though indirectly.

**Table 4.7        Odd Ratio Regression for Return on Equity**

|                          | B      | S.E.  | Wald   | df | Sig.  | Exp(B) |
|--------------------------|--------|-------|--------|----|-------|--------|
| Departmentalization      | 2.647  | 0.716 | 13.649 | 1  | 0.000 | 14.111 |
| Degree centralization    | 1.907  | 0.797 | 5.735  | 1  | 0.017 | 6.736  |
| Span of control          | -1.316 | 0.706 | 3.477  | 1  | 0.062 | 0.268  |
| Degree of specialization | 2.327  | 1.109 | 4.401  | 1  | 0.036 | 10.245 |
| Constant                 | -0.907 | 0.65  | 1.947  | 1  | 0.163 | 0.404  |

### 4.5.6 Relationship between Organizational Structure and Profit Before Tax

The study also sought to establish the relationship between Organizational structure and profit before tax. Table 4.8 shows the results of the odd ratio regression with regard to Profit before tax. The results reveal that departmentalization had a positive and significant relationship with the odds of high PBT. The odds of observing high PBT was 6.796 times higher for those firms with a departmentalized organization structure as compared to those without. The other sub constructs of organizational structure namely degree of centralization, span of control and degree of specialization were found to be insignificantly related to profit before tax. This implies that departmentalization results to high PBT. This finding confirms the argument by Eriksen (2006) and Edelman, Brush & Manolova (2005) that organizational structure does not directly influence firm performance but how contingent it is ultimately influences the performance of firms because contingencies directly influence costs and revenues.

**Table 4.8        Odd Ratio Regression for Profit Before Tax**

|                          | B      | S.E.     | Wald  | df | Sig.  | Exp(B) |
|--------------------------|--------|----------|-------|----|-------|--------|
| Departmentalization      | 1.916  | 0.76     | 6.353 | 1  | 0.012 | 6.796  |
| Degree centralization    | 0.907  | 0.845    | 1.151 | 1  | 0.283 | 2.477  |
| Span of control          | -1.374 | 0.796    | 2.979 | 1  | 0.084 | 0.253  |
| Degree of specialization | 19.274 | 5230.695 | 0.000 | 1  | 0.997 | 0.000  |
| Constant                 | 0.623  | 0.65     | 0.919 | 1  | 0.338 | 1.864  |

### 4.5.7 Relationship between Organizational Structure and Return on Assets

Furthermore, the study also sought to establish the relationship between Organizational structure and Return on Assets. The results presented in Table 4.9 reveal that departmentalization was positively and significantly related to ROA. The odds of observing a high ROA was 3.914 times higher for those firms which are departmentalized as compared to those firms which are not departmentalized. This implies that departmentalization results to high ROA.

The results also reveal that degree of centralization was positively and significantly related to ROA. The odds of observing a high ROA was 5.52 times higher for those firms which had embraced a high degree of centralization compared to those with low degree of centralization. This implies that a high degree of centralization results to high ROA. Further, the results also reveal that degree of specialization had a positive and significant relationship with ROA. The odds of observing a high ROA was 17.561 times higher for firms which are highly specialized compared to firms which have low degree of specialization. This implies that high degree of specialization results to a high ROA. This finding confirms the earlier confirmed argument by Eriksen (2006) and Edelman, Brush & Manolova (2005) that organizational structure does not directly influence firm performance but how contingent it is ultimately influences the performance of firms because contingencies directly influence costs and revenues.

**Table 4.9     Odd Ratio Regression for Return on Assets**

|  | **B** | **S.E.** | **Wald** | **df** | **Sig.** | **Exp(B)** |
|---|---|---|---|---|---|---|
| Departmentalization | 1.365 | 0.558 | 5.97 | 1 | 0.015 | 3.914 |
| Degree centralization | 1.708 | 0.677 | 6.369 | 1 | 0.012 | 5.52 |
| Span of control | -0.955 | 0.616 | 2.403 | 1 | 0.121 | 0.385 |
| Degree of specialization | 2.866 | 1.072 | 7.147 | 1 | 0.008 | 17.561 |
| Constant | -0.939 | 0.587 | 2.559 | 1 | 0.11 | 0.391 |

**4.5.8 Hypothesis Testing**

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the Ho fails to be rejected but if it's less than 0.05, the Ho is rejected. The null hypothesis for the first objective was: Organization structure has no significant influence on performance of large manufacturing firms in Kenya. The alternative hypothesis for the first objective was: Organization structure has significant influence on performance large manufacturing firms in Kenya. The results of the regression model summary are as presented in Table 4.10. The results indicated that Organization structure explains 12.0% of the changes in the performance of large manufacturing firms in Kenya.

**Table 4.10    Organization Structure Model Summary**

| Model Summary | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .347a | 0.12 | 0.115 | 0.37253 |
| a Predictors: (Constant), Organization Structure | | | | |

Furthermore the model fitness was established by comparing the F critical and F calculated. The results for F-calculated are as presented in Table 4.11. The F-Critical, $F_{0.05, 1, 155}$ was 3.84.Since F calculated, 21.503, was greater than F-Critical, $F_{0.05, 1, 155}$, 3.84, the study concluded that the model fits well. This is further supported by a p-value of 0.00 which is significant at 5% level of significance implying that the model fits well.

**Table 4.11    Organization Structure Model Fitness**

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 2.984 | 1 | 2.984 | 21.503 | .000b |
| | Residual | 21.789 | 155 | 0.139 | | |
| | Total | 24.773 | 156 | | | |
| a Dependent Variable: Performance | | | | | | |
| b Predictors: (Constant), Organization Structure | | | | | | |

The results in Table 4.12 further presented coefficients of the regression model. The relationship between organization structure and performance was significant at 5% level of significance. The p-value was 0.000 which indicated that the null hypothesis failed to be accepted at 5% level of significance hence organization structure has significant influence on performance of large manufacturing firms in Kenya. This is as indicated in Table 4.12. The findings are inconsistent with the argument by Eriksen (2006) and Edelman, Brush and Manolova (2005) that organizational structure does not directly influence firm performance.

**Table 4.12     Organization Structure Model Coefficients**

|   |   | B | Std. Error | t | Sig. |
|---|---|---|---|---|---|
| 1 | (Constant) | 0.470 | 0.064 | 7.376 | 0.00 |
|   | Organization Structure | 0.442 | 0.095 | 4.637 | 0.00 |
| a Dependent Variable: Performance | | | | | |

**Performance of Large Manufacturing firm = 0.47 + 0.442 Organization Structure**

### 4.6 Information Technology

The study also sought to establish the influence of information technology on performance of large manufacturing firms in Kenya. The measures of information technology were IT Policy, IT software adoption, IT hardware adoption and employee IT skills.

### 4.6.1   IT policy

The study sought to find out whether the manufacturing firms had a written down IT policy. The results are as presented in Figure 4.13.
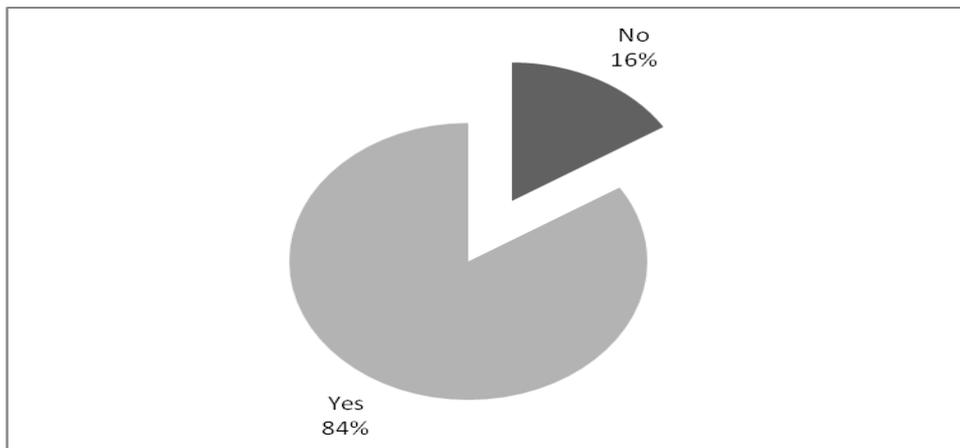


**Figure 4.13:   IT policy**

Results indicated that 84% of the respondents agreed that they have a written down IT policy as indicated in Figure 4.13. This implies that the use of a written down IT policy is present in most manufacturing firms. Furthermore, the study sought to establish whether having a written down IT policy improved performance of the firm. The results are as presented in Table 4.13.

**Table 4.13     IT Policy and Performance**

|  | Indicator | Frequency |
|---|---|---|
| Written down IT policy and Performance | Improved performance by 0-5% | 0.0 |
|  | Improved performance by 6-10% | 50.0 |
|  | Improved performance by more than 10% | 50.0 |
| Lack of written down IT policy and Performance | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 60.0 |
|  | Decreased performance by more than 10% | 40.0 |

## 4.6.2   IT Software Adoption

The study also sought to establish the rate of IT software adoption among large manufacturing firms in Kenya. The findings are as presented in Figure 4.14. The results in Table 4.13 indicates that 50.0% of the respondents agreed that having a written down IT policy improved performance by 6-10 percent while the another 50% also agreed that it improved performance by more than 10%. This implies that all the respondents agreed that having a written down IT policy improves performance by over 6%. However, the exact magnitude of having a written down IT policy cannot be established as half the number of respondents claimed it is between 6 to 10% while half claimed it is over 10%. A majority of 60% of those respondents who did not have IT policy believed that it decreased performance by 6-10%. These findings confirms the argument by World Bank (2006) that "firms that use ICT grow faster, invest more and are more productive and profitable than those that do not".

The fact that there was difficulty in establishing the exact magnitude of IT policy on performance among the respondents confirms the argument by Lefebvre and Lefebvre (1996) who concluded that "IT–productivity connection remains elusive, with contradictory results from study to study". The results in Figure 4.14 indicate that majority of the respondents, 89%, stated that there was a high rate while 11% stated low rate of software adoption. This implies that at the period of study, majority of large manufacturing firms had adopted IT software. The adoption can be linked to high performance.
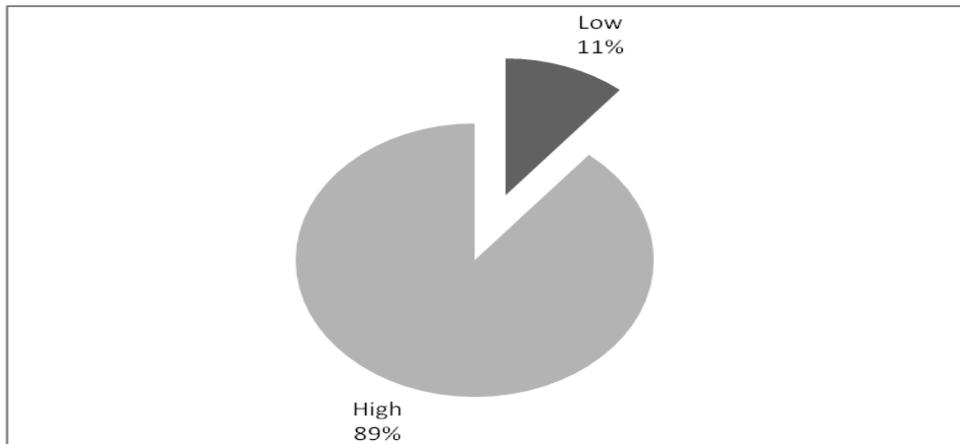
**Figure 4.14:  Rate of IT Software Adoption**

Furthermore, the study sought to establish whether firms' with high rate of IT software adoption had improved performance. The results are as presented in Table 4.14.

**Table 4.14    IT Software Adoption and Performance**

|  | Indicator | Percent |
|---|---|---|
| High rate of IT software adoption and performance | Improved performance by 0-5% | 0.0 |
|  | Improved performance by 6-10% | 43.3 |
|  | Improved performance by more than 10% | 56.7 |
| Low rate of IT software adoption and performance | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 55.6 |
|  | Decreased performance by more than 10% | 44.4 |

### 4.6.3   IT Hardware Adoption

The study also sought to establish the rate of IT hardware adoption among large manufacturing firms in Kenya. The results are as presented in Figure 4.15. The results in Table 4.14 indicate that majority of the respondents, 56.7%, whose firms' rate of IT software adoption is high stated that it improved performance by more than 10%. 55.6% of the respondents who had low rate of IT software adoption stated that it had decreased performance by 6-10%.

These findings further confirm the argument by World Bank (2006) that firms that use ICT grow faster, invest more and are more productive and profitable than those that do not. The results in Figure 4.15 indicate that majority of the respondents, 82%, stated that there was a high rate of IT adoption in their firms.
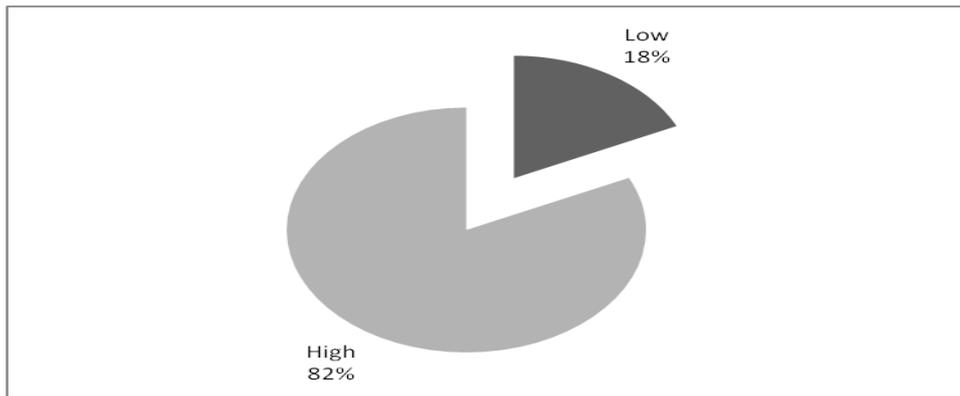


**Figure 4.15:    Rate of IT Hardware Adoption**

Furthermore, the study also sought to establish whether firms' with high rate of IT hardware adoption had improved performance. The results are as presented in Table 4.15. The results in Table 4.15 revealed that 55% of the respondents who admitted to having high rate of IT hardware adoption agreed that it improved performance by 6-10%. Majority, 53.6%, of those whose firms had low rate of IT hardware adoption agreed that it had decreased performance by 6-10%.

**Table 4.15      IT Hardware Adoption and Performance**

|  | Indicator | Percent |
| --- | --- | --- |
| High rate of IT hardware adoption and performance | Improved performance by 0-5% | 0 |
|  | Improved performance by 6-10% | 55.0 |
|  | Improved performance by more than 10% | 45.0 |
| Low rate of IT hardware adoption and performance | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 53.6 |
|  | Decreased performance by more than 10% | 46.4 |

### 4.6.4 Employee IT Skills

The respondents were asked to state whether employees in their firms train to sharpen their IT skills. The findings are presented in Figure 4.16. The results indicates that majority of the respondents, 76% stated that employees receive the training.
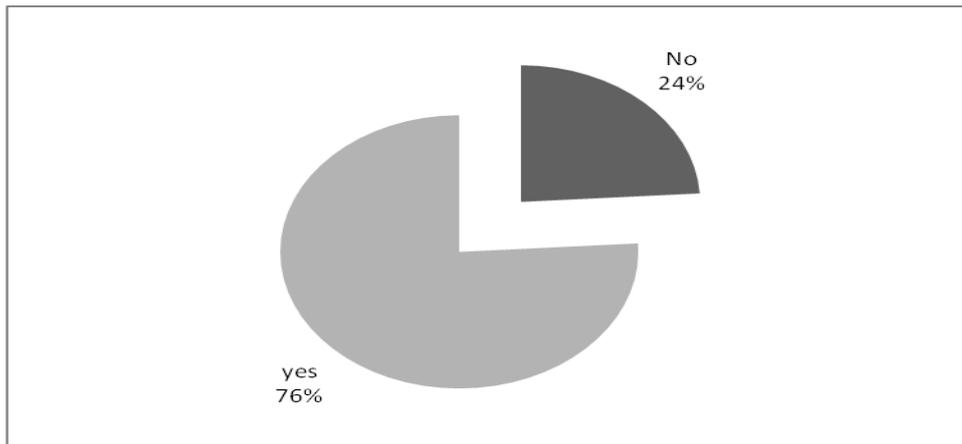


**Figure 4.16:** **Training to sharpen Employee IT skills**

Those who had indicated that there was training were further requested to state the frequency of training. The results are presented in Figure 4.17. Majority of the respondents, 58%, stated that frequency of training was 2 times per year while the other 42% said that it was more than 2 times per year.



**Figure 4.17:** **Frequency of Training to Sharpen Employee IT skills**

The study also sought to establish whether training on IT skills improves performance. The results are as presented in Table 4.16. Results in Table 4.16 revealed that majority of the respondents, 51.8% stated that training on IT skills improves performance by 6 to 10%. On the other hand, 55.3% of the respondents who had not implemented training to improve employee IT skills stated that it decreased performance by over 10% while 44.7% stated that it decreased performance by 6-10%. The results are in line with the results of a study by Ifinedo and Nahar (2009) which stated that firm management must ensure that continuous acquisition of relevant IT skills and expertise is adequately provided for to enhance success with such technologies so as to realize positive performance.

**Table 4.16    IT Hardware Adoption and Performance**

|  | Indicator | Percent |
|---|---|---|
| Training on IT and performance | Improved performance by 0-5% | 0.0 |
|  | Improved performance by 6-10% | 51.8 |
|  | Improved performance by more than 10% | 48.2 |
| Lack of Training on IT and performance | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 44.7 |
|  | Decreased performance by more than 10% | 55.3 |

**4.6.5 Relationship between Information Technology and ROE**

The study sought to establish the relationship between IT and ROE. The results of the binary regression model are presented in Table 4.17.

**Table 4.17    Odd Ratio Regression for Return on Equity**

|  | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| IT policy | 0.736 | 0.602 | 1.494 | 1 | 0.222 | 2.088 |
| IT software adoption | 1.639 | 0.422 | 9.789 | 1 | 0.024 | 4.096 |
| IT hardware adoption | 1.833 | 0.503 | 13.273 | 1 | 0.000 | 6.252 |
| IT skills | 1.403 | 0.477 | 8.643 | 1 | 0.003 | 4.069 |
| Constant | -2.606 | 0.78 | 11.169 | 1 | 0.001 | 0.074 |

**4.6.6 Relationship between Information Technology and Profit before Tax**

The study also sought to establish the relationship between IT and PBT. The results are presented in Table 4.18. Results in Table 4.17 show the results of the odd ratio regression with regard to Return on Equity. The results reveal that IT hardware adoption was positively and significantly related to ROE. The odds of observing a high ROE was 6.252 times higher for those firms with high rate of IT hardware adoption as compared to those firms which had low IT hardware adoption. This implies that having high rate of IT hardware adoption results to high ROE. The results also reveal that high rate of IT software adoption is positively and significantly related to ROE. The odds of observing a high ROE was 4.096 times higher for those firms with high rate of IT software adoption compared to those with low adoption. This implies that high rate of IT software adoption results to a high ROE.

Further, the results reveal that training employees to sharpen their IT skills had a positive and significant relationship with the odds of high ROE. The odds of observing high ROE was 4.069 times higher for those firms where employees received training to sharpen their IT skills. This implies that training employees to sharpen their IT skills results to high ROE. The findings support the contingency theory which states that management can achieve higher levels of success in firm's performance with their IT systems by matching organizational factors with relevant contingencies (Mabert *et al*., 2003). The results are however contradicting the findings of a study by Lefebvre and Lefebvre (1996) which concluded that "IT–productivity connection remains elusive, with contradictory results from study to study".

Results in Table 4.18 show the results of the odd ratio regression with regard to Profit before tax. The results reveal that written down IT policy was positively and significantly related to PBT. The odds of observing a high PBT was 3.366 times higher for those firms with a written down IT policy as compared to without a written down IT policy. This implies that having a written down IT policy results to high PBT.

The results also reveal that IT software adoption had a positive and significant relationship with the odds of high PBT. The odds of observing a high PBT was 3.522 times higher for firms with high IT software adoption compared to those with low adoption. This implies that a high IT software adoption results to high PBT.

Further, the results show that training employees to sharpen their IT skills had a positive and significant relationship with the odds of high PBT. The odds of observing high PBT was 4.228 times higher for those firms where employees received training to sharpen their IT skills. This implies that training employees to sharpen their IT skills results to high PBT. The findings of the study confirm the argument by Baldwin and Sabourin (2007) that many studies that cover the experience of developed countries conclude to a positive relationship between ICT use and superior performance.

**Table 4.18     Odd Ratio Regression for Profit Before Tax**

|                      | B      | S.E.  | Wald  | df | Sig.  | Exp(B) |
|----------------------|--------|-------|-------|----|-------|--------|
| IT policy            | 1.214  | 0.583 | 4.34  | 1  | 0.037 | 3.366  |
| IT software adoption | 1.259  | 0.708 | 3.158 | 1  | 0.046 | 3.522  |
| IT hardware adoption | 0.546  | 0.579 | 0.89  | 1  | 0.346 | 1.727  |
| IT skills            | 1.442  | 0.477 | 9.129 | 1  | 0.003 | 4.228  |
| Constant             | -2.289 | 0.792 | 8.35  | 1  | 0.004 | 0.101  |

**4.6.7 Relationship between Information Technology and ROA**

The study sought to establish the relationship between IT and ROA. The results for the binary logistic regression are as presented in Table 4.19. Results in Table 4.19 show the results of the odd ratio regression with regard to Return on Assets. The results reveal that IT hardware adoption was positively and significantly related to ROA. The odds of observing a high ROA was 8.281 times higher for those firms with high IT hardware adoption as compared to those firms who had lower IT hardware adoption. This implies that having high IT hardware adoption results to high ROA. The results also reveal that IT software adoption had a positive and significant relationship with ROA. The odds of observing a high ROA was 9.235 times higher for those firms with high IT software adoption compared to those with low adoption. This implies that high IT software adoption results to high ROA.

Further, the results also reveal that training employees to sharpen their IT skills had a positive and significant relationship with the odds of high ROA. The odds of observing high ROA was 13.491 times higher for those firms where employees received training to sharpen their IT skills. This implies that training employees to sharpen their IT skills results to high ROA. Studies by Sedera, Gabble and Chan (2003); Morton and Hu (2004); Lee and Lee (2004), observed that Information Technology (IT) is a key ingredient of contingency factors that is known to influence performance of manufacturing firms. It further argued that IT being contingent in nature, adoption of new technologies should always be adjusted to meet the current needs of a firm thus a necessary requirement to factor in the contingency elements. The findings of the current study confirm the findings by these studies.

The findings of the study confirm the findings of a study by Mouelhi (2008) which found out that there is a clear positive relationship between efficiency and ICT variable. ICT, by exposing firms to greater information on product characteristics, updated technologies and market trends, provide firms with learning opportunities that allow them to get on a steeper learning curve than firms that do not use ICT. This in turn improves efficiency and performance of the firms.

**Table 4.19      Odd Ratio Regression for Return on Assets**

|                      | B       | S.E.   | Wald    | df | Sig.   | Exp(B)  |
| -------------------- | ------- | ------ | ------- | -- | ------ | ------- |
| IT policy            | -0.373  | 0.724  | 0.265   | 1  | 0.607  | 0.689   |
| IT software adoption | 2.006   | 0.506  | 11.895  | 1  | 0.049  | 9.235   |
| IT hardware adoption | 2.114   | 0.500  | 17.852  | 1  | 0.000  | 8.281   |
| IT skills            | 2.602   | 0.505  | 26.508  | 1  | 0.000  | 13.491  |
| Constant             | -1.074  | 0.666  | 2.598   | 1  | 0.107  | 0.342   |

### 4.6.8 Hypothesis Testing

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the Ho is not rejected but if it's less than 0.05, the Ho failed to be accepted. The null hypothesis for the second objective was: Information Technology has no significant influence on performance of large manufacturing firms in Kenya.

The alternative hypothesis for the second objective was: Information Technology has significant influence on performance large manufacturing firms in Kenya. The results of the summary of regression model are as indicated in Table 4.20. The results reveal that Information Technology explains 23.3% of the changes in the performance of large manufacturing firms in Kenya.

**Table 4.20    Information Technology Model summary**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .483a | 0.233 | 0.228 | 0.34788 |

a Predictors: (Constant), Information Technology

The F statistic was significant at 5% level of significance implying that the model fits well. The results are shown in Table 4.21. The study also established the model fitness by comparing the F- calculated and F-critical values. The results for F-calculated are in Table 4.21. The F-Critical, $F_{0.05, 1, 155}$ was 3.84. Since F calculated, 47.699, was greater than F-Critical, $F_{0.05, 1, 155}$, 3.84, the study concluded that the model fits well. This is further supported by a p-value of 0.00 which is significant at 5% level of significance implying that the model fits well. The results in Table 4.22 present the regression model coefficients.

**Table 4.21    Information Technology Model Fitness**

**ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 5.773 | 1 | 5.773 | 47.699 | .000b |
| | Residual | 19 | 155 | 0.121 | | |
| | Total | 24.773 | 156 | | | |

a Dependent Variable: Performance
b Predictors: (Constant), Information Technology

The relationship between Information Technology and performance as indicated in Table 4.22 was significant at 5% level of significance. The p-value was 0.000 which indicated that the null hypothesis failed to be accepted at 5% level of significance hence Information Technology has significant influence on performance of large manufacturing firms in Kenya.

The results are consistent with the results of a study by Ifinedo and Nahar (2009) which stated that firm management must ensure that continuous acquisition of relevant IT skills and expertise is adequately provided for to enhance success with such technologies so as to realize positive performance.

**Table 4.22     Information Technology Model Coefficients**

|   |                        | B     | Std. Error | t     | Sig.  |
|---|------------------------|-------|------------|-------|-------|
| 1 | (Constant)             | 0.103 | 0.095      | 1.079 | 0.282 |
|   | Information Technology | 0.759 | 0.11       | 6.906 | 0.000 |
| a Dependent Variable: Performance |

**Performance of Large Manufacturing firms = 0.103 + 0.759 Information Technology**

**4.7 Dynamic Capabilities**

The study also sought to establish the influence of dynamic capabilities on performance of large manufacturing firms in Kenya. The measures of dynamic capabilities were sensing capability (Research and development), learning capability (training), networking capability and innovation capability. The respondents were asked whether their company had posited dynamic capabilities to adjust to uncertain environment. The study findings indicated in Figure 4.18 reveal that majority, 85%, of the respondents agreed that their firm had posited dynamic capabilities to adjust to that kind of environment. Furthermore, 15% of the respondents indicated that their firm had not posited dynamic capabilities to adjust to that kind of environment.
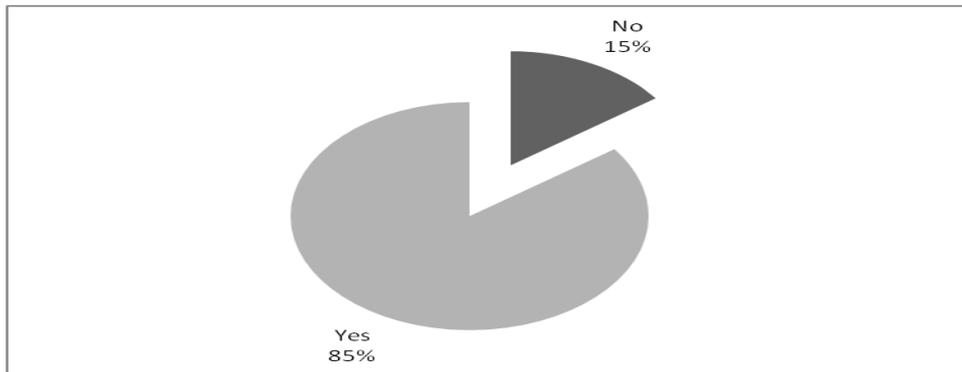
**Figure 4.18:   Dynamic Capabilities**

**4.7.1  Sensing Capability (Research and Development)**

The respondents who indicated that their firms posited dynamic capabilities to adjust to uncertain environment were further asked to indicate the amount their company spent on research and development in 2014.  The results indicated that majority , 55%, of the respondents stated that their firms spent between Ksh. 1.1 million to Ksh. 5 million on research and development while 45% indicated that their company spent over Ksh. 5million on research and development. These study findings imply that in uncertain environment, large manufacturing firms in Kenya spend on research and development to adjust to such environment.
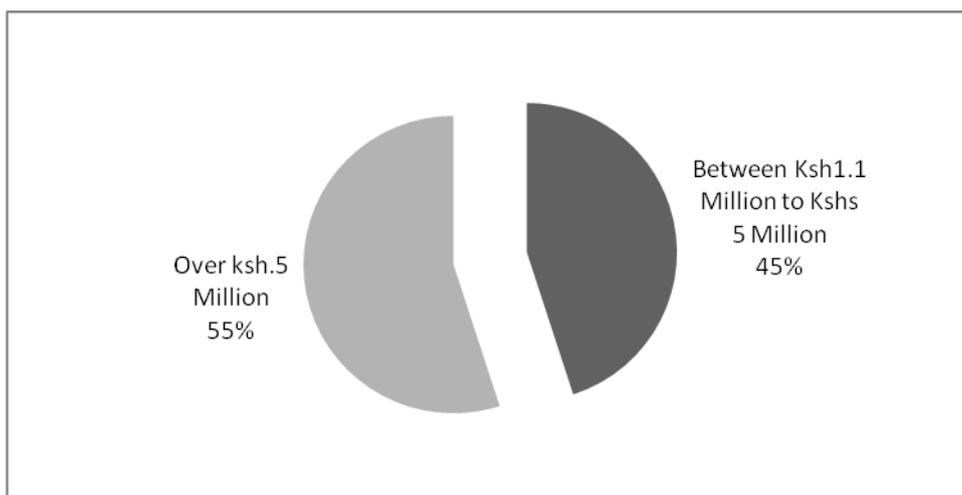


**Figure 4.19:   Sensing Capability (Research and Development)**

### 4.7.2  Learning Capability (Training)

The respondents who indicated that their firms posited dynamic capabilities to adjust to uncertain environment were also asked to indicate the amount the firm spent on training. The results indicate that majority of the respondents, 61%, agreed that their company spent over Ksh. 5 million on training. The study findings further indicate that 39% stated that their firm spent between Ksh. 1.1 million to Ksh. 5million on training. These study findings imply that in uncertain environment, large manufacturing firms in Kenya spend on training to adjust to such environment.
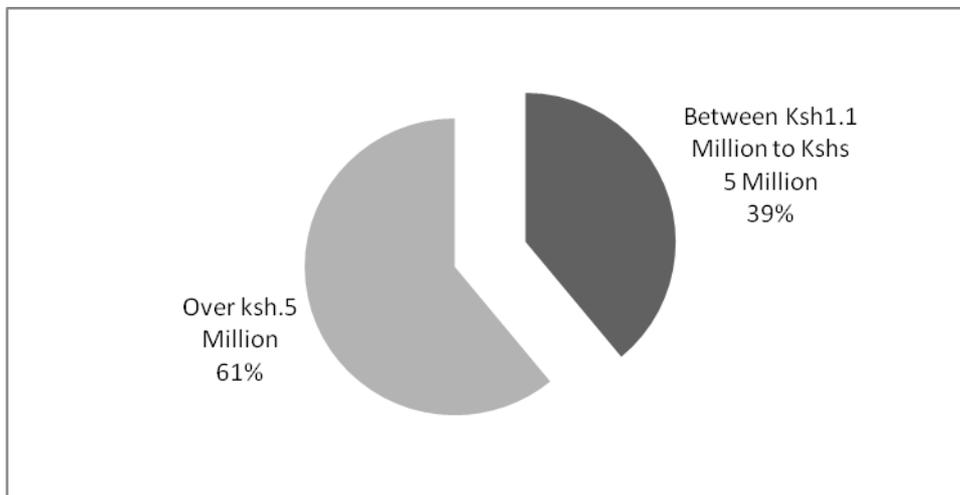


**Figure 4.20:   Learning Capability (Training)**

### 4.7.3  Networking Capability

Furthermore, the respondents who indicated that their firms posited dynamic capabilities to adjust to uncertain environment were again asked to state how many networking memberships their company had subscribed to. The results are presented in Figure 4.21. The study results indicates that 53% of the respondents indicated that the firm had a subscription to over 5 networking memberships while 47% indicated that the firm had subscribed to between 3-5 such memberships.
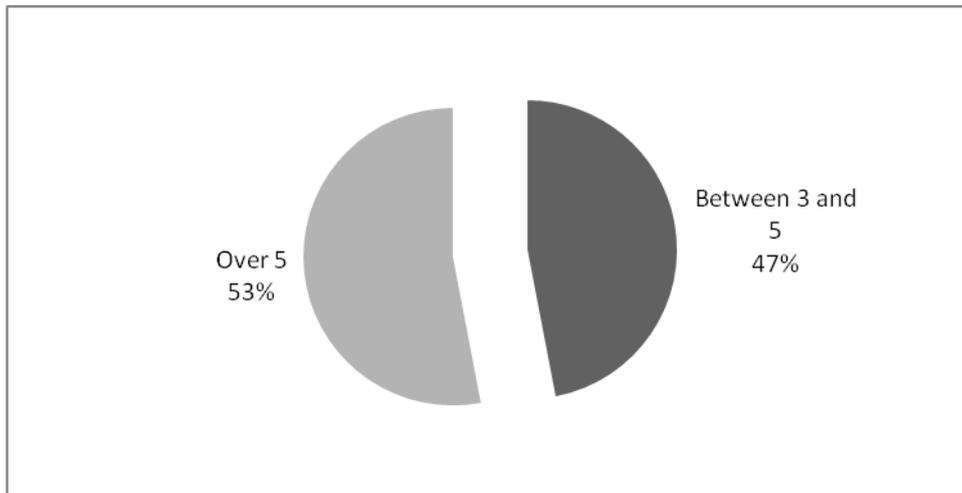
**Figure 4.21:    Networking Capabilities**

### 4.7.4    Innovation Capability

The respondents who indicated that their firms posited dynamic capabilities to adjust to uncertain environment were also asked to indicate how many new products their company had introduced into the market in 2014. The findings indicated that 32% of the respondents indicated that their firm had introduced less than 2 products, 38% indicated between 3-5 products while 30% stated that over 5 products were introduced in the market by their firms. The study also sought to establish whether having dynamic capabilities improved performance of the firms. The results are as presented in Table 4.23.
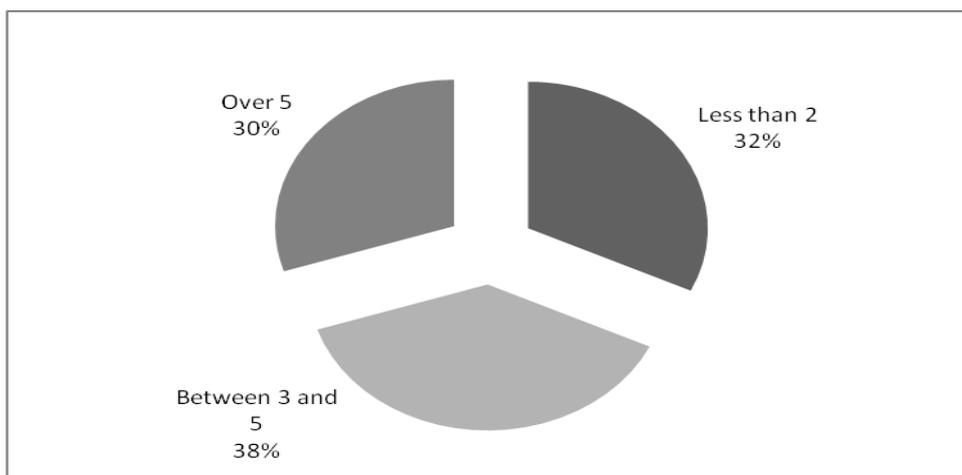


**Figure 4.22:    Innovation Capability**

**Table 4.23    Dynamic Capabilities and Performance**

|  | Indicator | Percent |
|---|---|---|
| Dynamic Capabilities and Performance | Improved performance by 0-5% | 32.6 |
|  | Improved performance by 6-10% | 39.3 |
|  | improved performance by more than 10% | 28.1 |
| Lack of Dynamic Capabilities and Performance | Decreased Performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 45.8 |
|  | Decreased performance by more than 10% | 54.2 |

### 4.7.5  Relationship between Dynamic Capabilities and Return On Equity

The study sought to establish the relationship between dynamic capability and Return on Equity. Table 4.24 presents the results. The results in Table 4.23 indicate that 32.6% of the respondents indicated that having dynamic capabilities improved performance by 0-5%, 39.3% indicated that it improved performance by 6-10% while 28.1% believed that it improved performance by more than 10%.

A majority, 54.2% of those respondents whose company did not have dynamic capabilities stated that it decreased performance by more than 10%. Dynamic capabilities have an influence on performance. Its impact on a firm's performance is a matter of the configuration of the dynamic capabilities it utilizes (Zahra *et al.,* 2006). According to them, differences in the performance among a set of firms result from the individual configuration of their dynamic capabilities. These findings by the current study, confirm the findings by Zahra *et al*., (2006).

Results in Table 4.24 reveal that research and development is positively and significantly related to ROE. The odds of observing a high ROE is 4.34 times higher for firms which spent over Ksh. 5million on research and development in 2014 compared to those which spent between Ksh 1.1 million to 5 million. This implies that spending over Ksh. 5million on research and development results to a high ROE. The results also reveal that training had a positive and significant relationship with ROE.

The odds of observing a high ROE was 2.79 times higher for firms which spent over Ksh. 5million on training compared to those which spent between Ksh 1.1 million to 5 million. This implies that spending over Ksh. 5million on training results to a high ROE. In addition, the results also show that innovation capability and ROE were positively and significantly related. The odds of observing a high ROE was 3.911 times higher for firms which had introduced over 5 new products into the market compared to those who had introduced between 3-5 products. The results also show that the odds of observing a high ROE was 4.34 times higher for those firms which had introduced over 5 new products compared to those which had introduced between 3-5 products. This implies that introducing 3-5 and over 5 new products in to the market results to high ROE. The findings of the study confirm the argument by Daniel and Wilson (2003) who stated that firms which possess dynamic capabilities of high quality outperform their competitors with dynamic capabilities of low quality in terms of performance.

**Table 4.24    Odd Ratio Regression for Return On Equity**

|  | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| Research and development | 1.468 | 0.514 | 8.147 | 1 | 0.004 | 4.34 |
| Training Capability | 1.026 | 0.484 | 4.49 | 1 | 0.034 | 2.79 |
| Networking membership | -0.101 | 0.502 | 0.04 | 1 | 0.841 | 0.904 |
| Innovation Capability | 1.364 | 0.559 | 5.956 | 1 | 0.015 | 3.911 |
| Constant | -0.429 | 0.556 | 0.595 | 1 | 0.441 | 0.651 |

### 4.7.6   Relationship between Dynamic Capabilities and Profit Before Tax

The relationship between dynamic capability and profit before tax was also established. Table 4.25 show the results of the odd ratio regression with regard to Profit before tax. The results reveal that research and development is positively and significantly related to PBT. The odds of observing a high ROA was 3.244 times higher for firms which spent more on research and development compared to those which spent less. Training capability, networking capability and innovation capability were found to be insignificantly related to profit before tax.

91

**Table 4.25    Odd Ratio Regression for Profit Before Tax**

|                        | B      | S.E.  | Wald  | df | Sig.  | Exp(B) |
|------------------------|--------|-------|-------|----|-------|--------|
| Research development   | 1.177  | 0.562 | 4.390 | 1  | 0.036 | 3.244  |
| Training Capability    | 0.565  | 0.521 | 1.176 | 1  | 0.278 | 1.76   |
| Networking Capability  | -0.167 | 0.552 | 0.091 | 1  | 0.763 | 0.846  |
| Innovation Capability  | 0.716  | 0.598 | 1.436 | 1  | 0.231 | 2.047  |
| Constant               | 0.75   | 0.597 | 1.574 | 1  | 0.21  | 2.116  |

### 4.7.8    Relationship between Dynamic Capabilities and Return On Assets

The study lastly established the relationship between dynamic capability and Return on Assets. Results in Table 4.26 show the odd ratio regression with regard to Return on Assets. The results reveal that research and development was positively and significantly related to ROA. The odds of observing a high ROA was 3.982 times higher for firms which spent over Ksh. 5 million on research and development compared to those which spent between Ksh. 1.1 million and 5million. This implies that spending over Ksh. 5 million on research and development results to high ROA.

The results also show that training capability and ROA were positively and significantly related. The odds of observing a high ROE was 3.271 times higher for firms which spent over Ksh. 5million on training compared to those which spent between Ksh 1.1 million to 5 million. This implies that spending over Ksh. 5million on training results to a high ROA. The results further reveal that innovation capability and ROA had a positive and significant relationship.  The findings support the results from studies by Helfat and Winter (2011); Barretto (2010); Helfat (2007) in their study of dynamic capabilities which informed that dynamic capabilities are contingent and are critical internal and external drivers of performance.

The findings of the study also confirmed the findings of a study by Jekel (2009) on the quality aspect of dynamic capabilities based on successful practices of 61 German manufacturing firms in China. The study recognized the contribution of dynamic capabilities to improvement of performance and it developed comprehensive, generalized model summarizing the quality aspects of dynamic capabilities with the highest influence on firm performance.

Furthermore, the findings supported findings from studies by Zott, (2003); Eisenhardt and Martin, (2000); Helfat and Peteraf, (2003); Teece, (2007); Zahra *et al.,* (2006) which assert that dynamic capability is a key aspect of contingency factors that indirectly influences firm's performance.

**Table 4.26     Odd Ratio Regression for Return On Assets**

|                       | B      | S.E.  | Wald  | df | Sig.  | Exp(B) |
|-----------------------|--------|-------|-------|----|-------|--------|
| Research development  | 1.382  | 0.463 | 8.926 | 1  | 0.003 | 3.982  |
| Training Capability   | 1.185  | 0.447 | 7.019 | 1  | 0.008 | 3.271  |
| Networking membership | 0.582  | 0.455 | 1.636 | 1  | 0.201 | 1.79   |
| Innovation Capability | 0.936  | 0.496 | 3.57  | 1  | 0.059 | 2.551  |
| Constant              | -1.18  | 0.533 | 4.909 | 1  | 0.027 | 0.307  |

**4.7.9 Hypothesis Testing**

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the Ho is not rejected but if it's less than 0.05, the Ho failed to be accepted. The null hypothesis for the third objective was: Dynamic Capabilities have no a significant influence on performance of large manufacturing firms in Kenya. The alternative hypothesis for the third objective was: Dynamic Capabilities have a significant influence on performance large manufacturing firms in Kenya. The summary results of the regression model are presented in Table 4.27. The results reveal that dynamic capabilities explain 14.7% of the changes in the performance of large manufacturing firms in Kenya.

**Table 4.27     Dynamic Capabilities Model Summary**

| **Model Summary** | | | | |
|-------|-------|----------|-------------------|----------------------------|
| Model | R     | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1     | .383a | 0.147    | 0.14              | 0.32914                    |
| a Predictors: (Constant), Dynamic Capabilities | | | | |

The study also established the model fitness by comparing the F- calculated and F-critical values. The results for F-calculated are in Table 4.28. The F-Critical, $F_{0.05, 1, 155}$ was 3.84. Since F calculated, 22.869, was greater than F-Critical, $F_{0.05, 1, 155}$, 3.84, the study concluded that the model fits well. This is further supported by a p-value of 0.00 which is significant at 5% level of significance implying that the model fit well.

**Table 4.28     Dynamic Capabilities Model Fitness**

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 2.477 | 1 | 2.477 | 22.869 | .000b |
| | Residual | 14.408 | 155 | 0.108 | | |
| | Total | 16.886 | 156 | | | |
| a Dependent Variable: Performance | | | | | | |
| b Predictors: (Constant), Dynamic Capabilities | | | | | | |

The regression coefficients are as presented in Table 4.29. The relationship between dynamic capabilities and performance as indicated in Table 4.29 was significant at 5% level of significance. The p-value was 0.000 which indicated that the null hypothesis failed to be accepted at 5% level of significance hence Dynamic Capabilities have a significant influence on performance of large manufacturing firms in Kenya.

The findings are consistent with an argument by Zahra *et al.* (2006) that dynamic capabilities have an influence on performance. Its impact on a firm's performance is a matter of the configuration of the dynamic capabilities it utilizes. The findings also agree with Daniel and Wilson (2003) who stated that firms which possess dynamic capabilities of high quality outperform their competitors with dynamic capabilities of low quality in terms of performance.

**Table 4.29     Dynamic capabilities Model Coefficients**

| | | B | Std. Error | t | Sig. |
|---|---|---|---|---|---|
| 1 | (Constant) | -0.259 | 0.222 | -1.166 | 0.246 |
| | Dynamic Capabilities | 0.44 | 0.092 | 4.782 | 0.000 |
| a Dependent Variable: Performance | | | | | |

**Performance of Large Manufacturing firms = -0.259 + 0.44 Dynamic capability**

## 4.8 Leadership Characteristics

The study sought to establish the influence of Leadership Characteristics on performance of large manufacturing firms in Kenya. The measures of Leadership Characteristics were idealized influence, intellectual stimulation, inspirational motivation and individualized consideration.

### 4.8.1 Idealized Influence Leadership Characteristics

The respondents were asked whether leaders in their firms had idealized influence form of leadership characteristic. The results are presented in Figure 4.23. From the results presented, the study established that majority of the respondents, 87%, indicated that leaders in their firms had idealized influence leadership characteristic while only 13% stated that the leaders don't have.
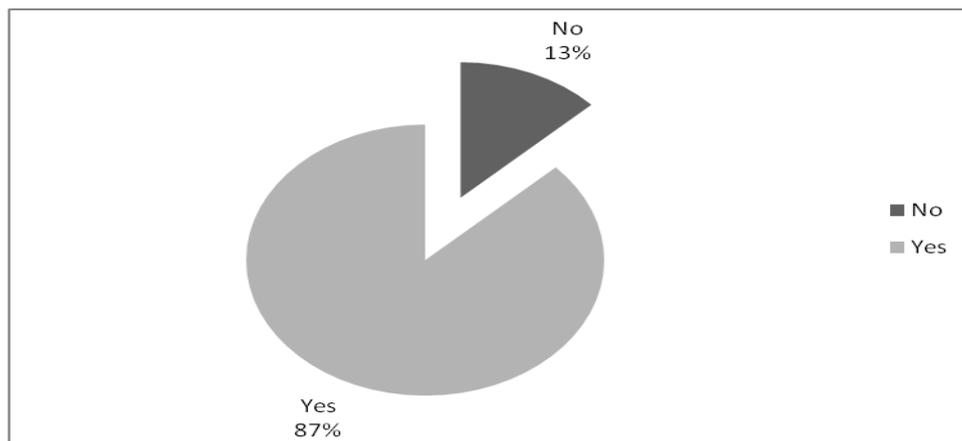


**Figure 4.23:   Idealized Influence Leadership Characteristics**

Furthermore, the study sought to establish whether having idealized influence improves performance of the organization. Results in Table 4.30 revealed that majority, 56.4%, of the respondents  agreed that idealized influence increases the performance of the company by over 10% while 43.6% indicated that it increased performance by 6-10% . On the other hand, majority, 57.9%, of those respondents who had indicated lack of idealized influence stated that it decreased performance by 6-10%. The study findings imply that having idealised influence has a positive effect on performance.

The findings of the study confirm the findings of the study by Hoogh (2014) which examined the relationships between idealized influence leadership and performance outcomes. Results revealed that idealized influence leadership was positively related to common-source and multi-source perceptual performance outcomes (subordinates' positive work attitude) and to organization profitability, but unrelated to organization liquidity and solvency.

**Table 4.30      Idealized Influence and Performance**

|  | Indicator | Percent |
|---|---|---|
| Idealize influence and performance | Increased performance by 0-5% | 0.0 |
|  | Increased performance by 6-10% | 43.6 |
|  | Increased performance by over 10% | 56.4 |
| Lack of idealized influence | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 57.9 |
|  | Decreased performance by over 10% | 42.1 |

**4.8.2 Intellectual Stimulation Leadership Characteristics**

Respondents were also asked to indicate whether leaders in the company had intellectual stimulation. The results are as presented in Figure 4.24. The results indicated that majority, 84%, stated that leaders had intellectual stimulation while only 16% stated that they don't have.
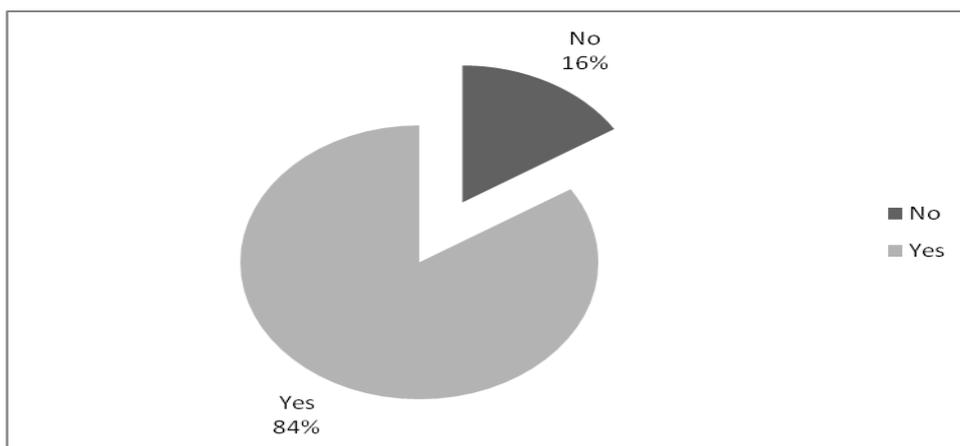


**Figure 4.24:   Intellectual Stimulation Leadership Characteristics**

Furthermore, the study sought to establish whether intellectual stimulation leadership characteristics improve performance. The results are presented in Table 4.31. Results in Table 4.31 indicate that majority of the respondents, 52.3%, stated that having intellectual stimulation increased performance by over 10%. The results further revealed 75.9% of the respondents indicated that lack of intellectual stimulation decreased performance by over 10%.

**Table 4.31      Intellectual Stimulation and Performance**

|  | Indicator | Percent |
|---|---|---|
| Intellectual stimulation | Increased performance by 0-5% | 0 |
|  | Increased performance by 6-10% | 47.7 |
|  | Increased performance by over 10% | 52.3 |
| Lack of intellectual stimulation | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 24.1 |
|  | Decreased performance by over 10% | 75.9 |

### 4.8.3 Inspiration Motivation Leadership Characteristics

The respondents were asked whether their leaders had inspiration motivation leadership characteristics. The results are as presented in Figure 4.25. The results indicates that majority of the respondents, 72%, agreed with the statement indicating that leaders in their company had inspiration motivation leadership characteristics with 28% objecting the fact that their company had leaders with inspiration motivation leadership characteristics.
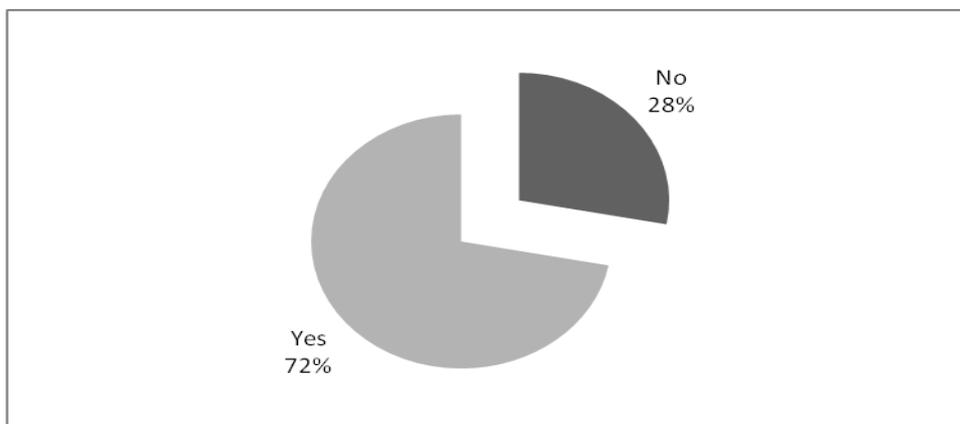


**Figure 4.25:   Inspiration Motivation Leadership Characteristics**

Respondents were further asked to indicate the effect of inspiration motivation leadership characteristics on performance of the company. Table 4.32 presents the results. The results indicates that majority, 53.2%, admitted that inspiration motivation leadership characteristics increase the performance of the company by over 10% and 46.8% agreed that leadership with inspiration motivation leadership characteristics increase the performance of the company by 6-10% .

Further, 60.4% indicated that lack of inspiration motivation leadership characteristics decreased the performance 6-10% while 39.6% indicated that it decreased perofrmance by over 10%. The findings confirm the finding of a survey-review by Fausing *et al* (2013) looking at the contribution of teamwork which is an aspect of inspirational motivation to organizational performance, the review showed that team working has a positive impact on performance. It also reveals that when teamwork is combined with structural change, performance can be further enhanced.

**Table 4.32    Inspiration Motivation and Performance**

|  | Indicator | Percent |
|---|---|---|
| Inspiration motivation | Increased performance by 0-5% | 0 |
|  | Increased performance by 6-10% | 46.8 |
|  | Increased performance by over 10% | 53.2 |
| Lack inspiration motivation | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 60.4 |
|  | Decreased performance by over 10% | 39.6 |

**4.8.4 Individualized Consideration Leadership Characteristics**

The respondents were asked whether their leaders had individualized consideration leadership characteristics. The results are as presented in Figure 4.26. Majority of the respondents 79% agreed that leaders in their firms had individualized consideration leadership characteristics while 21% objecting the fact that their firms had leaders with individualized consideration leadership characteristics.
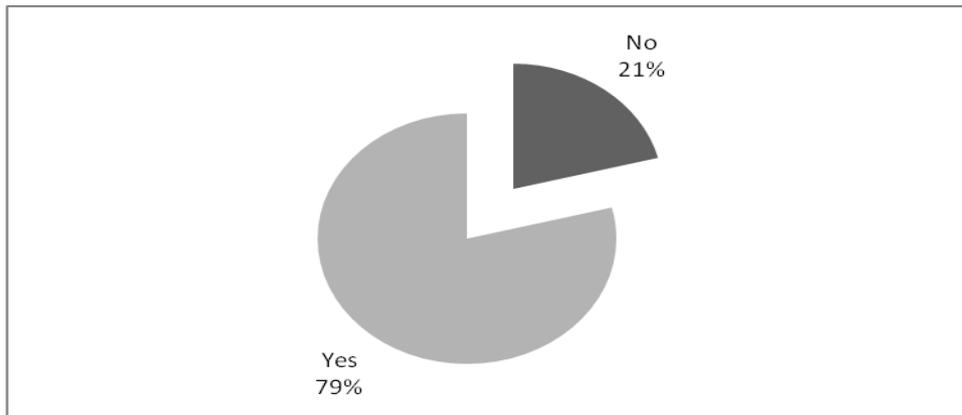
**Figure 4.26:   Individualized Consideration Leadership Characteristics**

The study sought to establish whether individualized consideration leadership characteristics improved performance of the company. Table 4.33 presents the results. From the table, majority 57.9% admitted that individualized consideration leadership characteristics increase the performance of the company by over 10%. Further, respondents were asked to indicate whether lack of individualized consideration leadership characteristics decreased the performance of the company.

Majority 60.4% agreed that lack of individualized consideration leadership characteristics decreases the performance of the company by over 10%. The finding of the study confirm the findings of a study by Kombo, Obonyo and Oloko (2013) which focused on the influence of individualized consideration on performance with a look at delegation whose objective was to find out whether or not delegation impacts on performance. The study established that there is a positive relationship between individualized consideration and performance.

**Table 4.33      Individualized Consideration and Performance**

|  | Indicator | Percent |
|---|---|---|
| Individualized consideration | Increased performance by 0-5% | 0 |
|  | Increased performance by 6-10% | 42.1 |
|  | Increased performance by over 10% | 57.9 |
| Lack individualized consideration | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 60.4 |
|  | Decreased performance by over 10% | 39.6 |

99

### 4.8.5 Relationship between Leadership Characteristics and ROE

The study sought to establish the relationship between leadership characteristics and ROE. The results are presented in Table 4.34. The results in Table 4.34 indicate the odd ratio regression with regard to ROE. The results reveal that intellectual stimulation, idealized influence, individualized consideration and inspiration motivation are positively related to ROE. The relationship between intellectual stimulation as well as inspiration motivation and ROE is significant at 5% level of significance. The odds of observing a high ROE were 3.532 times higher for those firms whose leaders have intellectual stimulation leadership characteristics as compared to those firms whose leaders do not have intellectual stimulation leadership characteristics.

The results also revealed that the odds of observing a high ROE were 3.806 times higher for those firms whose leaders have inspiration motivation leadership characteristics as compared to those firms whose leaders don't. This implies that having intellectual stimulation and inspirational motivation leads to a high ROE. Berg and Karlsen (2007) stated that contingent Leadership approach where a leader integrates and leads the work of the entire project team against challenges in the environment to function effectively leads to improved performance. The finding of the current study confirms the argument by Berg & Karlsen (2007).

**Table 4.34    Relationship between Leadership Characteristics and ROE**

|                           | B      | S.E.  | Wald  | df | Sig.  | Exp(B) |
|---------------------------|--------|-------|-------|----|-------|--------|
| Idealized influence       | 1.16   | 0.77  | 2.269 | 1  | 0.132 | 3.191  |
| Intellectual stimulation  | 1.262  | 0.555 | 5.163 | 1  | 0.023 | 3.532  |
| Inspiration motivation    | 1.337  | 0.444 | 9.066 | 1  | 0.003 | 3.806  |
| Individualized consideration | 0.225 | 0.606 | 0.138 | 1  | 0.71  | 1.253  |
| Constant                  | -2.059 | 0.679 | 9.192 | 1  | 0.002 | 0.128  |

**4.8.6 Relationship between Leadership Characteristics and Profit Before Tax**

The study also sought to establish the relationship between leadership characteristics and profit before Tax. The results are presented in Table 4.35.

**Table 4.35 Relationship between Leadership Characteristics and Profit Before Tax**

|                              | **B**  | **S.E.** | **Wald** | **df** | **Sig.** | **Exp(B)** |
|------------------------------|--------|----------|----------|--------|----------|------------|
| Idealized influence          | 0.911  | 0.81     | 1.265    | 1      | 0.261    | 2.488      |
| Intellectual stimulation     | 0.927  | 0.614    | 2.277    | 1      | 0.131    | 2.527      |
| Inspiration motivation       | 1.666  | 0.483    | 11.897   | 1      | 0.001    | 5.293      |
| Individualized consideration | 1.248  | 0.585    | 4.545    | 1      | 0.033    | 3.482      |
| Constant                     | -2.276 | 0.731    | 9.681    | 1      | 0.002    | 0.103      |

**4.8.7 Relationship between Leadership Characteristics and ROA**

The study also sought to establish the relationship between leadership characteristics and ROA. The results are presented in Table 4.36. The results reveal that the relationship between all the aspects of transformational leadership and profit before tax is positive. Further, inspirational motivation and individualized consideration are significantly related to PBT. The odds of observing a high PBT were 5.293 times higher for those firms whose leaders have inspiration motivation leadership characteristics as compared to those firms whose leaders do not have inspiration motivation leadership characteristics.

On the other hand, the odds of observing a high PBT were 3.482 times higher for those firms whose leaders have individualized consideration leadership characteristics as compared to those firms whose leaders don't. This implies that having inspiration motivation and individual consideration leads to a high PBT. These findings confirm the argument by Berg and Karlsen (2007) who stated that contingent Leadership approach where a leader integrates and leads the work of the entire project team against challenges in the environment to function effectively leads to improved performance.

The finding also confirm the findings of a study by Samad (2012) which examined the relationship between innovation, transformational leadership and performance and found that transformational leadership and innovation were related to organizational performance. Both transformational leadership and innovation were found to be the significant influence to organizational performance.

Table 4.36 indicates the odd ratio regression with regard to ROA. The results reveal that the relationship between all the aspects of transformational leadership and ROA is positive. The results reveal that inspiration motivation is positively and significantly related to ROA. The odds of observing a high ROA were 2.988 times higher for those firms whose leaders have inspiration motivation leadership characteristics as compared to those firms whose leaders do not have inspiration motivation leadership characteristics. This implies that having inspirational motivation leads to a high ROA.

The findings of the study confirms the findings of a study by Simpkins (2009) which concluded that adoption of situational leadership style in an uncertain environment would help managers develop and implement high strategic contingency decisions faced by unknowns. The study found out that a form of contingent leadership approach in an uncertain environment would result to more benefits to a firm. Rather than focusing on disasters or major disruptions, this style considers in advance various risks to deal with in the current situations than depending on laid strategies.

**Table 4.36     Relationship between Leadership Characteristics and ROA**

|                              | B      | S.E.  | Wald  | df | Sig.  | Exp(B) |
|------------------------------|--------|-------|-------|----|-------|--------|
| Idealized influence          | 0.914  | 0.754 | 1.471 | 1  | 0.225 | 2.495  |
| Intellectual stimulation     | 0.487  | 0.53  | 0.842 | 1  | 0.359 | 1.627  |
| Inspiration motivation       | 1.095  | 0.416 | 6.911 | 1  | 0.009 | 2.988  |
| Individualized consideration | 0.802  | 0.641 | 1.565 | 1  | 0.211 | 0.448  |
| Constant                     | -0.433 | 0.513 | 0.713 | 1  | 0.398 | 0.648  |

### 4.8.8 Hypothesis Testing

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the Ho was not rejected but if it was less than 0.05, the Ho failed to be rejected. The aspects of leadership were combined and run against the combined measures of performance. An ordinary least regression Model was used.

The null hypothesis for the fourth objective was: Leadership characteristics do not influence performance of large manufacturing firms in Kenya. The alternative hypothesis for the fourth objective was: Leadership characteristics influence performance of large manufacturing firms in Kenya. The results of the regression model are as indicated in Table 4.37. The results reveal that leadership characteristics explain 23.3% of the changes in performance of large manufacturing firms in Kenya. The remaining, 76.7%, of the change in performance of large manufacturing is explained by other factors.

**Table 4.37      Leadership Characteristics Model Summary**

**Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|----------|-------------------|----------------------------|
| .482a | 0.233 | 0.228 | 0.34798 |

The study also established the model fitness by comparing the F- calculated and F-critical values. The results for F-calculated are in Table 4.38. The F-Critical, $F_{0.05, 1, 155}$ was 3.84. Since F calculated, 47.58 was greater than F-Critical, $F_{0.05, 1, 155}$, 3.84, the study concluded that the model fits well. This is further supported by a p-value of 0.00 which is significant at 5% level of significance implying that the model fit well.

**Table 4.38      Leadership Characteristics Model Fitness**

**ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|----------------|-----|-------------|------|------|
| Regression | 5.762 | 1 | 5.762 | 47.58 | .000b |
| Residual | 19.011 | 155 | 0.121 | | |
| Total | 24.773 | 156 | | | |

The regression coefficients are as presented in Table 4.39. The result in Table 4.39 indicated that the relationship between leadership characteristics and performance of large manufacturing firms in Kenya was significant at 5% level of significance. The p-value was 0.000 which indicated that the null hypothesis was rejected at 5% level of significance hence leadership characteristics has significant influence on the performance of large manufacturing firms in Kenya.

The findings are consistent with the findings of a study by Hoogh (2014) which revealed that idealized influence leadership was positively related to common-source and multi-source perceptual performance outcomes (subordinates' positive work attitude) and to organization profitability. The findings were also consistent with the findings of a study by Kombo, Obonyo and Oloko (2013) which established that there is a positive relationship between individualized consideration form of leadership and performance of firms.

**Table 4.39    Leadership Characteristics Model Coefficients**

|  | **B** | **Std. Error** | **t** | **Sig.** |
|---|---|---|---|---|
| (Constant) | 0.192 | 0.083 | 2.318 | 0.022 |
| Leadership combined | 0.670 | 0.097 | 6.898 | 0.000 |

**Performance of Large Manufacturing firms = 0.192 + 0.67 Leadership Characteristics**

**4.9 Legal and Regulatory Environment**

The study sought to establish the moderating effect of legal and regulatory environment on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya. The measures of legal and regulatory environment were effective by laws, membership to a professional body and abiding by government laws.

### 4.9.1   Effective Bylaws

The respondents were asked whether their firm had effective by-laws. The results are presented in Figure 4.27. The results indicate that majority of the respondents 81% agreed with the statement that their firm had effective by-laws while 19% objecting the fact that their firm had effective by-laws.
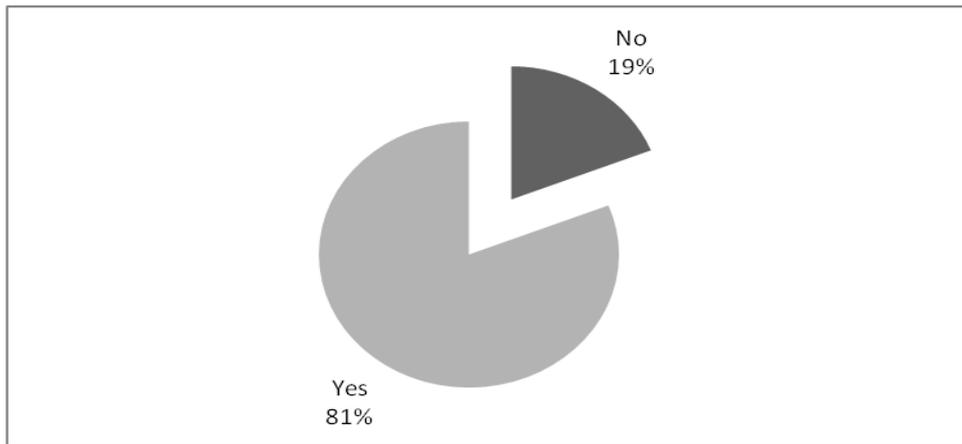


**Figure 4.27:   Effective Bylaws**

Respondents were further asked to indicate the effect of effective by-laws on performance of the company. The results are as presented in Table 4.40. Results in Table 4.40 indicate that majority,51.5%,admitted that effective by-laws increases the performance of the firm by 6-10%. Further, majority of the  respondents , 55.2% , agreed that lack of effective by-laws by the firm decreases the performance of the company by over 10%.   A study by Jabnoun, Khalifah and Yusuf (2009) on environmental uncertainty, strategic orientation and quality management using a contingency model found that businesses operate in an ever-dynamic environment and therefore must adjust and adapt to environmental dynamism through a variety of strategic orientations. It doesn't directly influence performance but is key to determine the direction of a firm's performance. These findings were similar to the findings of the current study.

**Table 4.40      Effective Bylaws and Performance**

|  | Indicator | Percent |
|---|---|---|
| Effective by laws | Increased performance by 0-5% | 0.0 |
|  | Increased performance by 6-10% | 51.5 |
|  | Increased performance by over 10% | 48.5 |
| Lack effective by laws | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 44.8 |
|  | Decreased performance by over 10% | 55.2 |

### 4.9.2   Membership to a Professional Body

The respondents were further requested to indicate whether their firm was a member of a professional body. The results are presented in Figure 4.28. The results indicate that majority of the respondents 81% agreed with the statement indicating that their firm was a member of a professional body with another 21% indicating that their firm was not a member of a professional body.
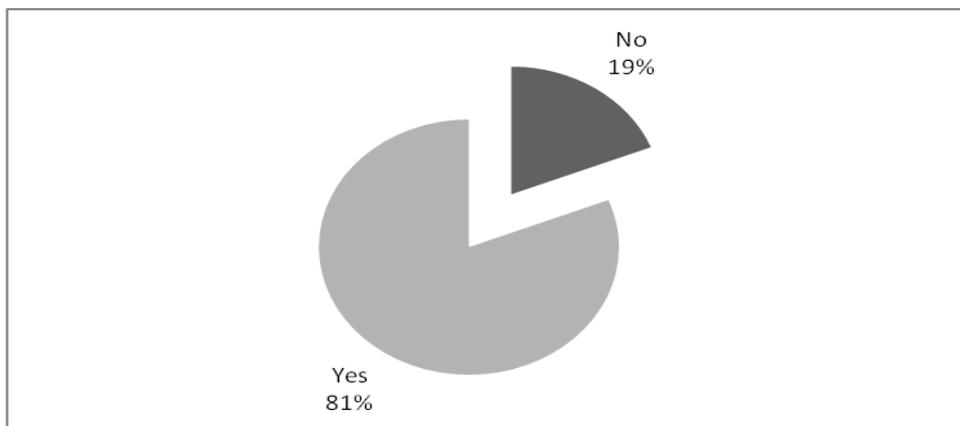


**Figure 4.28:   Membership to a Professional Body**

Respondents were further asked to indicate whether being a member of a professional body had an effect on performance of the company. Table 4.41 presents the results. Majority of the respondents , 56.9% , agreed that being a member of a professional body increases the performance of the company by over 10% while 43.1% agreed that it increased performance by 6-10%. Further, respondents were asked to indicate the effect of membership to a professional body on performance of the company.

Majority of the respondents, 65.5%, agreed that lack of professional body membership decreases the performance of the company by 6-10% while none stated that it decreases perofrmance by less than 5%.

**Table 4.41    Membership to a Professional Body and Performance**

|  | Indicator | Percent |
|---|---|---|
| Professional body | Increased performance by 0-5% | 0 |
|  | Increased performance by 6-10% | 43.1 |
|  | Increased performance by over 10% | 56.9 |
| Lack of professional body | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 65.5 |
|  | Decreased performance by over 10% | 34.5 |

### 4.9.3    Abiding by Government Laws

The respondents were asked whether their firm abide with the set laws of the government. Figure 4.29 presents the results. The results indicate that majority of the respondents, 99%, agreed with the statement indicating that their firm abides with the set laws of the government.
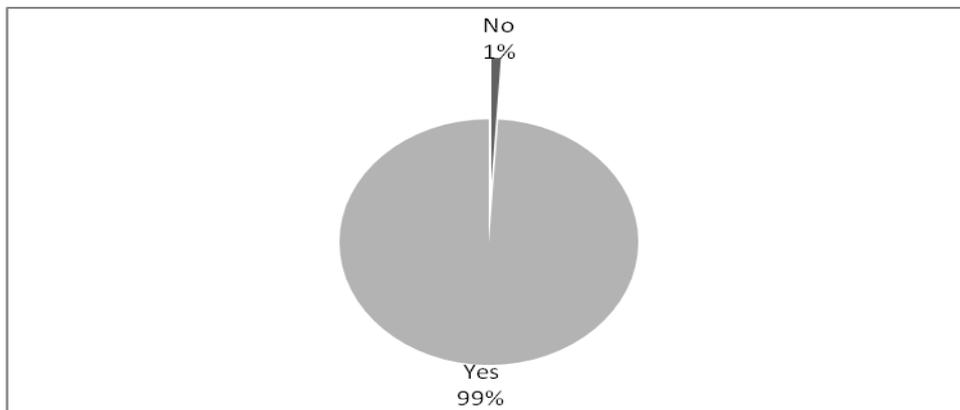


**Figure 4.29:    Abiding by Government Laws**

Moreover the respondents were asked to indicate the effect of abiding with the set laws of the government on performance. Table 4.42 presents the results. The results indicate that majority of the respondents admitted that it increases the performance of the firm by over 10% while none stated that it increases by less than 5%.

Further, 62.1% of the respondents agreed that failing to abide by the set laws of the government decreases the performance of the company by 6-10% while none stated that it decreases performance by less than 5%.

**Table 4.42    Abiding by Government Laws and Performance**

|  | Indicator | Percent |
|---|---|---|
| Set government policies | Increased performance by 0-5% | 0 |
|  | Increased performance by 6-10% | 40.8 |
|  | Increased performance by over 10% | 59.2 |
| Lack of set government policies | Decreased performance by 0-5% | 0.0 |
|  | Decreased performance by 6-10% | 62.1 |
|  | Decreased performance by over 10% | 37.9 |

**4.9.4 Relationship between Legal and Regulatory Environment and ROE**

The study sought to establish the relationship between legal and regulatory environment and ROE. The results are as presented in Table 4.43. The results reveal that effective by-laws are positively and significantly related to ROE. Similarly, being a member of a professional body is positively and significantly related to ROE. The odds of observing a high ROE were 0.281 times higher for those firms with effective by-laws as compared to those firms without effective by-laws.

The results also revealed that the odds of observing a high ROE were 6.087 times higher for those firms which are members of a professional body as compared to those firms which are not. This implies that effective by-laws and being a member of a professional body improve ROE. The findings of the current study confirm the argument by Okumus (2003) who argued that the external environment like legal requirements and strategic decisions influence the factors of organizational structure, in order to implement strategies successfully.

**Table 4.43    Relationship between Legal and Regulatory Environment and ROE**

|  | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| Effective bylaws | 1.271 | 0.595 | 4.557 | 1 | 0.033 | 0.281 |
| Member of professional body | 1.806 | 0.62 | 8.488 | 1 | 0.004 | 6.087 |
| Set government policies | 0.237 | 0.53 | 0.2 | 1 | 0.655 | 0.789 |
| Constant | 0.82 | 0.479 | 2.93 | 1 | 0.087 | 2.27 |

## 4.9.5 Relationship between Legal and Regulatory Environment and Profit Before Tax

The study further sought to establish the relationship between legal and regulatory environment and PBT. The results are as presented in Table 4.44. The results reveal that being a member of a professional body is positively and significantly related to PBT. The odds of observing a high PBT were 3.91 times higher for those firms which are members of professional bodies as compared to those firms which are not members of professional bodies. This implies that being a member of a professional body leads to a high PBT. The findings contradict the argument by Doz and Kosonen (2008) who indicated that in order to maintain continued growth firms need to make efficient and effective adjustment on organizational factors to changing legal and regulatory environment.

**Table 4.44      Legal and Regulatory Environment and Profit Before Tax**

|                             | B     | S.E.  | Wald  | df | Sig.  | Exp(B) |
|-----------------------------|-------|-------|-------|----|-------|--------|
| Effective bylaws            | 0.492 | 0.545 | 0.817 | 1  | 0.366 | 0.611  |
| Member of professional body | 1.364 | 0.595 | 5.245 | 1  | 0.022 | 3.91   |
| Set government policies     | 0.287 | 0.544 | 0.278 | 1  | 0.598 | 0.751  |
| Constant                    | 0.777 | 0.47  | 2.734 | 1  | 0.098 | 2.175  |

## 4.9.6 Relationship between Legal and Regulatory Environment and ROA

The study further establishes the relationship between legal and regulatory environment and ROA. The results are as presented in Table 4.45. The results reveal that effective by-laws are positively and significantly related to ROA. Similarly, being a member of a professional body is positively and significantly related to ROA. The odds of observing a high ROA were 0.246 times higher for those firms that observe effective by-laws as compared to those firms which don't.

The results also revealed that the odds of observing a high ROA were 7.031 times higher for those firms which are members of a professional body as compared to those firms that are not members of a professional body. This implies that having effective by-laws and being a member of a professional body improves ROE.

The findings also contradict the argument by Doz and Kosonen (2008) who indicated that in order to maintain continued growth firms need to make efficient and effective adjustment on organizational factors to changing legal and regulatory environment.

**Table 4.45    Relationship between Legal and Regulatory Environment and ROA**

|                            | B     | S.E.  | Wald  | df | Sig.  | Exp(B) |
|----------------------------|-------|-------|-------|----|-------|--------|
| Effective bylaws           | 1.402 | 0.603 | 5.407 | 1  | 0.020 | 0.246  |
| Member of professional body| 1.95  | 0.629 | 9.616 | 1  | 0.002 | 7.031  |
| Set government policies     | 0.131 | 0.513 | 0.065 | 1  | 0.799 | 0.877  |
| Constant                   | 0.57  | 0.464 | 1.506 | 1  | 0.22  | 1.768  |

**4.10 Overall Regression Model Before Moderation**

The study ran an overall ordinary least square regression model before including the moderating variable (Legal and regulatory environment). All the measures of each independent variable were combined using mean into their respective independent variable. The three measures of performance (ROE,ROA and PBT) were also combined into one measure of performance of large manufacturing firms. An ordinary least square regression model was then established without the moderating variable.

The model was of the form:

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

where :

$Y$ =    Performance of large manufacturing firms

$X_1$ =    Organizational Structure

$X_2$ =    Information Technology

$X_3$ =    Dynamic capabilities

$X_4$ =    Leadership characteristics

The results for the model summary are as presented in Table 4.46. The study findings presented in Table 4.46 indicates that the contingency factors; organizational structure, information technology, dynamic capabilities and leadership characteristics are jointly positively associated with performance as indicated by a Pearson correlation, R, value of 0.373. Furthermore, the findings indicated that organizational structure, information technology, dynamic capabilities and leadership characteristics jointly explain 13.9% of the changes in performance of large manufacturing firms in Kenya.

**Table 4.46    Regression Model Summary Before Moderating**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| .373 | 0.139 | 0.113 | 0.2329 |

The study also established the model fitness by comparing the F- calculated and F-critical values. The results for F-calculated are in Table 4.47. The F-Critical, $F_{0.05, 4, 152}$ was 2.37. Since F calculated, 5.258 was greater than F-Critical, $F_{0.05, 4, 152}$, 2.37, the study concluded that the model fits well. This is further supported by a p-value of 0.01 which is significant at 5% level of significance implying that the model fit well.

**Table 4.47    Regression Model Fitness Before Moderating**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 1.141 | 4 | 0.285 | 5.258 | .001 |
| Residual | 7.052 | 152 | 0.054 | | |
| Total | 8.193 | 156 | | | |

The regression coefficients are as presented in Table 4.48.  The results in Table 4.48 indicate that the relationship between organization structure, dynamic capability and leadership characteristics was not significant before moderation but information technology was significant. The relationship was however positive implying that an increase in any of the factors results to an improvement in performance.

**Table 4.48     Regression Model Coefficients Before Moderating**

|  | B | Std. Error | t | Sig. |
|---|---|---|---|---|
| (Constant) | 2.079 | 0.213 | 9.76 | 0.000 |
| Organization structure | 0.160 | 0.111 | -1.451 | 0.149 |
| Information Technology | 0.499 | 0.161 | 3.107 | 0.002 |
| Dynamic capability | 0.008 | 0.075 | -0.11 | 0.913 |
| Leadership characteristics | 0.077 | 0.133 | 0.577 | 0.565 |

The model before moderation was:

**Performance of Large Manufacturing Firms = 2.079 + 0.160 Organization Structure + 0.499 Information Technology + 0.008 Dynamic Capabilities + 0.077 Leadership Characteristics**

## 4.11 Overall Regression Model after Moderating Effect

A regression model was run after including the moderating variable (legal and regulatory environment). The model was therefore of the form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X.X_5 + \mu$$

Where,

$Y =$     Performance of large manufacturing firms

$X_1 =$     Organizational Structure

$X_2 =$     Information Technology

$X_3 =$      Dynamic capabilities

$X_4 =$     Leadership characteristics

$X.X_5 =$ Interaction of all of the independent variables and Legal and Regulatory environment

The results for the regression model after moderation are as presented in Table 4.49. Regression results in Table 4.49 after moderating revealed that contingency factors explain 14.4% of the changes in performance of large manufacturing firms.

The change of $R^2$ from 13.9% (before moderation) to 14.4% (after moderation) shows an insignificant change. This suggested that legal and regulatory environment has no moderating effect on the relationship.

**Table 4.49       Regression Model Summary after Moderating**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| .379a | 0.144 | 0.11 | 0.23322 |

### 4.11.1 Hypothesis testing for moderator

The fifth objective was to explore the moderating effect of legal and regulatory environment on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya. The null hypothesis was: Legal and regulatory environment has no moderating effect on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya while the alternative hypothesis was that legal and regulatory environment has a moderating effect on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya. The coefficient results are as presented in Table 4.50.

In Table 4.50 the interaction between the independent variables and moderating variable is not statistically significant (0.424), therefore legal and regulatory environment does not moderate the influence of strategic contingency factors on firm's performance. The findings are not consistent with the argument by Doz and Kosonen (2008) who indicated that in order to maintain continued growth firms need to make efficient and effective adjustment on organizational factors to changing legal and regulatory environment.

**Table 4.50    Regression Model Coefficients after Moderating**

|  | B | Std. Error | t | Sig. |
|---|---|---|---|---|
| (Constant) | 2.172 | 0.242 | 8.956 | 0.000 |
| Organization structure | 0.219 | 0.133 | -1.651 | 0.101 |
| Information Technology | 0.445 | 0.175 | 2.548 | 0.012 |
| Dynamic capability | 0.020 | 0.076 | -0.264 | 0.792 |
| Leadership characteristics | 0.055 | 0.135 | 0.407 | 0.684 |
| Interaction variable | 0.036 | 0.044 | 0.802 | 0.424 |

**Performance of Large Manufacturing Firms = 2.172 + 0.219 Organization Structure + 0.445 Information Technology + 0.02 Dynamic Capabilities + 0.055 Leadership Characteristics + 0.036 Interaction Variable**

Further test was conducted so as to check if the moderator variable supported partial moderation or full moderation. The results were presented in Table 4.51. The results in Table 5.51 indicate that legal and regulatory environment does not moderate the relationship between strategic contingency factors and performance since the interaction of the moderator and independent variable is not significant (p=0.881) and also that of the moderator (Legal and regulatory environment) on is not significant (p=0.207).

**Table 4.51    Regression Model Coefficients**

|  | B | Std. Error | t | Sig. |
|---|---|---|---|---|
| (Constant) | 2.317 | 0.068 | 34.089 | 0.000 |
| Independent variable | 0.024 | 0.073 | 0.333 | 0.740 |
| Legal and regulatory | 0.111 | 0.087 | 1.268 | 0.207 |
| Interaction variable | 0.012 | 0.082 | 0.150 | 0.881 |

Figure 4.30 shows two way interaction of the moderator (legal and regulatory environment). The y axis is the dependent variable (Performance of large manufacturing firms) while the x axis is the independent variable (Strategic Contingency factors). On the high as well as low legal and regulatory environment, there was no change in the performance of large manufacturing firms. This reveals that moderation was not supported.
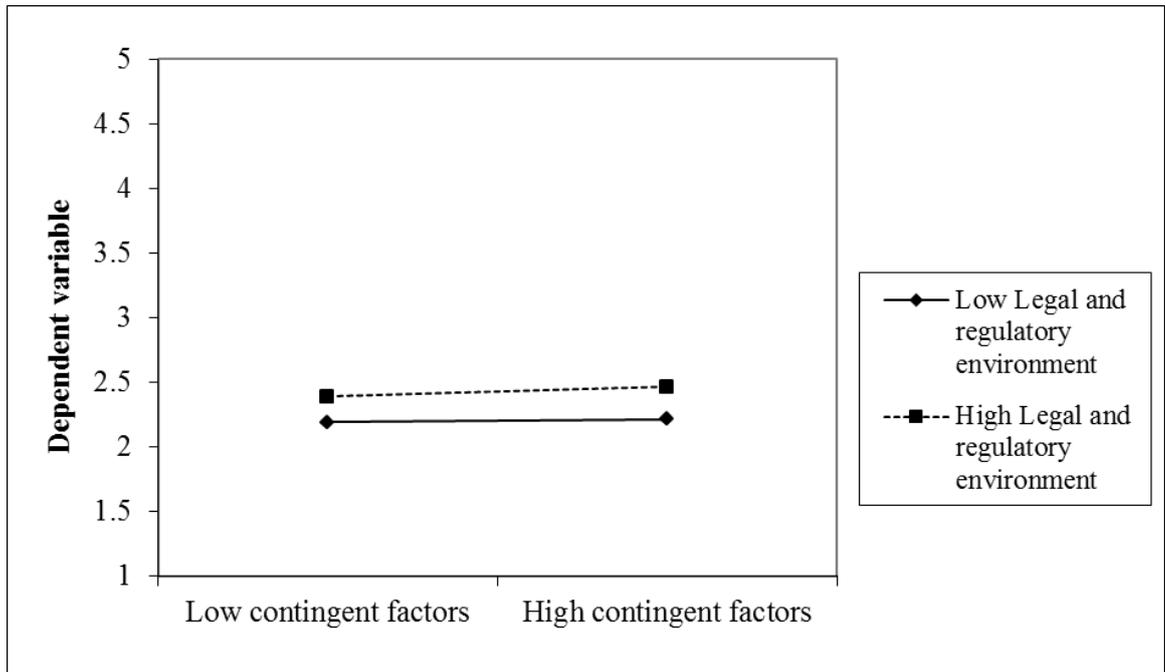
**Figure 4.30:  Interaction Effects**

**4.12 Joint Effect of Strategic Contigency Factors on Performance**

The study sought to establish the joint influence of strategic contingency factors on performance of large manufacturing firms in Kenya. All the independent variables were combined using mean and an OLS regression model was run against the combined measures of performance. The results for the model summary are as presented in Table 4.52. The study findings indicated that the Strategic contingency factors are positively associated with performance of large manufacturing firms as indicated by a Pearson correlation, R, value of 0.165. Furthermore, the findings indicate that Strategic contingency factors explain 27% of the changes in performance of large manufacturing firms in Kenya.

**Table 4.52    Joint Effect Regression Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1 | .165a | 0.270 | 0.02 | 0.25057 |

The study also established the model fitness by comparing the F- calculated and F-critical values. The results for F-calculated are in Table 4.53. The F-Critical, $F_{0.05, 1, 155}$ was 3.84. Since F calculated, 3.996 was greater than F-Critical, $F_{0.05, 1, 155}$, 3.84, the study concluded that the model fit well. This is further supported by a p-value of 0.048 which is significant at 5% level of significance implying that the model fit well.

**Table 4.53     Joint Effect Regression Model Fitness**

|  | Sum of Squares | df | Mean Square | F | Sig. |
| --- | --- | --- | --- | --- | --- |
| Regression | 0.251 | 1 | 0.251 | 3.996 | .048 |
| Residual | 8.978 | 155 | 0.063 |  |  |
| Total | 9.229 | 156 |  |  |  |

The regression coefficients are as presented in Table 4.54. The results in Table 4.54 indicate that the relationship between strategic contingency factors and performance of large manufacturing firms is positive and significant as indicated by a beta coefficient of 0.061 and P value of 0.048. This implies that an improvement in strategic contingency factors leads to an improvement in performance of large manufacturing firms in Kenya.

**Table 4.54     Joint Effect Regression Model Coefficients**

|  | B | Std. Error | t | Sig. |
| --- | --- | --- | --- | --- |
| (Constant) | 2.376 | 0.043 | 55.5 | 0.000 |
| Strategic contingency factors | 0.061 | 0.031 | 1.999 | 0.048 |

**Performance of Large Manufacturing Firms = 2.376 + 0.061 Strategic Contingency Factors**

**4.13 Multivariate Odd Ratio Regression on Performance**

The study conducted a multivariate regression model based on the significant variables under each objective. Three regression models were run and the results are presented.

### 4.13.1 Relationship between Strategic Contingency Factors and ROE

A multivariate regression model for the Relationship between strategic contingency factors and ROE was established. The results are presented in Table 4.55. The results in indicated that departmentalization, IT hardware adoption, research development, Intellectual stimulation leadership characteristics, Inspiration motivation leadership characteristics and effective by laws all have high odds of improving return on equity if adopted by large manufacturing firms in Kenya.

**Table 4.55    Strategic Contingency Factors and ROE**

|                          | B      | S.E.  | Wald   | df | Sig.  | Exp(B)  |
|--------------------------|--------|-------|--------|----|-------|---------|
| Degree of centralization | -1.672 | 1.403 | 1.419  | 1  | 0.234 | 0.188   |
| Departmentalization      | -4.531 | 1.318 | 11.822 | 1  | 0.001 | 0.011   |
| IT hardware adoption     | -6.125 | 2.081 | 8.663  | 1  | 0.003 | 0.002   |
| Research development     | -1.995 | 1.016 | 3.852  | 1  | 0.050 | 0.136   |
| Training                 | -0.681 | 0.781 | 0.759  | 1  | 0.384 | 0.506   |
| Intellectual stimulation | -3.741 | 1.554 | 5.797  | 1  | 0.016 | 0.024   |
| Inspiration motivation   | -1.925 | 0.828 | 5.401  | 1  | 0.020 | 0.146   |
| Effective by laws        | 3.789  | 1.88  | 4.062  | 1  | 0.044 | 44.205  |
| Constant                 | 7.575  | 1.753 | 18.663 | 1  | 0.000 | 1948.09 |

### 4.13.2 Relationship between Strategic Contingency Factors and Profit Before Tax

The study also established a multivariate regression model for the relationship between strategic contingency factors and PBT. Table 4.56 presents the results. Results in Table 4.56 indicate that the odds of having an improvement in profit before tax are increased for the large manufacturing firms that have departmentalization, research development and whose leaders have inspiration motivation leadership characteristics. This implies that an improvement in any of the factors leads to an improvement in profit before tax.

**Table 4.56    Strategic Contingency Factors and Profit Before Tax**

|                            | B      | S.E.  | Wald   | df | Sig.  | Exp(B) |
|----------------------------|--------|-------|--------|----|-------|--------|
| Departmentalization        | -3.772 | 1.15  | 10.751 | 1  | 0.001 | 0.023  |
| IT software adoption       | -1.271 | 1.753 | 0.526  | 1  | 0.468 | 0.281  |
| Research development       | -2.16  | 0.945 | 5.229  | 1  | 0.022 | 0.115  |
| Inspiration motivation     | -3.079 | 0.983 | 9.805  | 1  | 0.002 | 0.046  |
| Member of professional body| 0.804  | 1.369 | 0.345  | 1  | 0.557 | 2.235  |
| IT policy                  | 1.473  | 1.333 | 1.221  | 1  | 0.269 | 4.363  |
| IT skills(1)               | 1.15   | 1.197 | 0.923  | 1  | 0.337 | 3.157  |
| Individualized consideration| 0.961 | 1.395 | 0.475  | 1  | 0.491 | 2.615  |
| Constant                   | 4.47   | 1.955 | 5.227  | 1  | 0.022 | 87.37  |

## 4.13.3  Relationship between Strategic Contingency Factors and ROA

The study further established a multivariate regression model for the Relationship between strategic contingency factors and ROA. The results are presented in Table 4.57. The results in Table 4.57 indicates that degree of centralization, departmentalization, IT hardware adoption, IT skills and research development are associated with higher odds of observing a high return on assets. The results imply that an improvement in any of the factors results to an improvement in return on assets.

**Table 4.57    Strategic Ccontingency Factors and ROA**

|                          | B       | S.E.  | Wald   | df | Sig.  | Exp(B) |
|--------------------------|---------|-------|--------|----|-------|--------|
| Degree of centralization | 2.343   | 0.861 | 7.407  | 1  | 0.006 | 10.414 |
| Departmentalization      | 1.858   | 0.644 | 8.329  | 1  | 0.004 | 6.411  |
| IT hardware adoption     | 3.485   | 1.118 | 9.724  | 1  | 0.002 | 32.629 |
| IT skills                | 2.103   | 0.786 | 7.161  | 1  | 0.007 | 8.193  |
| Research development     | 1.416   | 0.669 | 4.482  | 1  | 0.034 | 4.122  |
| Training                 | 0.81    | 0.577 | 1.974  | 1  | 0.16  | 2.249  |
| Inspiration motivation   | 0.904   | 0.71  | 1.62   | 1  | 0.203 | 2.469  |
| Effective by laws        | -0.775  | 1.011 | 0.588  | 1  | 0.443 | 0.461  |
| Constant                 | -12.091 | 2.959 | 16.691 | 1  | 0.000 | 0.000  |

## 4.14 Performance of Large Manufacturing Firms

The study sought to investigate the performance of large manufacturing firms in Kenya. The measures of performance used in the study were ROE, ROA and Profit before tax.

### 4.14.1 ROE

The respondents were asked to indicate their company's performance with respect to given categories. The interpretation of responses was as follows: "1" was " a reported ROE which was less than 10%", "2", was "a reported ROE falling between 10.1% and 15%", "3" was a "a reported ROE falling between 15.1% and 20%", while "4" was a "a reported ROE of over 20%" .

The study findings imply that higher mean scores were associated with higher ROE implying high performance. The mean cutoff for firms with high ROE was 2.5. A mean score of 2.5 or more indicated high ROE and a mean score of less than 2.5 indicated low ROE. The results are as presented in Table 4.58. The results indicate that the performance of the firms in terms of ROE was low in the year 2010 and 2011 while in the years 2012, 2013 and 2014 ROE was high. The overall mean score of 2.70 indicates a higher ROE in the study period while a standard deviation of 0.91 indicates a small variation in ROE between the years.

**Table 4.58    ROE**

|  | Less than 10% | Between 10.1% and 15% | Between 15.1%-20% | More than 20% | Mean | Std Dev |
|---|---|---|---|---|---|---|
| ROE2010 | 26.90% | 29.40% | 38.80% | 5.00% | 2.22 | 0.90 |
| ROE2011 | 34.40% | 28.10% | 31.90% | 5.60% | 2.09 | 0.94 |
| ROE2012 | 12.50% | 4.40% | 46.90% | 36.20% | 3.07 | 0.95 |
| ROE2013 | 8.10% | 7.50% | 51.20% | 33.10% | 3.09 | 0.85 |
| ROE2014 | 8.10% | 12.50% | 46.20% | 33.10% | 3.04 | 0.89 |
| **Total** | | | | | **2.70** | **0.91** |

The study also established the trend analysis of mean yearly ROE for large manufacturing firms. The results are as presented in Figure 4.31. The trends analysis of mean yearly ROE for large manufacturing firms indicated in Figure 4.31 shows that ROE increased in the study period.
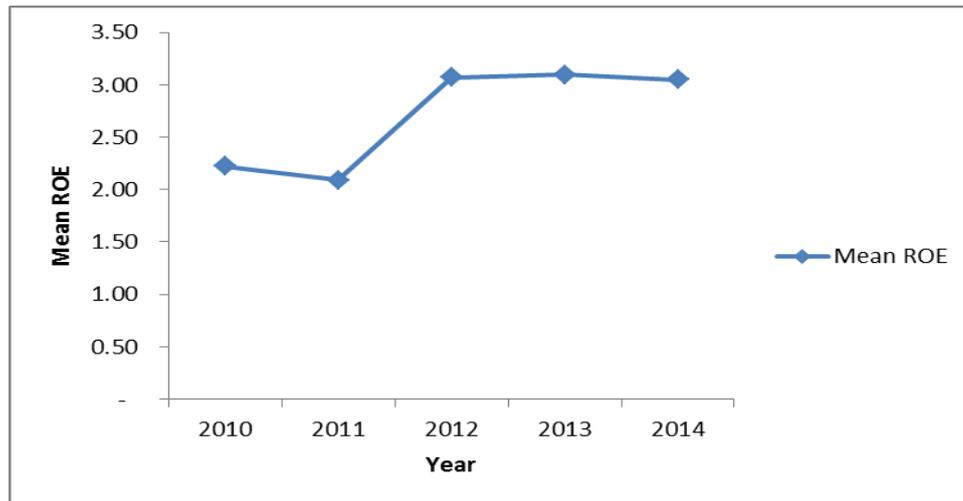


**Figure 4.31:    Trends for ROE**

### 4.13.2 Profit Before Tax

The respondents were asked to indicate their company's performance with respect to given categories. The interpretation of responses for profit before tax was as follows: "1" was "a reported profit before tax of less than Kshs.50 Million", "2", was "a reported profit before tax of between Kshs.51 million and 100 Million", "3" was a "a reported profit before tax of between Kshs.101 million and Kshs.500 million", while "4" was a "a reported profit before tax of more than Kshs.500 million".

This implied that higher mean scores were associated to higher profit before tax implying high performance.  The mean cutoff for firms with high profit before tax was 2.5. A mean score of 2.5 or more indicated high profit before tax and a mean score of less than 2.5 indicated low profit before tax.  Results in Table 4.59 shows that performance in terms of the profits after tax increased in the final two years of the study period as compared to the first 3 years. The overall mean score indicated a low profit before tax for all the firms and the standard deviation indicated a small variation in the profits after tax.

**Table 4.59    Profit Before Tax**

| | Less than Kshs.50 Million | Between Ksh.51 and Kshs 100 Million | Between Kshs. 101 Million and Kshs.500 Million | More than Kshs.500 Million | Mean | Std Dev |
|---|---|---|---|---|---|---|
| PBT2010 | 26.90% | 32.50% | 35.60% | 5.00% | 2.19 | 0.89 |
| PBT2011 | 28.70% | 36.90% | 30.00% | 4.40% | 2.10 | 0.87 |
| PBT2012 | 25.60% | 33.10% | 38.80% | 2.50% | 2.18 | 0.85 |
| PBT2013 | 6.90% | 35.00% | 30.60% | 27.50% | 2.79 | 0.93 |
| PBT2014 | 13.10% | 33.10% | 29.40% | 24.40% | 2.65 | 0.99 |
| **Total** | | | | | **2.38** | **0.91** |

Further, the study conducted a trend analysis of the mean yearly profit before tax for the large manufacturing firms in Kenya. The trends are as presented in Figure 4.32. The trends indicated in Figure 4.32 shows that the profit before tax of large manufacturing firms in has been increasing.
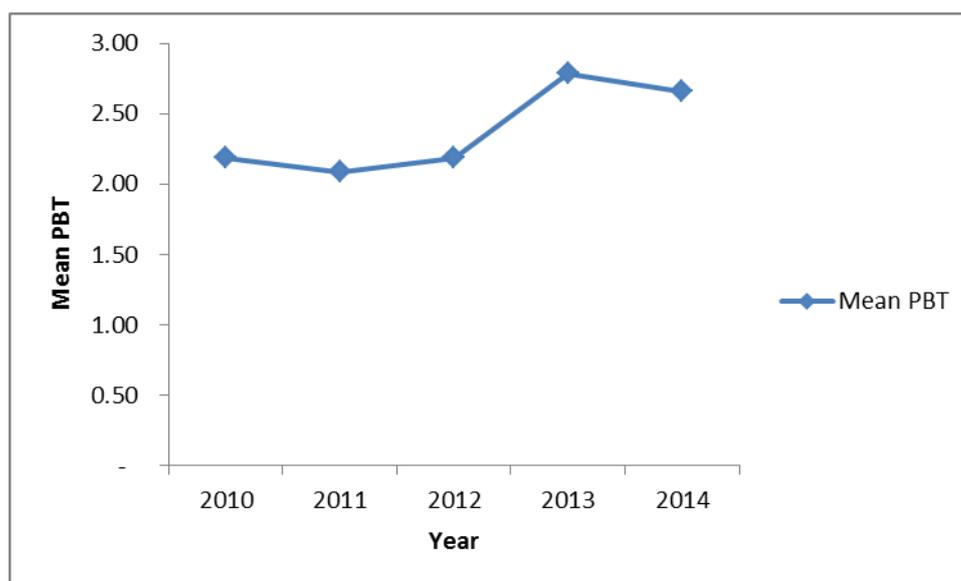


**Figure 4.32:   Trends for Profit Before Tax**

### 4.13.3 ROA

The respondents were asked to indicate their company's performance with respect to given categories. The interpretation of responses for ROA was as follows: "1" was " a reported ROA of less than 2%", "2", was "a reported ROA of between 2.1% and 5% ", "3" was a "a reported profit before tax of between Kshs.101 million and Kshs.500 million", while "4" was a "a reported ROA of more than 7%".

This implied that higher mean scores were associated to higher ROA implying high performance. The mean cutoff for firms with high ROA was 2.5. A mean score of 2.5 or more indicated high ROA and a mean score of less than 2.5 indicated low ROA. The results are as presented in Table 4.60. The results in Table 4.60 indicate a high performance in terms of ROA from the year 2012 to the year 2014 among the large manufacturing firms in Kenya. The year 2010 and 2011 had low performance. The overall ROA for all the large manufacturing firms in Kenya between the year 2010 and 2014 was high as indicated by a ROA of 2.51. A standard deviation of 0.95 indicated a small variation in ROA in the study period.

**Table 4.60     ROA**

|         | Less than 2% | Between 2.1% and 5% | Between 5.1% and 7% | More than 7% | Mean | Std Dev |
|---------|--------------|---------------------|---------------------|--------------|------|---------|
| ROA2010 | 26.20%       | 36.20%              | 28.70%              | 8.80%        | 2.40 | 0.93    |
| ROA2011 | 24.40%       | 28.10%              | 36.90%              | 10.60%       | 2.44 | 0.96    |
| ROA2012 | 17.50%       | 28.10%              | 36.20%              | 18.10%       | 2.55 | 0.98    |
| ROA2013 | 13.80%       | 33.10%              | 37.50%              | 15.60%       | 2.55 | 0.92    |
| ROA2014 | 13.80%       | 30.60%              | 36.20%              | 19.40%       | 2.61 | 0.95    |
| **Total** |            |                     |                     |              | **2.51** | **0.95** |

Further, the study conducted a trend analysis of the mean yearly ROA for the large manufacturing firms in Kenya. The trends are indicated in Figure 4.33. The trends indicated in Figure 4.33 shows that the performance of large manufacturing firms in Kenya has been increasing.
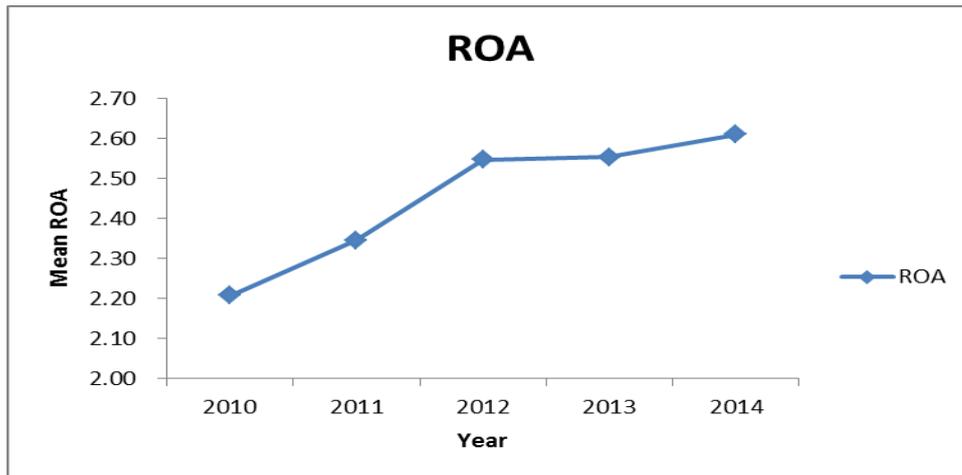
**Figure 4.33:    Trends for ROA**

## 4.13    Model Optimization

Based on the results of hypothesis testing, a model optimization was conducted. The model optimization is presented in Table 4.61.

**Table 4.61    Model Optimization**

| Objective No | Objective | Null Hypothesis | Rule | P value | Comment |
|---|---|---|---|---|---|
| 1 | To establish the influence of organizational structure on performance of large manufacturing firms in Kenya. | Organizational structure does not influence the performance of large manufacturing firms in Kenya. | Reject the null hypothesis if P value is less than 0.05 | 0.00 | Reject Null hypothesis |
| 2 | To assess the influence of information technology on performance of large manufacturing firms in Kenya. | Information Technology does not influence the performance of large manufacturing firms in Kenya. | Reject the null hypothesis if P value is less than 0.05 | 0.00 | Reject Null hypothesis |
| 3 | To determine the influence of dynamic capabilities on performance of large manufacturing firms in Kenya. | Dynamic capabilities do not influence performance of large manufacturing firms in Kenya. | Reject the null hypothesis if P value is less than 0.05 | 0.00 | Reject Null hypothesis |
| 4 | To assess the influence of leadership characteristics on performance of large manufacturing firms in Kenya. | Leadership characteristics do not influence performance of large manufacturing firms in Kenya. | Reject the null hypothesis if P value is less than 0.05 | 0.00 | Reject Null hypothesis |
| 5 | To explore the moderating effect of legal and regulatory environment on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya. | Legal and regulatory environment does not have a moderating effect on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya. | Reject the null hypothesis if P value is less than 0.05 | 0.110 | Fail to reject Null hypothesis |
| 6 | To analyse the joint influence of strategic contingency factors on performance of large manufacturing firms in Kenya. | Strategic contingency factors do not influence the performance of large manufacturing firms in Kenya. | Reject the null hypothesis if P value is less than 0.05 | 0.048 | Reject Null hypothesis |

The aim of a model optimization was to guide in derivation of the final model (revised conceptual framework) where only the significant variables were included in the model. In the new conceptual framework, only the significant variables, that is, organizational structure, information technology, dynamic capabilities and leadership characteristics were included while legal and regulatory environment was not included because it was not significant. After conducting hypothesis testing, the study came up with a revised conceptual framework. The framework is as presented in Figure 4.34.

**Strategic Contingency Factors**



**Independent variables**                                    **Dependent variable**
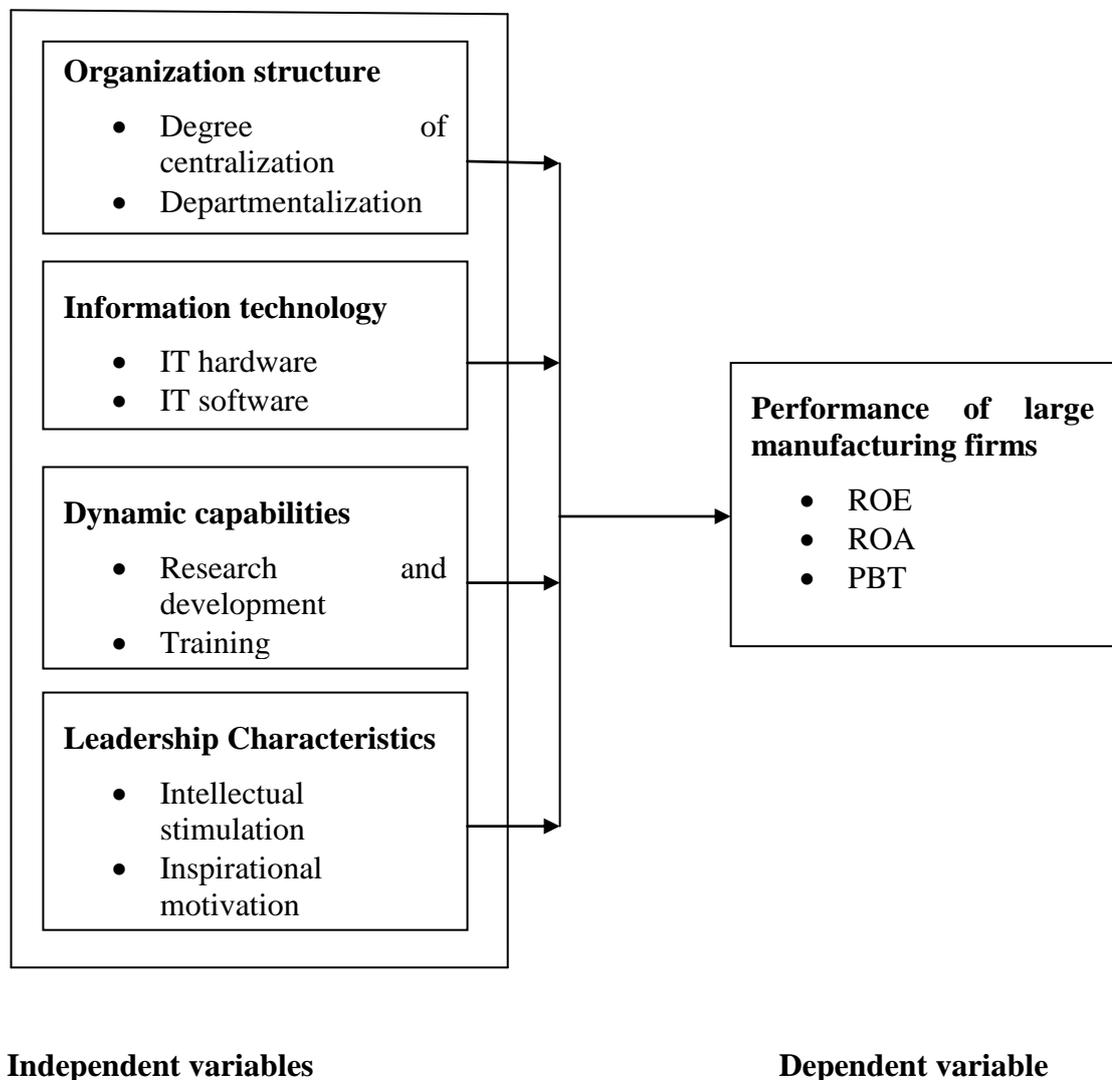
**Figure 4.34:   Optimized Conceptual Framework**

# CHAPTER FIVE

## SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Introduction

This chapter deals with the summary of the findings, the conclusion and recommendations. This was done in line with the objectives of the study. Areas of further research were suggested and limitations of the study were taken into account.

### 5.2 Summary of Findings

### 5.2.1 Demographic Characteristics

The gender results indicated that a majority of the respondents were male. On age, majority of the respondents were aged between 30 to 40 years while the least were over 50 years. Further results indicated that majority of the respondents had university education, followed by college education while a few had secondary education. On the years of experience in the industry, the findings revealed that most of the respondents had worked in the company for a period over three years while the least number had worked for a period less than two years. The study also established that majority of the manufacturing firms that are registered members of KAM are private of which most were over three years while a few were three years old.

### 5.2.2 Organization Structure

The first objective of the study was to determine the influence of organizational structure on performance of large manufacturing firms in Kenya. The findings of the study revealed that majority of the firms had a specialized organization structure. Having specialized organization structure improves performance and lack of specialized structure decreased performance. The study findings also indicated that the nature of the span of control in majority of firms is high. High span of control improves performance while low span of control decreases performance. The findings further revealed that majority of firms have adopted centralized structure which was found to improve performance. The study findings further indicated that majority of the firms had a departmentalized structure which leads to improved performance.

On the relationship between Organizational structure and Return on Equity, the study findings revealed that departmentalization was positively and significantly related to ROE. The odds of observing high ROE was higher for those firms with high span of control compared to those firms which had departmentalized organization structure implying that having a departmentalized organization structure results to high ROE. The results also revealed that degree of centralization was positively and significantly related to ROE. The odds of observing a high ROE was higher for those firms with high degree of centralization as compared to those firms with lower degree of centralization implying that high degree of centralization results to a high ROE. Further, the results also showed that degree of specialization was positively and significantly related to ROE. The odds of observing a high ROE was higher for those firms with high degree of specialization as compared to those firms with lower degree of specialization. This implies that high degree of specialization results to a high ROE.

On the relationship between Organizational structure and Profit before tax, the study findings revealed that departmentalization had a positive and significant relationship with the odds of high PBT. The odds of observing high PBT was higher for those firms with a departmentalized organization structure as compared to those without. This implies that departmentalization results to high PBT. The findings of the study also revealed that departmentalization was positively and significantly related to ROA.

The odds of observing a high ROA was higher for those firms which are departmentalized as compared to those firms which are not departmentalized. This implies that departmentalization results to high ROA. The results also revealed that degree of centralization was positively and significantly related to ROA. The odds of observing a high ROA was higher for those firms which had embraced a high degree of centralization compared to those with low degree of centralization. This implies that a high degree of centralization results to high ROA.

The results further reveal that degree of specialization had a positive and significant relationship with ROA. The odds of observing a high ROA was higher for firms which are highly specialized compared to firms which have low degree of specialization. This implies that high degree of specialization results to a high ROA.

The relationship between organization structure and performance was significant at 5% level of significance. The p-value was 0.000 which indicated that the null hypothesis failed to be accepted at 5% level of significance hence organization structure has significant influence on performance of large manufacturing firms in Kenya.

### 5.2.3 Information Technology

The second objective of the study was to establish the influence of information technology on performance of large manufacturing firms in Kenya. The findings of the study revealed that majority of the firms had a written down IT policy, high rate of both IT software and hardware adoption in their firms and also train to sharpen their IT skills. Having a written down IT policy, high rate of both IT software and hardware adoption in their firms and also train to sharpen their IT skills improves performance.

On the relationship between Information Technology and ROE the findings of the study revealed that IT hardware adoption was positively and significantly related to ROE. The odds of observing a high ROE was higher for those firms with high IT hardware adoption as compared to those firms who had lower IT hardware adoption. This implies that having high IT hardware adoption results to high ROE. The results also reveal that IT software adoption is positively and significantly related to ROE. The odds of observing a high ROE was higher for those firms with high IT software adoption compared to those with low adoption. This implies that high IT software adoption results to a high ROE. Further, the results reveal that training employees to sharpen their IT skills had a positive and significant relationship with the odds of high ROE.

The odds of observing high ROE was higher for those firms where employees received training to sharpen their IT skills. This implies that training employees to sharpen their IT skills results to high ROE. The findings of the study also revealed that written down IT policy was positively and significantly related to PBT. The odds of observing a high PBT was higher for those firms with a written down IT policy as compared to without a written down IT policy. This implies that having a written down IT policy results to high PBT.

The results also revealed that IT software adoption had a positive and significant relationship with the odds of high PBT. The odds of observing a high PBT was higher for firms with high IT software adoption compared to those with low adoption. This implies that a high IT software adoption results to high PBT. The results further indicated that training employees to sharpen their IT skills had a positive and significant relationship with the odds of high PBT. The odds of observing high PBT was higher for those firms where employees received training to sharpen their IT skills. This implies that training employees to sharpen their IT skills results to high PBT.

The results further revealed that IT hardware adoption was positively and significantly related to ROA. The odds of observing a high ROA was higher for those firms with high IT hardware adoption as compared to those firms which had lower IT hardware adoption. This implies that having high IT hardware adoption results to high ROA. The results also revealed that IT software adoption had a positive and significant relationship with ROA. The odds of observing a high ROA was higher for those firms with high IT software adoption compared to those with low adoption. This implies that high IT software adoption results to high ROA.

The results also revealed that training employees to sharpen their IT skills had a positive and significant relationship with the odds of high ROA. The odds of observing high ROA was higher for those firms where employees received training to sharpen their IT skills. This implies that training employees to sharpen their IT skills results to high ROA.

The relationship between Information Technology and performance was significant at 5% level of significance. The p-value was 0.000 which indicated that the null hypothesis failed to be accepted at 5% level of significance hence Information Technology has significant influence on performance of large manufacturing firms in Kenya.

### 5.2.4 Dynamic Capabilities

The third objective of the study was to determine the influence of dynamic capabilities on performance of large manufacturing firms in Kenya. The findings of the study revealed that majority of the firms had posited dynamic capabilities to adjust to uncertain environment, spend more on sensing capability (Research and development), spend more on learning capability (training), majority had a strong networking capability because of subscription to over 5 networking memberships and majority had a strong innovation capability. The findings further revealed that having the dynamic capabilities to adjust to uncertain environment, spending on sensing capability (Research and development), spending on learning capability (training), having a strong networking capability and also a strong innovation capability improves performance.

The findings of the study further revealed that research and development is positively and significantly related to ROE. The odds of observing a high ROE was higher for firms which spent over Ksh. 5million on research and development in 2014 compared to those which spent between Ksh 1.1 million to 5 million. This implies that spending over Ksh. 5million on research and development results to a high ROE. The results also reveal that training had a positive and significant relationship with ROE. In addition, the results also show that innovation capability and ROE were positively and significantly related. The odds of observing a high ROE was higher for firms who had introduced between 3-5 new products into the market compared to those who had introduced less than 2. The results also show that the odds of observing a high ROE was higher for those firms which had introduced over 5 new products compared to those which had introduced between 3-5 products. This implies that introducing 3-5 and over 5 new products in to the market results to high ROE.

On the relationship between dynamic capabilities and profit before tax, the findings of the study revealed that research and development is positively and significantly related to PBT. The odds of observing a high ROA was higher for firms which spent over Ksh. 5 million on research and development compared to those which spent between Ksh. 1.1 million and 5million. This implies that spending over Ksh. 5 million on research and development results to high PBT.

Further results indicated that research and development was positively and significantly related to ROA. The odds of observing a high ROA was higher for firms which spent over Ksh. 5 million on research and development compared to those which spent between Ksh. 1.1 million and 5million. This implies that spending over Ksh. 5 million on research and development results to high ROA. The results also show that training capability and ROA were positively and significantly related. The odds of observing a high ROE was higher for firms which spent over Ksh. 5million on training compared to those which spent between Ksh 1.1 million to 5 million. The results further revealed that innovation capability and ROA had a positive and significant relationship. The odds of observing a high ROA was higher for those firms which had introduced over 5 new products compared to those which had introduced between 3-5 products. This implies that introducing over 5 new products in to the market results to high ROA.

The relationship between dynamic capabilities and performance was significant at 5% level of significance. The p-value was 0.000 which indicated that the null hypothesis failed to be accepted at 5% level of significance hence Dynamic Capabilities have a significant influence on performance of large manufacturing firms in Kenya.

### 5.2.5 Leadership Characteristics

The fourth objective of the study was to assess the influence of leadership characteristics on performance of large manufacturing firms in Kenya. The findings of the study revealed that majority of the large manufacturing firms in Kenya have leaders with idealized influence leadership, intellectual stimulation leadership characteristics, inspiration motivation leadership characteristics and individualized consideration leadership characteristics. The findings also indicated that having leaders with idealized influence, intellectual stimulation; inspiration motivation and individualized consideration leadership characteristics improve performance.

The findings further revealed that intellectual stimulation, idealized influence, individualized consideration and inspiration motivation are positively related to ROE. The relationship between intellectual stimulation as well as inspiration motivation and ROE is significant at 5% level of significance. The odds of observing a high ROE were higher for those firms whose leaders have intellectual stimulation leadership characteristics as compared to those firms whose leaders do not have intellectual stimulation leadership characteristics.

The results also revealed that the odds of observing a high ROE were higher for those firms whose leaders have inspiration motivation leadership characteristics as compared to those firms whose leaders don't. This implies that having intellectual stimulation and inspirational motivation leads to a high ROE. The results further indicated that the relationship between all the aspects of transformational leadership and profit before tax is positive. Further, inspirational motivation and individualized consideration are significantly related to PBT.

The odds of observing a high PBT were higher for those firms whose leaders have inspiration motivation leadership characteristics as compared to those firms whose leaders do not have inspiration motivation leadership characteristics. On the other hand, the odds of observing a high PBT were higher for those firms whose leaders have individualized consideration leadership characteristics as compared to those firms whose leaders don't. This implies that having inspiration motivation and individual consideration leads to a high PBT.

On the relationship between leadership characteristics and ROA, the study findings indicated that the relationship between all the aspects of transformational leadership and ROA is positive. The results revealed that inspiration motivation is positively and significantly related to ROA. The odds of observing a high ROA were higher for those firms whose leaders have inspiration motivation leadership characteristics as compared to those firms whose leaders do not have inspiration motivation leadership characteristics. This implies that having inspirational motivation leads to a high ROA. The relationship between leadership characteristics and performance of large manufacturing firms in Kenya was significant at 5% level of significance implying that leadership characteristics has significant influence on the performance of large manufacturing firms in Kenya.

### 5.2.6 Legal and Regulatory Environment

The fifth objective of the study was to explore the moderating effect of legal and regulatory environment on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya. The findings of the study revealed that majority of the large manufacturing firms have effective by-laws, are members to a professional body and abide by the government rules. The findings also revealed that having effective by-laws, being a member to a professional body and abiding by the government rules improves performance. Furthermore, the findings of the study revealed that effective by-laws are positively and significantly related to ROE.

Similarly, being a member of a professional body is positively and significantly related to ROE. The odds of observing a high ROE were higher for those firms with effective by-laws as compared to those firms without effective by-laws. The results also revealed that the odds of observing a high ROE were higher for those firms which are members of a professional body as compared to those firms which are not. This implies that effective by-laws and being a member of a professional body improves ROE.

On the relationship between legal and regulatory environment and Profit before tax, the study findings indicated that that being a member of a professional body is positively and significantly related to PBT. The odds of observing a high PBT were higher for those firms which are members of professional bodies as compared to those firms which are not members of professional bodies. This implies that being a member of a professional body leads to a high PBT.

The findings also indicated that effective by-laws are positively and significantly related to ROA. Similarly, being a member of a professional body is positively and significantly related to ROA. The odds of observing a high ROA were higher for those firms that observe effective by-laws as compared to those firms which don't. The results also revealed that the odds of observing a high ROA were higher for those firms which are members of a professional body as compared to those firms that are not members of a professional body. This implies that having effective by-laws and being a member of a professional body improves ROE. The study findings also indicated that the change of $R^2$ from 13.9% (before moderation) to 14.4% (after moderation) was an insignificant change suggesting that legal and regulatory environment has no moderating effect on the relationship between contingency factors and performance.

The findings further indicated that the interaction between the independent variables and moderating variable was not statistically significant and implying that legal and regulatory environment does not moderate the effect of contingency factors on firm's performance. The results for two way interaction of the moderator (legal and regulatory environment) and performance of large manufacturing firms indicated that on the high as well as low legal and regulatory environment, there was no change in the performance of large manufacturing firms revealing that moderation was not supported. The results for joint influence of strategic contingency factors indicated that strategic contingency factors are positively associated with performance of large manufacturing firms. The results further indicated that strategic contingency factors explain 27% of the changes in performance of large manufacturing firms in Kenya.

The regression results also revealed that the relationship between strategic contingency factors and performance of large manufacturing firms is positive and significant implying that an improvement in contingency factors leads to an improvement in performance of large manufacturing firms in Kenya. The findings indicated that legal and regulatory framework does not have a moderating effect on the relationship between strategic contingent factors and performance (p=0.207).

## 5.3 Conclusion

Based on the study findings, the study concluded that organizational structure influences performance. Organization structure has significant influence on performance of large manufacturing firms in Kenya. The sub-constructs of organizational structure that is specialized organization structure, nature of the span of control, centralization and departmentalization influences performance positively.

Another conclusion made by the study is that information technology has significant influence on performance of large manufacturing firms in Kenya. The sub-constructs of information technology that is written down IT policy, rate of both IT software and hardware adoption and sharpen of IT skills influence performance positively. The study also concluded that Dynamic Capabilities have a significant influence on performance of large manufacturing firms in Kenya. The sub-constructs of dynamic capabilities namely research and development, training, networking capability and innovation capability affect performance positively.

Based on the study findings, the study concluded that leadership characteristics have a significant influence on performance of large manufacturing firms in Kenya. The sub-constructs of leadership characteristics that is idealized influence, intellectual stimulation, inspiration motivation and individualized consideration influence performance positively. The study also concluded that legal and regulatory environment has no moderating effect on the relationship between strategic contingency factors and performance of large manufacturing firms in Kenya. The study also concluded that strategic contingency factors are positively associated with performance of large manufacturing firms.

## 5.4 Recommendations of the Study

The study recommendations are in line with the objectives, findings and conclusions of the study.

### 5.4.1  Organizational Structure

The study recommended that the management of large manufacturing firms in Kenya should put in place high organizational structure strategies as it leads to high performance. The firms should ensure they have a specialized organization structure, high nature of the span of control, centralized structure and have departmentalization in the company. The study also recommends that future scholars and researchers should aim to test the relationship between organizational structure and performance using different sub constructs apart from organization structure, span of control, centralization and departmentalization.

### 5.4.2  Information Technology

It is recommended that large manufacturing firms in Kenya should have an improved information technology system as it leads to high performance. The firms should have written down IT policy, high rate of both IT software and hardware adoption and frequently sharpen IT skills of the employees through training. The study also recommends that future scholars and researchers should aim to test the relationship between IT infrastructure and performance using different sub constructs apart from IT software and hardware adoption as well as IT policy. This can bring rigour and offer platforms for comparison of findings.

### 5.4.3  Dynamic Capabilities

The study also recommended that large manufacturing firms should invest in research and development, training, networking capability and innovation since it affects performance positively. Dynamic capabilities being the ability to integrate, build, and reconfigure internal and external competencies to address rapidly-changing environments, can also take the form of various ways apart from the ones discussed in the current study and hence the future scholars can seek to explore other measures of this factor.

### 5.4.4  Leadership Characteristics

Based on leadership characteristics, the study recommended that large manufacturing should put in place strategies that encourage their leaders to have leadership characteristics as it has a positive effect on performance. The firms should encourage and put in place measures that promote idealized influence, intellectual stimulation, inspiration motivation and individualized consideration as they influence performance positively.

### 5.5 Contribution of the Study to Theory/Existing Knowledge

The study developed a conceptual framework for underpinning future research work on the influence of strategic contingency factors on performance of large manufacturing firms in Kenya. The study successfully tested hypothesis related to the original conceptual framework developed in chapter two. Based on research findings, it was found that future conceptual frameworks should focus on all the four strategic contingency factors and ignore the moderating effect of legal environment. The study also made a contribution as far as ordering and prioritizations of strategic contingency factors are concerned. The study noted that both IT and leadership characteristics are the most strategic contingency factors in the manufacturing sector because they explain a higher change in performance.

The findings of the study can be linked to the contingency theory. The theory indicates that the amount of uncertainty and rate of change in an environment impacts the development of internal features in organizations. Some of the features considered under the study were dynamic capabilities, IT infrastructure, leadership characteristics and organizational structure. The theory posits that the only way for an organization to survive in the environment is if the organizational features fit the environment. The theory highlights how the static state of fit between organizational structure and contingency causes high performance. The study findings indicated that organizational features which are contingent as a result of the highly uncertain environment of operation for instance dynamic capabilities, IT infrastructure, leadership and organizational structure can fit in the uncertain environment and influence the performance of large manufacturing firms in Kenya positively.

This was a demonstration that the most strategic contingency factors which require attention in the Kenyan context in as a far as manufacturing sector is concerned are the four factors. The study findings can also be linked to the dynamic capabilities theory. The theory argued that dynamic resources help a firm adjust its resource mix and thereby maintain the sustainability of the firm's competitive advantage which otherwise might be quickly eroded. The theory indicates that dynamic capabilities foster firm's performance positively. In other words, dynamic capabilities impact the resource base of the firm, which in turn is the source of the firm's competitive advantage thus augmenting for high firm performance. The study successfully tested this theoretical relationship by establishing that Dynamic Capabilities have a significant influence on performance of large manufacturing firms in Kenya. This implies that, in the Kenyan setting of the manufacturing sector, dynamic capabilities are a key factor which influences the performance of the large manufacturing firms.

## 5.6 Areas for Further Research

Further studies can be done to establish the influence of strategic contingency factors on performance of firms in other sectors other than manufacturing firms in Kenya. A study can also be done to establish other factors that influence performance of large manufacturing firms other than strategic contingency factors. The results indicated that strategic contingency factors explain 27% of the changes in performance of large manufacturing firms in Kenya. This implies that the remaining 73% of the change in performance of large manufacturing firms is explained by other factors not investigated in the current study. A study can be conducted in future to establish the other factors.

# REFERENCES

Abdinnour, H.S., Lengnick, H.M.L., & Lengnick, H.C.A. (2003). "Pre-Implementation attitudes and organizational readiness for implementing an enterprise resource planning system", *European Journal of Operational Research,* 146(2), 258-73.

Adner, R., & Helfat, C.E. (2003). "Corporate effects and dynamic managerial capabilities", *Strategic Management Journal*, 24(10), 1011-1025.

Aguinis, H. (2005). Statistical power problems with moderated multiple regression in management research. *Journal of Management*, 21 (6), 1141-1158

Albadvi, A., & Keramati, A. (2006). "A proposal for a framework or research approach on Information Technology impact on corporate level productivity" *Information technology journal*.

Ambrosini, V.,& Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews*, 11(1), 29-49.

Ambrosini, V., Bowman, C. & Collier, N. (2009). 'Dynamic capabilities: An exploration of how firms renew their resource base', *British Journal of Management,* 20(1),9-24.

Amit, R. & Schoemaker, P.J.H.(2009). Strategic assets and organizational rent. *Strategic Management Journal* 14(1), 33-46.

Anderson, C. (2013). "Mexico: the new China", available at:opinion/sunday/the-tijuana-connection-a-template-for-growth.html?_r¼0 (accessed April 22, 2015).

Augier, M., & Teece, D. J. (2006). 'Understanding Complex Organization: The Role of Know-How, Internal Structure, and Human Behavior in the Evolution of Capabilities', Industrial and Corporate Change, 15 (2), 395-416

Awino, Z.B. (2007). The Effect of Selected variables on corporate performance: A survey of Supply Chain Management in Large Private Manufacturing Firms in Kenya. *Unpublished PhD Thesis*. University of Nairobi.

Babbie, E. (2004 ). "Survey research." The practice of social research 10(1), 242-280.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. NY: Free Press.

Bass, B.M., & Riggio, R.E. (2006). *Transformational leadership.* Mahwah, New Jersey 07430: Lawrence Erlbaum Associates, Inc.

Bagozzi & Richard, P. (ed.) (1994). Principles of marketing research. Cambridge, MA: Blackwell.

Baldwin, J.R, & Sabourin, D. (2007). *"Impact of the adoption of advanced information and communication technologies on firm performance in the Canadian manufacturing sector"* WP, Statistics Canada.

Baranyi, A. (2001). Environmental strategy types among manufacturing enterprises in Hungary. *Unpublished Doctorate Thesis*, University of Economic Sciences and Public Administration. Budapest

Barretto, I. (2010). Dynamic Capabilities: A Review of Past Research and an Agenda for the Future. *Journal of Management*, 36 (1), 256-291.

Bass, B. M. (2008). *The Bass handbook of leadership: Theory, research, & managerial applications* (4th ed.). New York, NY: Free Press.

Bennis, W.,& Nanus, B. (1985*). Leaders: The Strategies for Taking Charge*. New York: Harper and Row.

Berg, M. E., & Karlsen, J. T. (2007). Mental models in project management coaching. *Engineering Management Journal*, 19(3), 3-14.

Blackburn, S. (2002). The project manager and the project-network. *International Journal of Project Management*, 20(3), 199-204.

Bourgeois, L.J. (2000). Strategy and environment: A conceptual integration. *Academy of Management Review* 5(1): 25-39.

Boyer, K., & Lewis, M. W. (2002).Competitive Priorities: Investigating the need for Trade-offs In Operations Strategy. *Journal of Production and Operations Management* 11 (1), U.S.A.

Bradley, S. Aldrich, H. Shepherd, D., & Wiklund, J. (2011). Resources, environmental change, and survival: asymmetric paths of young independent and subsidiary organizations. *Strategic Management Journal*, 32 (5): 486-495.

Brewster, C. J., & Mayrhofer. (ed.). (2012). *Handbook of Research on Comparative Human Resource Management, Cheltenham*: Edward Elgar Publishing Inc.

Bryman, A., & Cramer, D. (2005). *Quantitative data analysis with SPSS* 12 and 13, Retrieved from http://www.psypress.co.uk/brymancramer

Burns, J. M. (1978). *Leadership*. New York: Harper and Row Publishers.

Buttery, E. A., & Buttery, E. M, (1991). Design of a Marketing Information System: Useful Paradigms. *European Journal of Marketing*, 25(1), 26 – 39.

Chandler, A.D.(1962). *Strategy and structure: The history of the American industrial enterprise*. Cambridge, MA: MIT Press.

Channon, D. (1971). Strategy and structure of British enterprise. *Unpublished Doctoral Dissertation*. Harvard University. Cambridge, MA.

Cleland,D.L.(2008). *Project Management: strategic design and implementation*. McGraw Hill Professional Publishing

Cohen, J., & Cohen, P. (2003). *Applied multiple regression/correlation analysis for the behavior sciences*. Hillsdale, NJ: Lawrence Erlbaum.

Cohen, W. B., Maiersperger, T. K., Gower, S. T., & Turner, D. P.,(2003). An improved strategy for regression of biophysical variables and Landsat ETM+ data. *Remote Sensing of Environment*, *84*(4), 561-571.

Collins, J. & Hussey, R. (2009). *Business Research: A practical Guide for Undergraduate & Postgraduate Students*. 3rd ed. Hampshire: Palgrave Macmillan.

Conger, J. A. (2011). *Charismatic leadership*. In A. Bryman, D. Collinson, K. Grint, B. Jackson & M. Uhl-Bien (Eds.), The SAGE handbook of leadership (pp. 86-102). Thousand Oaks, CA: Sage.

Conger, J. A. & Hunt, J. A. (1999). Overview charismatic and transformational leadership : taking stock of the present and future (part 1). *Leadership quarterly.* 10 (2), 121-127

Cooper, D.R., & Schindler, P.S. (11th Ed.).(2011). *Business Research Methods.* New York: McGraw-Hill/Irwin Publishers.

Cooper, D.R., & Schindler, P.S. (8th Ed.).(2003). *Business Research Methods.* Boston: McGraw-Hill/Irwin Publishers.

Cooper, D.R., & Schindler, P.S. (9th Ed.). (2006). *Research Design: Qualitative and Quantitative Methods.* Boston: McGraw-Hill/Irwin Publishers.

Cronbach, L.J. (1951).Coefficient Alpha and the Internal Structure of Tests. *Psychometrika,* 16297-334.

Daft R.L, Sormunen J, & Parks D. (1998). Chief executive scanning, environmental characteristics and company performance: An empirical study. *Strategic Management Journal* 9(2), 123-139.

Daniel, E. & Wilson H.N. (2003). The role of dynamic capabilities in business transformation. *European Journal of Information Systems* 12(4), 282-296.

Davenport, T. (2000), Mission Critical, Harvard Business School Press, Boston, MA.

Den, H. D. N. & House, R. J. (2002). Emics and Etics of Culturally-Endorsed Implicit Leadership. *A Working Paper of the Reginald H. Jones Center*. The Wharton School. 38 University of Pennsylvania. [Online]. Available from: http://www.sciencedirect.com/science

Dess, G. G. & Davis, P. S.(2004). Generic strategies as determinants of strategic group membership and organizational performance', *Academy of Management Journal*, (27), 467-488.

Dobák, M. & Antal, Zs. (2010): *Vezetés és szervezés: Szervezetek kialakítása és működtetése.* [Management and organization: creating and operating organizations] Aula Kiadó, Budapest

Dobák, M. (2006): *Szervezeti formák és vezetés.* [Organizational types and management] Akadémiai Kiadó, Budapest

Donaldson, L. (2001). *The contingency theory of organizations.* London: Sage Publications Ltd.

Donaldson, L. (2006). "The contingency theory of organizational design: challenges and opportunities", in Burton, R.M., Eriksen, B., Hakonsson, D.D. and Snow, C.C. (Eds), Organization Design: The Evolving State-of-the-Art, Springer, New York, NY, 19-40.

Doz, Y. & Kosonen, M. (2008). *Fast Strategy*, Wharton School Publishing/Pearson Education, Harlow.

Dubrin, A.J. (2007). *Leadership research findings, practice, and skills*, 5th edition, Houghton Mifflin Company.

Edelman, L.F., Brush, C.G. & Manolova, T. (2005). Co-aligment in the resource-performance relationship: strategy as mediator. *Journal of Business Venturing* 20, 359-383.

Eisenhardt, K.M. & Graebner, M.E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal* 50(1), 25-32.

Eisenhardt, K.M., & Martin, J.A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal* 21(10-11), 1105-1121.

Eriksen, B. (2006). *"Organization design constraints on strategy and performance"*, in Burton, R., Eriksen, B., Hakonsson, D. and Snow, C. (Eds), Organization Design. The Evolving State-of-the-Art, Springer, New York, NY, 165-80.

Evans, M. G. (2001). Problems of analyzing multiplicative composites. *American Psychologist*, 46, 6-15.

Fausing, M. S., Jeppesen, J. H., Jønsson, T. S., Lewandowski, J., & Bligh, M. C. (2013). Moderators of shared leadership: work function and team autonomy. Team Performance Management: *An International Journal,* 19(5-6), 244-262.

Fisher, R.J. (1983). Social Desirability Bias and the Validity of Indirect Questioning. *Journal of Consumer Research*, 20(2), 303-315.

Flynn, B.B. & Flynn, E.J., (2004). An exploratory study of the nature of cumulative capabilities, *Journal of Operations Management* 22(5), 439-457.

Frey, L. R., Botan, C. H., Friedman, P. G., & Kreps, G. L. (2007). *Investigating communication: an introduction to research methods*. Englewood Cliffs, NJ: Prentice Hall.

Furrer, O., Thomas, H. & Goussevskaia, A. (2008). The structure and evolution of the strategic management field: A content analysis of twenty-six years of strategic management research, *International Journal of Management Reviews*, (10)1, 1-23.

Galan, J.I. & Sanchez-Bueno, M.J. (2009). "The continuing validity of the strategy-Structure nexus: new findings, 1993-2003*", Strategic Management Journal*, 30(11), 1234-43.

Gall, M.D., Gall, J.P., & Borg, W.R. (8th Ed.). (2007). Educational Research: An Introduction. Boston, MA: Pearson.

Galunic, D.C., & Eisenhardt, K.M. (2001). Architectural innovation and modular corporate forms. *Academy of Management Journal* 44(6), 1229-1250.

Garg, V.K., Walters, B.A., & Priem, R.L., (2003). Chief executive scanning emphases, environmental dynamism, and manufacturing firm performance. *Strategic Management Journal* 24(8), 752-744.

Glynn, M. A., & DeJordy, R. (2010). *Leadership through an organizational behavior lens: A look at the last half-century of research*. In N. Nohria, & R. Khurana (Eds.), Handbook of leadership and practice (119-158). Boston, MA: Harvard Business Press.

Goldhaber, G.M., Dennis, H.S., Richetto, G.M., & Wiio, O.A., (2004). *Information strategies: New pathways to management productivity*. New York: Ablex.

Graeff, C. L. (1997). Evolution of situational leadership theory: A critical review. *The Leadership Quarterly*, 8(2), 153-170.

Grant, R.M. & Baden-Fuller, C. (2004). "A knowledge accessing theory of strategic alliances", *Journal of Management Studies*, 41(1), 61-84.

Grant, M., Azar P. J., & Howard T.,(2008)." Diversity, Diversification and Profitability among British Manufacturing Firms", *The Academy of Management Journal,* 31( 4), 771-801.

Hallgren, M., Olhager, J. & Schroeder, R.G. (2011). "A hybrid model of competitive capabilities", *International Journal of Operations & Production Management*, 31(5), 511-526.

Hallgren, M. (2007). *Manufacturing Strategy, Capabilities and Performance*. Linköping University, UniTryck, Linköping, Sweden.

Hambrick, D. C. (2003). 'Some tests of the effectiveness and functional attributes of Miles and Snow's strategic types', *Academy of Management Journal*, 26,5-26.

Harris, R.D. (2004). "Organizational task environments: an evaluation of convergent and discriminant validity", *Journal of Management Studies*, 41 (5), 857-882.

Hartmann, F. G. H. (2005). The appropriateness of RAPM: toward the further development of theory, *Accounting, Organizations and Society*, 25(4-5), 451-482.

Hayes, R., Pisano, G., Upton, D. & Wheelwright, S., (2005). *Operations, Strategy, and Technology – Pursuing the Competitive Edge*, John Wiley & Sons, Hoboken, NJ.

Helfat, C., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece D. & Winter S. (2007). *Dynamic Capabilities: Understanding Strategic Change in Organizations.* London: Blackwell.

Helfat, C. & Winter, S. (2011). Untangling dynamic and operational capabilities: Strategy for the (n) ever-changing world. *Strategic Management Journal*, 32 (11), 1243–1250.

Helfat, C.E., & Peteraf, M.A. (2003). The dynamic resource-based view: Capability lifecycles. *Strategic Management Journal*, 24(10), 997-1010.

Hersey, P., Blanchard, K., & Johnson, D. (2006). Management of organizational behavior: Utilizing human resources. Academic Internet Publishers.

Hitt, M.A. (2011). "Relevance of strategic management theory and research for supply Chain management", *Journal of Supply Chain Management,* 47(1), 9-13.

Hoogh, H. B. (2014). Charismatic leadership, environmental dynamism, and performance. *European Journal of Work and Organizational Psychology,* 13 (4), 447–471.

Hoque, Z. (2004). 'A Contingency Model of the Association Between Strategy, Environmental Uncertainty and Performance Measurement Impact on Organizational Performance', *International Business Review*, 13(4),485-502.

Hoque, Z. (2005). 'Linking Environmental Uncertainty to Non-Financial Performance Measures and Performance: a Research Note.', *British Accounting Review*, 37(4),471-481.

House, R. J., Hanges, P.J., Javidan, M., Dorfman, P.W. & Gupta, V.(eds.) (2004). *Culture, Leadership, and Organizations - The GLOBE Study of 62 Societies*. Thousand Oaks, CA: Sage Publications Inc.

Hutchison, J. & Das, S.R. (2007). "Examining a firm's decisions with a contingency Framework for manufacturing flexibility", *International Journal of Operations & Production Management,* 27(2), 159-180.

Ifinedo, P. & Nahar, N. (2009)."Interactions between contingency, organizational IT factors, and ERP success", *Industrial Management & Data Systems*, 109(1), 118 - 137

Jabnoun, N., Khalifah, A. & Yusuf, A. (2009). *Environmental Uncertainty, Strategic Orientation, and Quality Management: A Contingency Model*. 10(4), University of Sharjah.

Jackson, T. (2009*). Prosperity without growth: Economics for a finite planet*. London: Earthscan.

Jankowicz, A.D. (2005). *Business Research Projects* (4th edn). London: Thomson Learning.

Javidan, M., Dorfman P.W., de Luque, M.S. & House, R.H. (2006). In the Eye of the Beholder. GLOBE. [Online]. Available from: http://www.businessfordiplomaticaction.org/learn/articles/crosscultural_leadership_research_ from_thunderbird1.pdf

Jekel, R. (2009). *The Quality Aspect of Dynamic Capabilities: Successful Practices of German Manufacturers in China*. PhD Thesis, University of St. Gallen, Germany

Jeminson, D.B. (2003). Organizational vs. Environmental sources of influence in strategic decision making. *Strategic Management Journal*, 2, 77-89.

Kalpakjian, S. & Steven, S. (2005). *Manufacturing, Engineering & Technology*. Prentice Hall. 22–36, 951–988.

Kandie, K. (2014). *Sustained Investments In Electricity Needed To Power The Economy*. Economic Review.

Kaplan, R.S. & Norton, D.P. (2008).*The Balanced Score Card*. Harvard Business School press; Boston, MA.

Kargar, J., & Parnell, J.A. (1996).Strategic Planning Emphasis and Planning Satisfaction in Small Firms; An Empirical Investigation. *Journal of Business Strategies*, 13(1), 42-64.

Kenya Association of Manufacturers (2014). Facts and Figures.

Kim, W.C., Hwang, P., & Burgers, W.P. (2009). Global diversification strategy and corporate profit performance. *Strategic Management Journal* 10(1), 45–57.

KNBS (2012). Leading Economic Indicators. Kenya National Bureau of Statistics

KNBS (2014).Leading Economic Indicators. Kenya National Bureau of Statistics Know-How, Internal Structure, and Human Behavior in the Evolution of Capabilities', Industrial and Corporate Change, 15 (2), 395-416

Kombo, B. W., Obonyo, G. O., & Oloko, M. (2013). Effects of Delegation on Employee Performance in Savings and Credit Cooperative Societies in Kisii County, Kenya. *The International Journal of Business & Management*, 2(7), 203-226.

Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.

Kothari, C. R. (2004). *Research Methodology: Methods and Techniques (2*<sup>nd</sup> *ed.).* New Delhi: New Age Publications (Academic).

KPMG (2014). *Kenya-Business Environment Survey*. Available at kpmg.com/Africa

KPMG (2014). *Manufacturing in Africa, Sector Report*. Available at kpmg.com/Africa

Krager, J & Parnell, J. A. (2005). Strategic Planning Emphasis and Planning Satisfaction in Small Firms: An Empirical Investigation. *Journal of Business Strategies.* Spring, 120.

Kvale, S. (2003). The Psychoanalytic Interview as Inspiration for Qualitative Research.

Laukkanen, S., Sarpola, S. & Hallikainen, P. (2005). "ERP system adoption – does the size matter?" *Proceedings of the 38th Hawaii International Conference on System Sciences*, Hawaii.

Lawrence, P. R. & Lorsch, J. W. (1967). Differentiation and Integration in Complex Organizations. *Administrative Science Quarterly*,12(1),1-47.

Lee, J. & Runge, J. (2001). "Adoption of Information Technology in Small Business: Testing Drivers of Adoption for Entrepreneurs," *Journal of Computer Information Systems*, Fall, 44-57.

Lee, S.C. & Lee, H.G. (2004). "The importance of change management after ERP implementation: an information capability perspective", *Proceedings of the 25th International Conference on Information Systems*, Washington, DC.

Lefebvre, E., & Lefebvre, L. (1996). "Information and telecommunication technologies, the impact of their adoption on small and medium-sized enterprises", a book CRDI.

Lichtenthaler, U. & Lichtenthaler, E. (2009). "A capability-based framework for open innovation: complementing absorptive capacity", *Journal of Management Studies*, 46 (8), 1315-1338.

Ljungquist, U. (2007)."Core competency beyond identification: presentation of a model", *Management Decision*, 45(3),393-402.

Lorsch, J. W. (2010). *A contingency theory of leadership*. In N. Nohria, & R. Khurana (Eds.), Handbook of leadership theory and practice (pp. 411-432). Boston, MA: Harvard Business Press.

Lumpkin, G.T., & Dess, G.G. (2001). Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: The Moderating Role of Environment and Industry Life Cycle. *Journal of Business Venturing,* 16(5), 429–451.

Mabert, V.A., Soni, A., & Venkataramanan, M.A. (2003a). Enterprise Resource Planning: Managing the Implementation Process. *European Journal of Operational Research* 146(2), 302-314.

Markus, L. & Tanis, C. (2000). "The enterprise systems experience – from adoption to success", in Zmud, R.W. (Ed.), Framing the Domains of IT Research: Glimpsing the Future Through  the Past, Pinnaflex Educational Resources, Inc., Cincinnati, OH, 173-207.

Matyusz, Z. (2012). The effect of contingencies on manufacturing practices and operations performance. *Unpublished Doctorate Thesis*, Corvinus University of Budapest.

McDougall, P. (2006). "In depth: when outsourcing goes bad", Information Week, June 19, 1-4.

McGovern, A., Friedland, L., Hay, M., Gallagher, B., Fast, A., Neville, J., & Jensen, D. (2004). Exploiting relational structure to understand publication patterns in high-energy physics. SIGKDD Explorations, 5(2), 165– 172. Winning entry to the open task for KDD Cup 2003

McMilan, J.H. & Schumacher, S. (2006). *Research in education: Evidence based inquiry*, (6th ed.) Boston, United States of America: Pearson Education

McNeill, P. (2005). *Research Methods* (3rd edn). London: Routledge.

Medori, D., & Steeple, D. (2000). A framework for auditing and enhancing performance measurement systems. *International Journal of Operations & Production Management*, 20(5), 520-533.

Milburn, T. (2012). *8 Ways to Measure Your Leadership Effectiveness*. Available at: http://timmilburn.com/8-ways-to-measure-your-leadership-effectiveness

Miles, M.B., & Huberman, A.M. (1994). Qualitative Data Analysis: An Expanded Source Book. Thousand Oaks, California: Sage Publications, Inc.

Miles, R.E., & Snow, C.C. (1978).Organizational Strategy, Structure and Process. New York, USA: McGraw-Hill.

Mintzberg, H. (1979). *The Structuring of Organizations: A Synthesis of the Research*, Prentice-Hall, Englewood Cliffs, NJ.

Morton, N.A. & Hu, Q. (2004). "The relationship between organizational structure and enterprise resource planning systems: a structural contingency theory approach", *Proceedings of the 10th Americas Conference on Information Systems*, New York, NY.

Mouelhi, R. (2008). Impact of the adoption of Information and Communication Technologies on firm efficiency in the Tunisian manufacturing sector. *International Journal of Production Economics*, 53-60

Mugenda, O.M., & Mugenda, A.G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi, Kenya: Acts Press.

Mutindi, U.J.M., Namusonge, G.S., & Obwogi, J. (2013). Effects of Strategic Management Drivers on Organizational Performance: A Survey of the Hotel Industry in Kenyan Coast. *International Journal of Arts and Commerce*. 2(11), December. Nairobi, Kenya: Applied Research and Training Services. ACTS Press

Neely, A., Mills, J., Platts, K., Richards, H., Gregory, M., Bourne, M., & Kennerley, M. (2000). Performance measurement system design: developing and testing a process based approach. *International journal of operations & production management*, 20 (10), 1119-1145.

Nelson, R. & Winter, S. (1982). *An Evolutionary Theory of Economic Change*. Belknap Press of Harvard Press: Cambridge MA

Neuman, L.W. (2006*). Social research methods: Qualitative and quantitative approaches*, 6th Ed. London: Pearson International Edition.

Newbert, S.L. (2008)."Value, rareness, competitive advantage, and performance: a conceptual-level empirical investigation of the resource-based view of the firm"*, Strategic Management Journal*, 29(7),745-68.

Nyabiage, J. & Kapchanga, K. (2014). *Thousands of jobs on the line as tens of firms shut down local units*. The Standard Digital, Sunday, October 12th.

Okumus, F. (2003). "A framework to implement strategies in organizations"*, Management Decision*, 41(9), 871-82.

Osroff, C., & Schmitt, N. (1993). Configurations of Organizational Effectiveness and Efficiency, *Academy of Management Journal*, 36 (6), 1345-1361.

Camic, P., Rhodes,J., & Yardley, L. (Eds.), *Qualitative Research in Psychology: Expanding in Methodology and Design* (257-297). Washington, D.C.: American Psychological Association Press.

Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks: Sage.

Pearce, J.A., Robbins, D.K., & Robinson, R.B. (2007). The impact of grand strategy and planning formality in financial performance. *Strategic Management Journal* 8, 125 – 134.

Peng, C. Y. J., & So, T. S. H. (2002). Logistic regression analysis and reporting: primer. Understanding Statistics: Statistical Issues in Psychology, Education, and the Social Sciences, 1(1), 31-70.

Pertusa-Ortega, E. M. (2008). Hybrid Competitive Strategies, Organizational Structure, and Firm Performance. *Unpublished MBA Thesis,* University of Alicante, Spain.

Pfeffer, J. (1982). Competitive Advantage through People: Unleashing the Power of the Work Force, Boston: *Harvard Business School Press*.

Pike, K.L. (2007). *Language in relation to a unified theory of the structure of human behaviour*. The Hague: Mounton.

Polit, D. F. & Beck, C.T. (2003). *In Nursing Research:  Principles and Methods*. 7th Ed. Philadelphia: Lippincott Williams & Wilkins.

Porter, M. (1991). Towards a dynamic theory of strategy. *Strategic Management Journal* 12, 95-117.

Porter, M. E. (1981). The Contributions of Industrial Organization To Strategic Press of Harvard Press: Cambridge MA

Pugh, D. S., & Hickson, D. J. (eds) (1976). Organizational Structure in its Context. The Aston Programme I. Westmead, Farnborough.

Qi, Y. (2010). *The Impact of the Budgeting Process on Performance in Small and Medium-Sized Firms in China* (Doctoral Dissertation, University of Twenty, China). Retrieved from http://doc.utwente.nl/69978/1/thesis_Y_Qi.pdf

Ramanujam, V., Ramanujam, N., & Camillus, J. C. (2006). Multi objective assessment of effectiveness of strategic planning and discriminant analysis approach. *Academy of management Journal* 29(2), 347 – 472.

Reichel, M., & Ramey, M.A. (Eds.). (1987). Conceptual Frameworks for Bibliographic Education: Theory to Practice. Littleton Colorado: Libraries Unlimited Inc.

Republic of Kenya, (2014). Kenya.um.dk. Economy. [online] Available at: http://kenya.um.dk/en/about-kenya-new/economy-new// Accessed on 3rd June 2015

Republic of Kenya, (2014a). *Economic Review report*. [online] Available at: http://kenya.um.dk/en/about-kenya-new/economy-new// Accessed on 2nd June 2015

Richard, S. & Amrik, S. S, (1999)."Organisational characteristics associated with AMT adoption", *International Journal of Operations & Production Management*, 19(12),1270 – 1291

Salvato C. 2003. The role of micro-strategies in the engineering of firm evolution. *Journal of Management Studies* 40(1), 83-108.

Samad, S. (2012). The influence of innovation and transformational leadership on organizational performance. Procedia-Social and Behavioral Sciences, 57, 486-493.

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students*. (4th Ed.). Harlow: FT/Prentice Hall.

Saunders, M., Lewis, P., & Thornhill, A. (5th Ed.). (2009). Research Methods for Business Students. Harlow: FT/Prentice Hall.

Schendel, D. & Patton. G.R. (2002). 'A simultaneous equation model of corporate strategy', *Management Science*, 24, 1611-1621.

Schmenner, R.W. & Tatikonda, M.V. (2005). "Manufacturing process flexibility revisited", *International Journal of Operations & Production Management*, 25(12), 1183-1189.

Schreyögg, G., & Kliesch, E. M. (2007). How dynamic can organizational capabilities be? Towards a dual-process model of capability dynamization. *Strategic Management Journal* 28(9), 913-933.

153

Sedera, D., Gable, G.G. & Chan, T. (2003). "ERP success: does organization size matter?", Proceedings of the 7th Pacific Asian Conference on Information Systems, Adelaide, Australia.

Sekaran, U. (2006). *Research Methods for Business: a skill building approach*. (4th Ed.). London: John Wiley and Sons.

Senge, P.M. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*, Doubleday, New York, NY

Seyranian, V. (2009). "Contingency Theories of Leadership." *Encyclopedia of Group Processes & Intergroup Relations.* Ed. John M, Levine and Michael A. Hogg. Thousand Oaks, CA: SAGE, 152-56.

Shamoo, A. E, & Resnik, D.B. (2003). *Responsible Conduct of Research*. Oxford, UK: Oxford University Press

Simpkins, R. A. (2009). "How great leaders avoid disaster: the value of contingency planning", *Business Strategy Series*, 10(2),104 – 108

Small, M. H. (2007). Planning, justifying and installing advanced manufacturing technology: a managerial framework. *Journal of Manufacturing Technology Management*, 18(5),513-537.

Smyth, G.K. (2004). Linear Models and Empirical Bayes Methods for Assessing Differential Expression in Microarray Experiments. *available on* http://www.bepress.com/sagmb/vol3/iss1/art3

Sousa, R. & Voss, C. A. (2008). Contingency research in operations management practices. *Journal of Operations Management*, 26, 697-713.

Spanos, Y.E., & Lioukas, S., (2001). An examination into the causal logic of rent generation: contrasting Porter's competitive strategy framework and the resource-based perspective. *Strategic Management Journal* 22 (10), 907-934.

Stile, J. (2003). A philosophical Justification for a Realist Approach to Strategic Alliance Research: Qualitative Market Research. *An International Journal*, 6(4), 263 – 271.

Stone, E.F. & Hollenbck, J.R. (2004). Some issues associated with the use of moderated regression. *Organizational Behavior and Human Performance*, 34, 195-213.

Swink, M., Narasimhan, R. & Kim, S. W. (2005). Manufacturing Practices and Strategy Integration: Effects on Cost Efficiency, Flexibility, and Market-Based Performance. *Decision Sciences*, 36,(3),427-457

Teece, D.J., Pisano, G., & Shuen, A.(1997). Dynamic capabilities and strategic management. *Strategic Management Journal* 18(7), 509-533.

Teece, D.J. (2007). Explicating dynamic capabilities: The nature and micro-foundations of (sustainable) enterprise performance. *Strategic Management Journal* 28(13), 1319- 1350.

Thompson, V.A. (2007). Bureaucracy and innovation. *Administrative Science Quarterly*, 10, 1-20.

Treacy, M., & Wiersema, F. (1993). Customer intimacy and other value disciplines. *Harvard business review*, *71*(1), 84-93.

Trompenaars, F. & Woolliams, P. (2007). Reconciling Dilemmas. The 2007 Pfeiffer Annual Leadership Development. San Francisco: John Wiley & Sons Inc. [Online]. Available from: www.pfeiffer.com

Ubben, G. C., Hughes, L. W. & Norris, C. J. (2001). *The Principal: Creative Leadership for Excellent Schools*. 4th edition. Boston: Allyn and Bacon.

Van de Ven, A.H. & Drazin, R. (1985). "The Concept of Fit in Contingency Theory," *Research in Organizational Behavior*, 7, 333-365.

Wade, M., & Hulland, J. (2004). The Resource based view and Information Systems Research: Review Extension, and suggestions for further research. MIS Quarterly 28(1), 107-142

Wagana, D. & Kabare, K. (2015). The influence of Corporate Governance on Corporate Performance Among Manufacturing Firms in Kenya: A Theoretical Model. *International Journal of Academic Research in Business and Social Sciences*, 5 (4), 2222-6990.

Waithaka, T.S., Mburu, T.K., Koror, J. & Muathe, S. (2012). Environmental factors that influence Supply Chain Management Implementation in the Manufacturing Industries in Kenya: A case of Manufacturing Industries in Nairobi, Kenya. *ABC Journal of Research.*

Walters, B.A., &. Bhuian, S.N, ( 2004). "Complexity Absorption and Performance: A Structural Analysis of Acute-Care Hospitals", *Journal of Management* 30(1), 97–121

Ward, P.T., McCrery, J.K. & Anand, G. (2007)."Business strategies and manufacturing decisions: an empirical examination of linkages", *International Journal of Operations & Production Management,* 27(9), 951-973.

Willcocks, L.P. & Sykes, R. (2000)."The role of the CIO and IT function in ERP", *Communications of the ACM*, 43(4), 32-38.

Wilson, J. & Eilertsen, S. (2010). How did strategic planning help during the economic crisis? *Strategy & Leadership*. 38 (2), 5-24.

Wongrassamee, S., Gardiner, P.D., & Simmons, J.E.L. (2003). *Performance measurement tools: the Balanced Scorecard and the EFQM Excellence Model*. Measuring Business Excellence, 7(1), 14-29.

Woodward, J., (1965). *Industrial Organization: Theory and Practice,* Oxford University

World Bank. (2006). *"Information and communications for development 2006: global trends and policies*, www.worldbank.org

World Bank. (2007). *"Enterprise Survey."* Washington, DC: World Bank. Available on www.enterprisesurveys.org.

World Bank. (2014). "*Anchoring High Growth: Can Manufacturing contribute more?"* World Bank Report 2014

Yukl, G. (2011). *Contingency theories of effective leadership.* In A. Bryman, D. Collinson, K. Grint, B. Jackson & M. Uhl-Bien (Eds.), The SAGE handbook of leadership (286- 298). Thousand Oaks, CA: Sage.

Zahra, S.A., & George, G. (2002). The net-enabled business innovation cycle and the evolution of dynamic capabilities. *Information Systems Research* 13(2),147-151.

Zahra, S.A., Sapienza, H.J, & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies* 43(4),917-955.

Zigurs, I. & Buckland, B. (1998). "A Theory of Task/Technology Fit and Group Support Systems Effectiveness," *MIS Quarterly*, 22(3), 313-334.

Zimmerer, T., & Yasin, M. M. (1998). A leadership profile of American project managers. *Project Management Journal*, 29(3), 31-38.

Zott, C. (2003). Dynamic capabilities and the emergence of intraindustry differential firm performance: Insights from a simulation study. *Strategic Management Journal* 24(2), 97-125.

## APPENDICES

### Appendix 1: Introduction Letter

**Allan Samuel Njogu Kihara (Ph.D. Student)**

**Jomo Kenyatta University of Agriculture and Technology (JKUAT)**

**P.O. BOX 62000-00200 City Square Nairobi**

**Date:……………………………**

**The Manager,**

**Dear Sir/Madam,**

### RE: ACADEMIC RESEARCH PROJECT

I am a Ph.D. student at Jomo Kenyatta University of Agriculture and Technology. One of the requirements for the award of the degree would be to write a dissertation in an area of my studies. The title of my research is **"Influence of Strategic Contingency Factors on Performance of Large Manufacturing Firms in Kenya".** A questionnaire has been designed and attached. It will be used to gather relevant information to address the research objectives of the study.

The study will be conducted as an academic research and the information provided will be treated in strict confidence. Strict ethical principles will be observed to ensure confidentiality and the study outcomes and reports will not include reference to any individuals.

Yours Sincerely,

**Allan S.N. Kihara**

**Appendix 1I: Questionnaire**

**Introduction**

Kindly fill your response in the space provided or tick (√) as appropriate. All the information provided here will be considered private and confidential for the purpose of this research ONLY.

**SECTION A; DEMOGRAPHIC INFORMATION**

1. Name of the company (optional) ……………………………………………

2. Gender; (tick) Male  {  }                                    Female  {  }

3. Age;

   Below 20 years     {  }                    20 – 30 years        {  }

        30 – 40 years     {  }                    40 – 50 years        {  }

   Over 50 years       {  }

4. Level of education

      None          {  }                         Primary          {  }

      Secondary     {  }                         Tertiary         {  }

      University     {  }

5. Respondent's years of experience in the industry;

   Below one year        {  }                    One year        {  }

   Two years             {  }                    Three years     {  }

   Over three years      {  }

6. Type of organization;

   Public                {  }                    Private         {  }

7. Age of the organization;

| | | | |
|---|---|---|---|
| Below one year | { } | One year | { } |
| Two years | { } | Three years | { } |
| Over three years | { } | | |

8. Sector of the organization;

| | | | |
|---|---|---|---|
| Building | { } | Chemical | { } |
| Energy | { } | Food | { } |
| Metal and Allied | { } | Motor | { } |
| Leather | { } | Paper | { } |
| Pharmaceuticals | { } | Plastics | { } |
| Textiles | { } | Wood Products | { } |

## SECTION B: ORGANIZATIONAL STRUCTURE

9. a) Does your company have a specialized organization structure?

Yes { }                     No { }

b) If Yes to question 9(a), what is the degree of specialization in your organization.

High { }                     Low { }

c) If Yes to question 9(a), in which of the following ways has embracing specialization in the organization structure influenced the performance of your company.

i). Improved performance by 0-5%                     { }

ii). Improved performance by 6-10%                     { }

iii).Improved performance by more than 10%                     { }

d) What benefits has your company reaped from embracing specialization in the organization structure? (Tick all that apply)

i). Improved decision making                     { }

ii). Improved communication                     { }

iii). Better control mechanisms { }

iv). Other…………………………………………………………………

e) If No to question 9 (a), how has failure to embrace specialization in the organization structure influenced the performance of your company?

i). Decreased performance by 0% - 5% { }

ii). Decreased performance by 6- 10% { }

iii). Decreased performance by Over 10% { }

10. a) How can you describe the nature of the span of control in your company?

High { } Low { }

b) If your answer to question 10(a) is high, in which of the following ways has having a high span of control in your company influenced the performance of your company.

i). Improved performance by 0-5% { }

ii). Improved performance by 6-10% { }

iii). Improved performance by more than 10% { }

c) What benefits has your company reaped from having a high span of control? (Tick all that apply)

i). Faster decision-making { }

ii). Better and more frequent communication { }

iii). Reduced costs relative to a taller organization { }

iv). Other ……………………………………………………………

d) If your answer to question 10 (a) is low, how has having a high span of control in your company influenced the performance of your company?

i). Decreased performance by 0% - 5% { }

ii). Decreased performance by 6- 10% { }

iii). Decreased performance by Over 10% { }

11. a) What is the type of structure adopted by your organization?

Centralized { } Decentralized { }

b) If your answer to question 11(a) is centralized, what is the degree of centralization in your organization?

        High        { }        Low        { }

c) If your answer to question 11 (a) is centralized, in which of the following ways has having a centralized structure in your company influenced the performance of your company.

    i). Improved performance by 0-5%        { }

    ii). Improved performance by 6-10%        { }

    iii). Improved performance by more than 10%    { }

e) What benefits has your company reaped from having a centralized structure? (Tick all that apply)

    i). Focused vision        { }

    ii). Fast execution        { }

    iii). Reduced conflict        { }

    iv). Better control and accountability        { }

    v). Other ……………………………………………………………………

f) If your answer to question 11 (a) is decentralized, how has having a decentralized structure in your company influenced the performance of your company?

    i). Decreased performance by 0% - 5%        { }

    ii). Decreased performance by 6- 10%        { }

    iii). Decreased performance by Over 10%        { }

12. a) Is the organization structure in your company departmentalized?

        Yes        { }        No        { }

b) If your answer to question 12(a) is yes, what type(s) of departmentalization have been adopted by your organization? (Tick all that apply)

Functional Departmentalization { }Geographic Departmentalization    { }

Product Departmentalization  { } Chain of command Departmentalization { }

Customer Departmentalization { } Combined Departmentalization        { }

c) If your answer to question 12 (a) is Yes, in which of the following ways has having a departmentalization in your company influenced the performance of your company.

      i).   Improved performance by 0-5%           { }

      ii). Improved  performance by 6-10%       { }

      iii).Improved performance by more than 10%    { }

d) What benefits has your company reaped from departmentalization? (Tick all that apply)

      i).  Better utilization of employee skills        { }

      ii). Economies of scale              { }

      iii).Better coordination               { }

      iv).Better control and accountability        { }

      v).  Other

          ……………………………………………………………………..

e) If your answer to question 12 (a) is No, how has lack of departmentalization in your company influenced the performance of your company?

      i).  Decreased performance by 0%  - 5%     { }

      ii). Decreased performance by 6- 10%      { }

      iii).Decreased performance by Over 10%    { }

## SECTION C: INFORMATION TECHNOLOGY

13. a) Does your company have a written down IT policy?

        Yes   { }   No   { }

b) If Yes to question 13 (a), in which of the following ways has having written down IT policy affected performance of your company.

      i).  Increased performance by 0-5%       { }

      ii). Increased performance by 6-10%      { }

      iii).Increased performance by more than 10%   { }

c)  What benefits has your company reaped from having a written down policy on IT? (Tick all that apply)

    i).  Employees competency has improved       { }

    ii).  The firm is informed on market changes      { }

    iii).Improved operational efficiency        { }

    iv). Other

    …………………………………………………………………………..

d)  If No to question 13 (a), how has failure to have a written down IT policy affected performance of your company?

    i).  Decreased performance by 0%  - 5%      { }

    ii).  Decreased performance by 6- 10%      { }

    iii).Decreased performance by Over 10%     { }

14. a) What is the rate of IT software adoption in your company?

    High   { }    Low   { }

  b)  If your answer to question 14(a) is high, in which of the following ways has high rate of IT software adoption affected performance of your company.

    i).  Increased performance by 0-5%      { }

    ii).  Increased performance by 6-10%      { }

    iii).Increased performance by more than 10%   { }

  c). What benefits has your company reaped from having a high rate of IT software adoption? (Tick all that apply)

    i).  Improved employees  competency      { }

    ii).  The firm is informed on market changes     { }

    iii).Improved operational efficiency       { }

    iv). Other …………………………………………………….

d)  If your answer to question 14 (a) is low, how has low high rate of IT software adoption affected the performance of your company?

    i).  Decreased performance by 0%  - 5%     { }

    ii).  Decreased performance by 6- 10%     { }

    iii).Decreased performance by Over 10%    { }

15. What is the rate of IT hardware adoption in your company?

       High   { }    Low   { }

  b)  If your answer to question 15(a) is high, in which of the following ways has high rate of IT hardware adoption affected performance of your company.

      i).  Increased performance by 0-5%         { }

      ii). Increased performance by 6-10%       { }

      iii). Increased performance by more than 10%   { }

  c). What benefits has your company reaped from having a high rate of IT hardware adoption? (Tick all that apply)

      i).  Improved employees  competency      { }

      ii). The firm is informed on market changes    { }

      iii). Improved operational efficiency       { }

      iv). Other …………………………………………………………

e)  If your answer to question 15 (a) is low, how has low high rate of IT hardware adoption affected the performance of your company?

      i).  Decreased performance by 0%  - 5%     { }

      ii). Decreased performance by 6- 10%      { }

      iii). Decreased performance by Over 10%    { }

16. a) Do employees in your company receive training to sharpen their IT skills?

       Yes   { }    No    { }

  b) If yes to questions 16 (a), how frequent is the training?

      i).  Less than 2 times  in a year        { }

      ii). 2 times in a year            { }

      iii). More than 2 times in a year        { }

      iv). Other …………………………………………………………………

  c)  If your answer to question 16(a) is Yes, in which of the following ways has training on IT affected performance of your company?

      i).  Increased performance by 0-5%        { }

      ii). Increased performance by 6-10%       { }

      iii). Increased performance by more than 10%   { }

If your answer to question 16 (a) is No, how has lack of training on IT affected performance of your company?

    i). Decreased performance by 0% - 5%         { }

    ii). Decreased performance by 6- 10%         { }

    iii).Decreased performance by Over 10%       { }

## SECTION D: DYNAMIC CAPABILITIES

17. a) In an uncertain environment, does your firm posit dynamic capabilities to adjust to the environment?

    Yes    { }    No    { }

b) If Yes to question 17(a), how much did your company spend on research and development in a bid to uncover new trends in the year 2014?

    i). Less than Kes 1 million         { }

    ii). Between Kes 1.1 million – Kes 5 million     { }

    iii).Over Kes 5 million         { }

c) If Yes to question 17(a), how much did your company spend on training?

    i). Less than Kes 1 million         { }

    ii). Between Kes 1.1 million – Kes 5 million     { }

    iii).Over Kes 5 million         { }

e) If Yes to question 17(a), how many association membership/networking membership has your company subscribed to?

    i.  Less than 2         { }

    ii.  Between 3 – 5         { }

    iii.  Over 5         { }

f) If Yes to question 17(a), how many new product has your company introduced to the market in the year 2014?

    i.  Less than 2         { }

    ii.  Between 3 – 5         { }

    iii.  Over 5         { }

g) If Yes to question 17(a), in which of the following ways having dynamic capabilities affected performance of your company.

    i. Increased performance by 0-5%       { }

    ii. Increased performance by 6-10%      { }

    iii. Increased performance by more than 10% { }

f) How has your company benefited from having dynamic capabilities?

    i. Developed absorptive capacity –that is, exploring knowledge from external sources      { }

    ii. Developed desorptive capacity,-that is, exploitation of external knowledge      { }

    iii. Developed technology transfer propensity- that is, technology transfer mechanisms      { }

g) If No to question 17 (a), how has failure to have dynamic capabilities affected performance of your company?

    i. Decreased performance by 0% - 5%       { }

    ii. Decreased performance by 6- 10%       { }

    iii. Decreased performance by Over 10%      { }

## SECTION E: LEADERSHIP CHARACTERISTICS

18. a) Do leaders in your company have idealized influence leadership characteristics?

    Yes    { }    No    { }

b) If Yes to question 18 (a), in which of the following ways has having idealized influence affected the performance of your company.

    i. Increased performance by 0-5%       { }

    ii. Increased performance by 6-10%      { }

    iii. Increased performance by more than 10%    { }

c) If No to question 18 (a), in which of the following ways has failure to have idealized influence affected the performance of your company.

    i. Decreased performance by 0% - 5%      { }

    ii. Decreased performance by 6- 10%      { }

    iii. Decreased performance by Over 10%      { }

19. a) Do leaders in your company have intellectual stimulation leadership characteristics?

       Yes   { }   No   { }

b) If Yes to question 19 (a), in which of the following ways has having intellectual stimulation affected the performance of your company.

       i.  Increased performance by 0-5%        { }

       ii.  Increased performance by 6-10%      { }

       iii.  Increased performance by more than 10%   { }

c) If No to question 19 (a), in which of the following ways has failure to have intellectual stimulation affected the performance of your company.

       i.  Decreased performance by 0% - 5%     { }

       ii.  Decreased performance by 6- 10%      { }

       iii.  Decreased performance by Over 10%    { }

20. a) Do leaders in your company have inspiration motivation leadership characteristics?

       Yes   { }   No   { }

b) If Yes to question 20 (a), in which of the following ways has having inspiration motivation affected the performance of your company.

       i.  Increased performance by 0-5%        { }

       ii.  Increased performance by 6-10%      { }

       iii.  Increased performance by more than 10%   { }

c) If No to question 20 (a), in which of the following ways has failure to have inspiration motivation affected the performance of your company.

       i.  Decreased performance by 0% - 5%     { }

       ii.  Decreased performance by 6- 10%      { }

       iii.  Decreased performance by Over 10%    { }

21. a) Do leaders in your company have individualized consideration leadership characteristics?

       Yes   { }   No   { }

b) If Yes to question 21 (a), in which of the following ways has having individualized consideration affected the performance of your company.

     i.  Increased performance by 0-5%        { }

     ii.  Increased performance by 6-10%       { }

     iii.  Increased performance by more than 10%   { }

c) If No to question 21 (a), in which of the following ways has failure to have individualized consideration affected the performance of your company.

     i.  Decreased performance by 0%  - 5%     { }

     ii.  Decreased performance by 6- 10%      { }

     iii.  Decreased performance by Over 10%    { }

## SECTION F: LEGAL AND REGULATORY ENVIRONMENT

22. a) Are there effective bylaws in your firm?

Yes   { }   No   { }

b) If Yes to question 22 (a), in which of the following ways has having effective by-laws affect the performance of your company.

     i).  Increased performance by 0-5%       { }

     ii).  Increased performance by 6-10%      { }

     iii). Increased performance by more than 10%   { }

c) If No to question 22 (a), in which of the following ways has lack of effective by-laws affect the performance of your company.

     i).  Decreased performance by 0%  - 5%    { }

     ii).  Decreased performance by 6- 10%     { }

     iii). Decreased performance by Over 10%    { }

23. a) Is your firm a member of the professional body in its sector of operations?

     Yes   { }   No   { }

b) If Yes to question 23 (a), in which of the following ways has being a member of the professional body affect the performance of your company.

     i).  Increased performance by 0-5%       { }

     ii).  Increased performance by 6-10%      { }

     iii). Increased performance by more than 10%   { }

c) If No to question 23 (a), in which of the following ways has failure to belong to any professional body affect the performance of your company.

    i). Decreased performance by 0% - 5%        { }

    ii). Decreased performance by 6- 10%         { }

    iii).Decreased performance by Over 10%     { }

24. a) Does your company abide to the set government policies?

    Yes    { }    No    { }

 b) If Yes to question 24 (a), in which of the following ways has abiding to government policies affected the performance of your company.

    i). Increased performance by 0-5%        { }

    ii). Increased performance by 6-10%        { }

    iii).Increased performance by more than 10%   { }

c) If No to question 24 (a), in which of the following ways has failure to abide to the set government policies affected the performance of your company.

    i). Decreased performance by 0% - 5%        { }

    ii). Decreased performance by 6- 10%         { }

    iii).Decreased performance by Over 10%     { }

## SECTION G: FIRM'S PERFORMANCE

Kindly indicate your firm's financial performance with respect to the following financial indicators.

25. For each of the past 5 years, please indicate the return on equity (ROE) of the firm.

| Year | Less than 10% | Between 10.1% - 15% | Between 15.1% - 20% | More than 20% |
|------|---------------|---------------------|---------------------|---------------|
| 2010 | | | | |
| 2011 | | | | |
| 2012 | | | | |
| 2013 | | | | |
| 2014 | | | | |

ii. To what would you attribute to the above trend?

---------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------


26. For each of the past 5 years, please indicate the profit before tax (PBT) realized by the firm.

| Year | Less than Kes 50 million | Between Kes 51 – Kes 100 million | Between Kes 101 – Kes 500 million | More than Kes 500 million |
|------|------|------|------|------|
| 2010 | | | | |
| 2011 | | | | |
| 2012 | | | | |
| 2013 | | | | |
| 2014 | | | | |

ii. To what would you attribute to the above trend?

---------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------

27. For each of the past 5 years, please indicate the return on assets (ROA) of the firm.

| Year | Less than 2% | Between 2.1% - 5% | Between 5.1% - 7% | More than 7% |
|------|------|------|------|------|
| 2010 | | | | |
| 2011 | | | | |
| 2012 | | | | |
| 2013 | | | | |
| 2014 | | | | |

ii. To what would you attribute to the above trend?

-------------------------------------------------------------------------------------------------------

-------------------------------------------------------------------------------------------------------

-------------------------------------------------------------------------------------------------------

28. . What are the other indicators of the performance of your firm?

     i.  Product quality             {  }

     ii.  Customer satisfaction      {  }

     iii.  Brand loyalty             {  }

     iv.  Brand reputation        {  }

     v.  Others (Specify) …………………………………………

## Appendix III: List of Large Manufacturing Firms in Kenya

| Energy Sector | | |
|---|---|---|
| A.I Records (Kenya) Ltd | Modulec Engineering Systems Ltd | Kenwestfal Works Ltd |
| Amedo Centre Kenya Ltd | Mustek East Africa | Kenya Power & Lighting Co. Ltd |
| AssaAbloy East Africa Ltd | Nationwide Electrical Industries | Kenya Scale Co. Ltd/ Avery Kenya Ltd |
| Aucma Digital Technology Africa Ltd | Nationwide Electrical Industries Ltd | Kenya Shell Ltd |
| Avery (East Africa) Ltd | Optimum Lubricants Ltd | Libya Oil Kenya Limited |
| Baumann Engineering Limited | PCTL Automation Ltd | Power Technics Ltd |
| Centurion Systems Limited | Pentagon Agencies | Reliable Electricals Engineers Ltd |
| Digitech East Africa Limited | Power Engineering International Ltd | Sanyo Armo (Kenya) Ltd |
| Manufacturers & Suppliers (K) Ltd | Eveready East Africa Limited | Socabelec East Africa |
| Marshall Fowler (Engineers) Ltd | Frigorex East Africa Ltd | Sollatek Electronics (Kenya) Limited |
| Mecer East Africa Ltd | Holman Brothers (E.A.) Ltd | Specialised Power Systems Ltd |
| Metlex Industries Ltd | IberaAfrica Power (EA) Ltd | Synergy-Pro |
| Metsec Ltd | International Energy Technik Ltd | Tea Vac Machinery Limited |
| East African Cables Ltd | Kenwest Cables Ltd | Virtual City Ltd |
| Chemical Sector | | |
| Anffi Kenya Ltd | Maroo Polymers Ltd | Imaging Solutions (K) Ltd |
| Basco Product (K) Ltd | Match Masters Ltd | Interconsumer Products Ltd |
| Bayer East Africa Ltd | United Chemical Industries | Odex Chemicals Ltd |

| | Ltd | |
|---|---|---|
| Continental Products Ltd | Oasis Ltd | Osho Chemicals Industries Ltd |
| Cooper K- Brands Ltd | Rumorth EA Ltd | PolyChem East Africa Ltd |
| Cooper Kenya Limited | Rumorth East Africa Ltd | Procter & Gamble East Africa Ltd |
| Beiersdorf East Africa td | Sadolin Paints (E.A.) Ltd | PZ Cussons Ltd |
| Blue Ring Products Ltd | Sara Lee Kenya Limited | Rayal Trading Co. Ltd |
| BOC Kenya Limited | Saroc Ltd | Reckitt Benckiser (E.A) Ltd |
| Buyline Industries Limited | Super Foam Ltd | Revolution Stores Co. Ltd |
| Carbacid (CO2) Limited | Crown Berger Kenya Ltd | Soilex Chemical Ltd |
| Chemicals & Solvents E.A. Ltd | Crown Gases Ltd | Strategic Industries Limited |
| Chemicals and Solvents E.A. Ltd | Decase Chemical (Ltd) | SupaBrite Ltd |
| Coates Brothers (E.A.) Limited | Deluxe Inks Ltd | Unilever Kenya Ltd |
| Coil Products (K) Limited | Desbro Kenya Limited | Murphy Chemical E.A Ltd |
| Colgate Palmolive (E.A) Ltd | E. Africa Heavy Chemicals (1999) Ltd | Syngenta East Africa Ltd |
| Johnson Diversity East Africa Limited | Elex Products Ltd | Synresins Ltd |
| Kel Chemicals Limited | European Perfumes & Cosmetics Ltd | Tri-Clover Industries (K) Ltd |
| Kemia International Ltd | Galaxy Paints & Coating Co. Ltd | Twiga Chemical Industries Limited |
| Ken Nat Ink & Chemical Ltd | Grand Paints Ltd | Vitafoam Products Limited |
| Magadi Soda Company Ltd | Henkel Kenya Ltd | |
| | Food Sector | |
| Africa Spirits Ltd | Annum Trading Company Limited | Premier Flour Mills Ltd |
| Agriner Agricultural Development Limited | Aquamist Ltd | Premier Food Industries Limited |
| Belfast Millers Ltd | Brookside Dairy Ltd | Proctor & Allan (E.A.) Ltd |
| Bidco Oil Refineries Ltd | Candy Kenya Ltd | Promasidor (Kenya) Ltd |

| Bio Foods Products Limited | Capwelll Industries Ltd | Trufoods Ltd |
|---|---|---|
| Breakfast Cereal Company(K) Ltd | Carlton Products (EA) Ltd | UDV Kenya Ltd |
| British American Tobacco Kenya Ltd | Chirag Kenya Limited | Unga Group Ltd |
| Broadway Bakery Ltd | E & A Industries Ltd | Usafi Services Ltd |
| C. Czarnikow Sugar (EA) Ltd | Kakuzi Ltd | Uzuri foods Ltd |
| Cadbury Kenya Ltd | Erdemann Co. (K) Ltd | ValuePak Foods Ltd |
| Centrofood Industries Ltd | Excel Chemical Ltd | W.E. Tilley (Muthaiga) Ltd |
| Coca cola East Africa Ltd | Kenya Wine Agency Limited | Kevian Kenya Ltd |
| Confec Industries (E.A) Ltd | Highlands Canner Ltd | Koba Waters Ltd |
| Corn Products Kenya Ltd | Super Bakery Ltd | Kwality Candies & Sweets Ltd |
| Crown Foods Ltd | Sunny Processor Ltd | Lari Dairies Alliance Ltd |
| Cut Tobacco (K) Ltd | Spin Knit Dairy Ltd | London Distillers (K) Ltd |
| Deepa Industries Ltd | Highlands Mineral Water Co. Ltd | Mafuko Industries Ltd |
| Del Monte Kenya Ltd | Homeoil | Manji Food Industries Ltd |
| East African Breweries Ltd | Insta Products (EPZ) Ltd | Melvin Marsh International |
| East African Sea Food Ltd | Jambo Biscuits (K) Ltd | Kenya Tea Development Agency |
| Eastern Produce Kenya Ltd | Jetlak Foods Ltd | Mini Bakeries (Nbi) Ltd |
| Farmers Choice Ltd | Karirana Estate Ltd | Miritini Kenya Ltd |
| Frigoken Ltd | Kenafric Industries Limited | Mount Kenya Bottlers Ltd |
| Giloil Company Limited | Kenblest Limited | Nairobi Bottlers Ltd |
| Glacier Products Ltd | Kenya Breweries Ltd | Nairobi Flour Mills Ltd |
| Global Allied Industries Ltd | Kenya Nut Company Ltd | NAS Airport Services Ltd |
| Global Beverages Ltd | Kenya Sweets Ltd | Rafiki Millers Ltd |
| Global Fresh Ltd | Nestle Kenya Ltd | Razco Ltd |
| Gonas Best Ltd | Nicola Farms Ltd | Re-Suns Spices Limited |
| Hail & Cotton Distillers Ltd | Palmhouse Dairies Ltd | Smash Industries Ltd |
| Al-Mahra Industries Ltd | Patco Industries Limited | Softa Bottling Co. Ltd |

| Alliance One Tobacco Kenya Ltd | Pearl Industries Ltd | Spice World Ltd |
|---|---|---|
| Alpha Fine Foods Ltd | Pembe Flour Mills Ltd | Wrigley Company (E.A.) Ltd |
| Alpine Coolers Ltd | | |
| **Plastics and Rubber** | | |
| Betatrad (K) Ltd | Prestige Packaging Ltd | Haco Industries Kenya Ltd |
| Blowplast Ltd | Prosel Ltd | Hi-Plast Ltd |
| Bobmil Industries Ltd | Qplast Industries | Jamlam Industries Ltd |
| Complast Industries Limited | Sumaria Industries Ltd | Kamba Manufacturing (1986) Ltd |
| Kenpoly Manufacturers Ltd | Super Manufacturers Ltd | Keci Rubber Industries |
| Kentainers Ltd | Techpak Industries Ltd | Nairobi Plastics Industries |
| King Plastic Industries Ltd | TreadsettersTyres Ltd | Nav Plastics Limited |
| KingwayTyres&Automart Ltd | Uni-Plastcis Ltd | Ombi Rubber |
| L.G. Harris & Co. Ltd | Wonderpac Industries Ltd | Packaging Masters Limited |
| Laneeb Plastics Industries Ltd | ACME Containers Ltd | Plastic Electricons |
| Metro Plastics Kenya Limited | Afro Plastics (K) Ltd | Raffia Bags (K) Ltd |
| Ombi Rubber Rollers Ltd | Alankar Industries Ltd | Rubber Products Ltd |
| Packaging Industries Ltd | Dune Packaging Ltd | Safepak Limited |
| Plastics & Rubber Industries Ltd | Elgitread (Kenya) Ltd | Sameer Africa Ltd |
| Polyblend Limited | Elgon Kenya Ltd | Sanpac Africa Ltd |
| Polyflex Industries Ltd | Eslon Plastics of Kenya Ltd | Silpack Industries Limited |
| Polythene Industries Ltd | Five Star Industries Ltd | Solvochem East Africa Ltd |
| Premier Industries Ltd | General Plastics Limited | Springbox Kenya Ltd |
| **Building sector** | | |
| Central Glass Industries Ltd | Kenbro Industries Ltd | Manson Hart Kenya Ltd |
| KarsanMurji& Company Limited | Kenya Builders & Concrete Ltd | Mombasa Cement Ltd |
| **Paper Sector** | | |
| Ajit Clothing Factory Ltd | Paper House of Kenya Ltd | General Printers Limited |
| Associated Papers & Stationery Ltd | Paperbags Limited | Graphics & Allied Ltd |

| Autolitho Ltd | Primex Printers Ltd | Guaca Stationers Ltd |
|---|---|---|
| Bag and Envelope Converters Ltd | Print Exchange Ltd | Icons Printers Ltd |
| Bags & Balers Manufacturers (K) Ltd | Printpak Multi Packaging Ltd | Interlabels Africa Ltd |
| Brand Printers | Printwell Industries Ltd | Jomo Kenyatta Foundation |
| Business Forms & Systems Ltd | Prudential Printers Ltd | Kartasi Industries Ltd |
| Carton Manufacturers Ltd | Punchlines Ltd | Kenafric Diaries Manufacturers Ltd |
| Cempack Ltd | Conventual Franciscan Friers-Kolbe Press | Kitabu Industries Ltd |
| Chandaria Industries Limited | Creative Print House | Kul Graphics Ltd |
| Colour Labels Ltd | D.L. Patel Press (Kenya) Limited | Label Converters |
| Colour Packaging Ltd | Dodhia Packaging Limited | Modern Lithographic (K) Ltd |
| Colour Print Ltd | East Africa Packaging Industries Ltd | Pan African Paper Mills (EA) Limited |
| Kenya Stationers Ltd | Elite Offset Ltd | Ramco Printing Works Ltd |
| Kim-Fay East Africa Ltd | Ellams Products Ltd | Regal Press Kenya Ltd |
| Paper Converters (Kenya) Ltd | English Press Limited | SIG CombiblocObeikanKenya |
| | Textile Sector | |
| Africa Apparels EPZ Ltd | Kenya Trading EPZ Ltd | Spinners & Spinners Ltd |
| FulchandManek& Bros Ltd | Kikoy Co. Ltd | Storm Apparel Manufacturers Co. Ltd |
| Image Apparels Ltd | Le-Stud Limited | Straightline Enterprises Ltd |
| Alltex EPZ Ltd | Metro Impex Ltd | Sunflag Textile & Knitwear Mills Ltd |
| Alpha Knits Limited | Midco Textiles (EA) Ltd | Tarpo Industries Limited |
| Apex Appaels (EPZ) Ltd | Mirage Fashionwear EPZ Ltd | Teita Estate Ltd |
| Baraka Apparels (EPZ) Ltd | MRC Nairobi (EPZ) Ltd | Thika Cloth Mills Ltd |
| Bhupco Textile Mills Limited | Ngecha Industries Ltd | United Aryan (EPZ) Ltd |

| | | |
|---|---|---|
| Blue Plus Limited | Premier Knitwear Ltd | UpanWasana (EPZ) Ltd |
| Bogani Industries Ltd | ProtexKenya (EPZ) Ltd | Vaja Manufacturers Limited |
| Brother Shirts Factory Ltd | Riziki Manufacturers Ltd | Yoohan Kenya EPZ Company Ltd |
| Embalishments Ltd | Rolex Garments EPZ Ltd | YU-UN Kenya EPZ Company Ltd |
| J.A.R Kenya (EPZ) Ltd | Silver Star Manufacturers Ltd | |
| **Timber Sector** | | |
| Economic Housing Group Ltd | Transpaper Kenya Ltd | Wood Makers Kenya Ltd |
| Eldema (Kenya) Limited | Twiga Stationers & Printers Ltd | Woodtex Kenya Ltd |
| Fine Wood Works Ltd | Uchumi Quick Suppliers Ltd | United Bags Manufacturers Ltd |
| Furniture International Limited | Rosewood Office Systems Ltd | Statpack IndustriesLtd |
| Hwan Sung Industries (K) Ltd | Shah Timber Mart Ltd | Taws Limited |
| Kenya Wood Ltd | Shamco Industries Ltd | Tetra Pak Ltd |
| Newline Ltd | Slumberland Kenya Ltd | |
| PG Bison Ltd | Timsales Ltd | |
| **Motor Vehicle Assembly and Accessories** | | |
| Auto Ancillaries Ltd | General Motor East Africa Limited | Megh Cushion industries Ltd |
| VarsaniBrakelining Ltd | Impala Glass Industries Ltd | Mutsimoto Motor Company Ltd |
| Bhachu Industries Ltd | Kenya Grange Vehicle Industries Ltd | Pipe Manufacturers Ltd |
| Chui Auto Spring Industries Ltd | Kenya Vehicle Manufacturers Limited | Sohansons Ltd |
| Toyota East Africa Ltd | Labh Singh Harnam Singh Ltd | Theevan Enterprises Ltd |
| Unifilters Kenya Ltd | Mann Manufacturing Co. | |

| Metal and Allied | | |
|---|---|---|
| Allied Metal Services Ltd | Morris & Co. Limited | KhetshiDharamshi& Co. Ltd |
| Alloy Street Castings Ltd | Nails & Steel Products Ltd | Nampak Kenya Ltd |
| Apex Street Ltd Rolling Mill Division | Orbit Engineering Ltd | Napro Industries Limited |
| ASL Ltd | Rolmil Kenya Ltd | Specialized Engineer Co. (EA) Ltd |
| ASP Company Ltd | Sandvik Kenya Ltd | Steel Structures Limited |
| East Africa Foundry Works (K) Ltd | Sheffield Steel Systems Ltd | Steelmakers Ltd |
| Elite Tools Ltd | Booth Extrusions Limited | Steelwool (Africa) Ltd |
| Friendship Container Manufacturers | City Engineering Works Ltd | Tononoka Steel Ltd |
| General Aluminum Fabricators Ltd | Crystal Industries Ltd | Welding Alloys Ltd |
| Gopitech (Kenya) Ltd | Davis &Shirtliff Ltd | Wire Products Limited |
| Heavy Engineering Ltd | Devki Steel Mills Ltd | Viking Industries Ltd |
| Insteel Limited | East Africa Spectre  Ltd | Warren Enterprises Ltd |
| Metal Crown Limited | Kens Metal Industries Ltd | |
| Pharmaceutical and Medical Equipment | | |
| Alpha Medical Manufacturers | Madivet Products Ltd | KAM Industries Ltd |
| Beta Healthcare International  Ltd | Novelty Manufacturing Ltd | KAM Pharmacy Limited |
| Biodeal Laboratories Ltd | Oss. Chemie (K) | Pharmaceutical Manufacturing |
| Bulks Medical Ltd | Dawa Limited | Regals Pharmaceuticals |
| Cosmos Limited | Elys Chemical Industries | Universal Corporation Limited |
| Laboratory & Allied Limited | Gesto Pharmaceutical Ltd | Pharm Access Africa Ltd |
| Manhar Brothers (K) Ltd | GlaxoSmithkline Kenya | |
| Leather Products and Footwear | | |
| Alpharama Ltd | C & P Shoe Industries Ltd | East Africa Tanners (K) Ltd |
| Bata Shoe Co. (K) Ltd | CP Shoes | Leather Industries of Kenya  Ltd |
| New Market Leather Factory Ltd | Dogbones Ltd | |

**Source: Kenya Association of Manufacturers (KAM) Directory. June, 2014**