KNOWLEDGE SHARING, ORGANIZATIONAL LEARNING, FIRM-LEVEL INSTITUTIONS AND PERFORMANCE OF TOP MEDIUM-SIZED COMPANIES IN KENYA

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

2015

DECLARATION

This Doctoral thesis is my original work and has not been presented to this or any other University for award of a degree.

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I dedicate this work to my dear husband Duncan Irungu for his inspiration and unwavering support. "You are the icon of my strength in life".

ACKNOWLEDGEMENTS

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ABBREVIATIONS AND ACRONYMS

ANOVA: Analysis of Variance

BSC: Balanced Scorecard

COP: Communities of practice

DCT: Dynamic Capabilities Theory

FLIs: Firm Level Institutions

GoK: Government of Kenya

IBP: Internal Business Processes

KM: Knowledge Management

KS: Knowledge Sharing

OECD: Organization for Economic Cooperation and Development

OL: Organizational Learning

PCA: Principal Component Analysis

Q-Q plots: Quantile-Quantile plots

RBV: Resource Based View

ROI: Returns on Investment

SBSC: Sustainable Balanced Scorecard

St: Saint

VIF: Variance Inflation Factor

4i Framework: Intuition, Interpretation, Integration and Institutionalization

ABSTRACT

This study was grounded on the view that organizations have hidden reservoirs of knowledge in terms of tacit and explicit knowledge. This study sought to make a contribution by focusing on how knowledge can be tapped to improve performance. Knowledge sharing, organizational learning and firm-level institutions were considered to offer an explanation for superior performance of top 100 medium-sized companies in Kenya. The main objective of this study was to determine the influence of organizational learning and firm-level institutions in the relationship between knowledge sharing and organizational performance. To achieve the objective, six hypotheses were formulated and tested to form the basis of conclusions that were drawn. The study was anchored on four theories: resource based theory, knowledge based theory, dynamic capabilities theory and institutional theory. A positivism paradigm guided the study while cross-sectional survey was adopted as the research design. The study population consisted of 100 medium-sized companies categorized as top performing medium-sized companies in Kenya by KPMG and Nation Media Group. Data was collected from 65 companies. Data was analyzed using descriptive statistics, simple, multiple and hierarchical regression analysis. The study established that knowledge sharing had a positive and statistically significant effect on organizational performance. Firm-level institutions had significant direct and moderating effect on organizational performance. Conversely and contrary to expectation, the study established that organizational learning had neither direct nor mediating effect on organizational performance. The joint effect of the study variables on organizational performance was positive and statistically significant. The study has made a unique theoretical contribution by linking the theoretical views into an integrated framework. Further it supports the theoretical view of resource based theory that performance differences across firms can be attributed to the variance in firms' resources and capabilities. Policy makers can utilize the findings of this study to formulate sound support strategies for medium enterprises. Additionally, Kenya's Vision 2030, relies heavily on creative talents that can raise the country's international competitiveness through encouraging flourishing of businesses. Knowledge sharing plays a vital role in boosting wealth creation, social welfare and international competitiveness contributing to realization of Vision 2030. The study has a major implication on managerial practice in that managers can relook at their firm-level institutions in terms of organizational structure, culture, technology, management style and human resources to enhance knowledge sharing for innovation and improved performance. A number of limitations were experienced, including access to information on financial performance as medium-sized companies are not required by law to publish their financial reports. Cross sectional research design adopted has the limitation of collecting data at a given point in time preventing investigation over a period of time. Future researchers can consider longitudinal research design to examine the impact of knowledge sharing and organizational learning on organizational performance over time and to establish causal relationships. The findings of this study revealed that organizational learning had no direct and mediating effect on the relationship between knowledge sharing and organizational performance. Future researchers may scrutinize the study findings in other settings by incorporating different industries, countries or time periods.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

A fundamental question in the field of strategic management is how organizations achieve sustainable competitive advantage (Porter, 1985). Knowledge is considered a key resource that leads to innovation and prevents wheel re-invention (Lopez and Esteves, 2013). Knowledge sharing (KS) helps in combining various levels of expertise to create new organizational knowledge and acquire deeper levels of understanding leading to better business performance (Bollinger and Smith, 2001). For KS to take place, organizations should be structured in such a way that new patterns are nurtured and collective aspirations encouraged (Senge, 1990). KS leads to organizational learning (OL) by making employees better problem solvers, more creative and innovative thinkers, more confident and proficient workers through provision of skills, insights and competences to perform work well (Kumaraswamy and Chitale, 2012). A firm's ability to gather, analyze and use knowledge is a requirement for business success (Senge, 1990).

This study is anchored on Resource Based Theory (RBT), Dynamic Capabilities Theory (DCT), Knowledge Based Theory (KBT) and institutional theory. Resource based theory advances the view that performance differences across firms can be attributed to the variance in firms' resources and capabilities (Barney, 1991). Knowledge was considered as a vital resource and sharing it contributes to improved organizational performance. Additionally, Knowledge Based Theory (KBT) depicts firms as repositions of knowledge and competences (Spender, 1996; Grant, 1996; Nonaka, 1994). Dynamic capabilities

theory is the driver behind the creation, evolution and recombination of resources into new sources of competitive advantage (Teece, Pisano and Schuen, 1997). Organizational learning was considered an important dynamic capability. Institutional theory according to North (1991) is a powerful theoretical lens that explains organizational forms and practices. The firm-level institutions (FLIs) were informed by institutional theory.

The focus of this study on top 100 medium-sized companies was informed by the fact that medium-sized companies are key players in innovation bringing creativity into products and services. Knowledge sharing was considered a major contributor to their learning, creativity and innovation. Secondly, according to Kenya Vision 2030, Kenya intends to become a knowledge-led economy where creation, adaptation and use of knowledge will be among the most critical factors for rapid economic growth (GoK, 2012). Thirdly, the future of Kenyan economy depends to a great extent on the success of medium-sized companies due to their great potential in achieving macroeconomic goals of nations through poverty reduction, employment and wealth creation. Fourthly, top 100 medium-sized companies cut across sixteen different sectors thus a representative of Kenyan economy. Finally, knowledge sharing has gained recognition in large companies, yet there is little evidence of its impact in medium-sized companies.

1.1.1 The Concept of Knowledge Sharing

Knowledge is a combination of data, information, facts, description and skills learnt through experience and practice (Keskin, 2005). Knowledge in this study encompasses tacit and explicit knowledge that employees learn by combining practical understanding

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of workplace routines, experiences and insights that contribute to individual and collective action (Davenport and Prusak, 1998). This study adopted the definition by (Manaf, 2012) who defines knowledge sharing as the exchange of knowledge between and among individuals, teams, departments and organizations.

Knowledge is created through interaction among individuals with different types and contents of knowledge. Knowledge is created by tapping the tacit often subjective intuitions of individual employees and making those insights available for testing and use by the company as a whole. Nonaka (1991) holds that the key to knowledge creation is personal commitment and employees sense of identity with the enterprise and its mission. After knowledge generation, knowledge sharing creates the ability to exchange relevant ideas, knowledge, experiences and information.

Knowledge sharing is a learning activity which occurs through asking questions, sharing ideas, suggesting potential solutions and adopting new behaviour patterns (Manaf, 2012). It is the dynamic processes of interpersonal interaction (Nonaka and Takeuchi, 1995). Knowledge sharing fuels growth in regional and national economies by fostering communities of innovators and ensuring knowledge diffusion (Appleyard, 1996). According to Dunford (2000), knowledge sharing is so important since much of the key knowledge is held by individuals unless there is some structure to retain it within the organizational memory. Impliedly, knowledge sharing can be used to capture, organize, reuse and transfer experience-based knowledge; contributing to knowledge staying in the organization long after the employee leaves it.

Knowledge sharing helps the organization to use available resources in the most efficient way by transferring the best practices from one department to another, from one project or client to another. Knowledge sharing not only reduces the cost of production or service but also contributes to the success of the organization since it helps in avoiding mistakes and develops the ability to innovate (Keskin, 2005). When knowledge is shared, it becomes cumulative and embedded within organizational processes, products and services. According to Ramirez, Garcia and Rojas (2011) research on knowledge sharing and organizational performance is ongoing; however, how this relationship is influenced by firm-level institutions and organizational learning is scantly known.

1.1.2 Organizational Learning

Organizational learning refers to growing competence among individuals in communicating and solving dilemmas and problems successfully (Steiner, 1998). It is the principal means of achieving strategic renewal which requires firms to explore and learn new ways while concurrently exploiting what they have already learnt (March, 1991). This study adopted the definition by Cummings and Whorley (2009) which view organizational learning as a change process that enhances the organizational capability to acquire and develop knowledge.

Organizational learning is a prime organizational capability which occurs when organizations develop a deeply ingrained learning culture and have education, training and mentoring programs available to encourage organizational learning (Grant, 1996). A climate of continuous learning, removal of blockages and installing enhancers are

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necessary organizational actions to optimize this asset (Steiner, 1998). For this reason, organizational leaders are seeking learning to achieve excellence by being flexible, intelligent and responsive (Pedler, Burgoyne & Boydell, 1996). Additionally, organizations are developing employee skills for organizational learning, strategic flexibility and improved performance (Cummings and Whorley, 2009). Organizations today are structured in such a way as to provide a mechanism for supporting continuous learning and enable firms to create new products, processes and respond to changing environment (Bustina, Molina and Aranda, 2010).

Organizational learning is any relatively permanent change in behaviour that occurs as a result of experience (Pedler et al. 1996). It involves the dynamics and processes of collective learning that occur both naturally and in a planned manner within the organization. Grant (1996) views the firm as an institution for knowledge integration where people should learn how to learn; otherwise they run the risk of becoming walking encyclopedias of outdated information. For organizational learning to take place, the organization needs to have tolerance for mistakes and view them as opportunities for learning and problem solving (Pedler, et al. 1996). This study focused on organizational learning as a dynamic capability where knowledge resources are integrated and shared.

1.1.3 Firm-level Institutions

Firm-level institutions (FLIs) refer to the attributes that define the internal organizational environment which define the context in which strategic decisions are made and implemented (Mulabe, 2013; Machuki, Aosa and Letting, 2012). Institutions are the

governance structures that define the rules of the game (North, 1991). Firm-level institutions influence the preferences, behaviors and actions of organizations and individuals thus determine the organizational outcomes (Luthans, 2008). Institutions comprise of both the formal rules such as laws, constitutions and property rights as well as informal constraints such as customs, traditions and code of conduct (North, 1991).

Firm-level institutions derive from both the resource-based view and the McKinsey 7-S framework (Machuki, 2011). According to McKinsey's 7-S framework, managers should focus on seven components to ensure effectiveness; these include strategy, structure, systems, shared values, skills, staff and style (Peters and Waterman, 1982). This study focused on the organizational structure, culture, technology, management style and human resources. Firm-level institutions such as organizational structure, incentive system, corporate culture, routines and leadership impact on organizational performance (Nonaka et al, 2000). Studies show that knowledge is rooted in human experience and social context and its sharing demands close attention to people, cultures, organizational structure and information technology (Lopez and Esteves, 2013; Syed-Ikhsan and Rowland, 2004).

Organizational structure is perceived as the way people and jobs in an organization are arranged so that the work of the organization can be performed (Syed-Ikhsan and Rowland, 2004). Organizational structure may facilitate and accelerate decision making. Office design and office layouts reduce the distance between workers or professionals to foster adhoc, informal and face to face communication thus knowledge sharing is

enhanced (Soliman and Spooner, 2000). A centralized structure reinforces past behaviours whereas a more decentralized structure allows shifts in beliefs and actions (Fiol and Lyles, 1985). In this study, organizational structure was discussed in terms of its influence on knowledge sharing and its impact on organizational performance.

Organizational culture consists of shared beliefs, the ideologies and norms that influence organizational actions (Pfeffer, 1981). Culture influences what is desirable; therefore, it affects knowledge sharing initiatives and predisposes employees towards particular forms of behaviour. Organizational culture partially determines strategy and the direction of organizational change (Syed-Ikhsan and Rowland, 2004). Technological infrastructure and management practices motivate employees to share knowledge in a continuous way (Davenport and Prusak, 1998).

Knowledge sharing does not happen automatically in an organization and a leader has an important role to play in making it come about. Leaders are responsible for building organizations in which human resources are continually expanding and enhancing their capabilities to shape their future (Senge, 1990). When the institutions are in good alignment, an organization is poised and energized to execute strategy to the best of its ability (Peters and Waterman, 1982). Studies have established that individuals, technology and organization culture and structure are possible barriers to knowledge sharing (Kogut and Zander, 1992; Mosoti and Masheka, 2010). The current study sought to establish how firm-level institutions influence the relationship between knowledge sharing and organizational performance.

1.1.4 Organizational Performance

Organizational performance refers to the extent to which an organization achieves its stated objectives (Bagire, 2012). Performance is a multidimensional construct that cannot be easily explained through any single index (Chakravathy, 1986). It is defined broadly in industrial organization as encompassing dimensions such as allocative efficiency or profitability, technical efficiency or cost minimization and innovativeness (Porter, 1981). Organizational performance is the time test of any strategy (Namada, 2013). This study adopted the definition by Steers (1982) that performance relates to the efficiency and effectiveness of the organization.

Performance improvement is at the heart of strategic management and this necessitates close attention to measurement of organizational performance (Venkatraman and Ramanujam, 1986). Performance centers on the use of financial indicators such as sales growth, profitability and earnings per share. Financial indicators of performance give inadequate or inaccurate perspective on the firm's status hence the need for inclusion of non financial measures (Kaplan and Norton, 1992). The non financial measures include market share, new product introduction, product quality, marketing effectiveness and technological efficiency (Venkatraman and Ramanujam, 1986). This study used both financial and non financial measures of performance.

Measuring organizational performance has become complex as stakeholder expectations about a company's economic, social and environmental responsibilities change (Hubbard, 2009). Today, the emphasis is on operationalizing performance along the Sustainable

Balance Score Card (SBSC) which builds on the well established balanced scorecard but adds factors designed to capture a firm's social and environmental performance. These perspectives include financial measures, internal business processes, customer satisfaction, employee learning and growth, social and environmental performance (Hubbard, 2009). This study adopted sustainable balance scorecard in operationalizing performance. Scholars have not yet exhausted the debate on the factors that influence organizational performance due to methodological flaws and contextual application Mugambi and K'Obonyo (2012) and the current study aimed to make a contribution to this debate.

1.1.5 Top 100 Medium-sized Companies in Kenya

This research was carried out in top 100 medium-sized companies in Kenya as per the year 2013 categorization by KPMG and Nation Media Group. These are medium-sized companies which rank ahead of their peers in terms of profit growth, returns to shareholders and liquidity (Top 100 medium-sized companies report, 2013). The ranking is based on financial scope which involves parameters such as revenue growth, return on equity, retention ratio, current ratio, debt to equity ratio and interest cover ratio. They also consider involvement in CSR and the role played by innovation in their operations. The ranking seeks to capture the contribution of top 100 medium-sized companies to job creation while bearing in mind that not all industries are labour intensive. The top 100 list is based on quantitative criteria and considers both financial and non financial measures of performance (Top 100 medium-sized companies report, 2013).

There is no clear and universally acceptable definition of medium enterprises. Different countries have adopted diverse classifications of enterprises depending on their stage of development, the number of employees, value of assets, capital investment and turnover (Bategeka, 2012). The definition of medium enterprises is a significant issue for policy development and implementation. According to the Organization for Economic Cooperation and Development (OECD), medium enterprises are defined on the basis of the number of employees, invested capital, sales and industry type (OECD, 2004). In Kenya, medium-sized companies comprise of between 50-99 employees and annual sales turnover of between Ksh. 70 million to one billion (GoK, 2005). The current study adopted Kenyan classification to define medium-sized companies.

Top 100 medium-sized companies play a central role in Kenyan economy. They are a major source of entrepreneurial skills, innovation, employment opportunities and social integration (GoK, 2005). Kenya's economic blue print document, Vision 2030, relies on creative talents that can raise the country's international competitiveness through encouraging flourishing of businesses (GoK, 2012). Further, new knowledge plays a vital role in boosting wealth creation, social welfare and international competitiveness. This study context is useful in establishing the role of knowledge sharing, organizational learning and innovation in realization of Kenya's Vision 2030.

The choice of this study context was informed by a number of factors. Nonaka (1994) asserts that in an economy where the only certainty is uncertainty, the one sure lasting competitive advantage is knowledge. Top 100 medium-sized companies are more

innovative than larger firms due to their flexibility and ability to quickly and efficiently integrate new inventions (Qian and Li, 2003). The study sought to establish the role of knowledge sharing in medium-sized companies' competitiveness.

This study context was useful in establishing the role of knowledge sharing and organizational learning in organizational performance. Additionally, medium-sized companies are characterized with innovation, less bureaucracy, good network, informal communication networks and proximity to the market which creates a conducive environment for knowledge sharing. Finally, the study focused on medium enterprises as there is relatively limited research studies conducted on knowledge sharing in Kenya in this context.

1.2 Research Problem

Strategic management research has established that knowledge sharing has become an important strategy to gain competitive advantage due to its synergetic effect on individuals and organizations (Zhang, Li and Shi, 2005). Knowledge sharing provides opportunities for organizational learning and stimulates the creation of new knowledge, contributing to a firm's ability to innovate (Tsai, 2001). Although organizational learning literature has highlighted the importance of knowledge (Cummings and Whorley, 2009), less attention has been focused on the role of organizational learning on the relationship between knowledge sharing and organizational performance. There is therefore need to empirically investigate whether organizational learning has an intervening effect.

Internal environment factors conceptualized in this study as firm-level institutions influence the performance of organizations (Njuguna, 2013). They influence the preferences, behaviors and actions of organizations and individuals thus determine the organizational outcomes (Luthans, 2008). The moderating role of firm-level institutions on the relationship between knowledge sharing and organizational performance has not been evaluated. Additionally, the joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance could provide a greater understanding of the synergetic effect.

Balanced Scorecard performance measurement system holds that financial measures are inadequate for guiding and evaluating organizations as they attempt to generate growth opportunities and create economic value in the future (Kaplan and Norton, 1992). A multi-dimensional strategic measurement and management system is proposed to overcome the shortcomings. Pearson and Robinson (2007) further holds that financial indicators of performance give inadequate or inaccurate perspective on the firm's status; hence the need for inclusion of non financial measures. The current study focused on sustainable balanced scorecard which focuses on economic, social and environmental perspectives.

Top 100 medium-sized companies facilitate economic development in terms of their contribution to innovation, employment creation and entrepreneurial skills. These companies cut across sixteen different industries thus a representation of Kenyan economy. The environment in which top 100 medium-sized companies operate is

burdened by various challenges. To compete and thrive in such turbulent environment, the practice of knowledge sharing has becomes very crucial. The focus of this study on this context was to establish whether knowledge sharing, organizational learning and firm-level institutions could be the cause of the good performance of top 100 medium-sized companies since they operate in the same macro environment as their peers.

Studies have focused on developed world with very few studies focusing on developing nations (Mwihia, 2008; Mosoti and Masheka, 2010; Han, Chiang and Chang, 2010). The current study was carried out in a developing country Kenya and this provides a platform for comparison with extant literature from developed nations. Additionally, determinants of success derived from knowledge sharing in large organizations are well researched; however, studies on medium-sized companies have not received similar attention.

The results of previous studies on knowledge sharing are inconclusive and conflicting given the differences in findings. For instance, a study by Chang, Gong and Peng (2012) established that expatriate competencies in knowledge transfer enhanced subsidiary performance. They recommended future research on what facilitates knowledge sharing hence the focus on firm-level institutions. Ramirez et al. (2011) established that knowledge creation and organizational learning leads to increase in performance of Spanish companies. However, it is difficult to generalize these findings to Kenyan context due to contextual differences. Tsai (2001) established that knowledge transfer in intra-organizational networks contributes to innovation and performance but did not focus on the influence of firm-level institutions.

In Kenya, Namada (2013) established a positive relationship between organizational learning and firm performance as measured using balanced scorecard. However, balanced scorecard does not encompass social and environmental concerns which are very critical today. In addition, the study was in a different context that is Export Processing zones. Machuki et al. (2012) noted that their study was limited to Nairobi stock exchange and recommended a study on firm-level institutions in other types of organizations and in larger samples. Mosoti and Masheka (2010) recommended that organizations should integrate knowledge management practices to enhance knowledge sharing which will be addressed by firm-level institutions in this study.

In view of the extant empirical literature, studies on the influence of knowledge sharing on organizational performance are inconclusive hence this study sought to make a contribution in this regard. Additionally, the key knowledge gaps are the mediating role of organizational learning and moderating role of firm-level institutions in the relationship between knowledge sharing and organizational performance as well as the joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance. There is therefore, need to establish the hypothesized relationships in order to bridge the identified gaps. What is the effect of organizational learning and firm-level institutions on the relationship between knowledge sharing and organizational performance?

1.3 Research Objectives

The general objective of this study was to determine the effect of organizational learning and firm-level institutions on the relationship between knowledge sharing and performance of top 100 medium-sized companies. The specific objectives were to:

  i.   Establish the effect of knowledge sharing on organizational performance.

 ii.   Determine the effect of firm-level institutions on organizational performance.

iii.   Examine the effect of organizational learning on organizational performance.

 iv.   Determine the effect of organizational learning on the relationship between knowledge sharing and organizational performance.

  v.   Establish the effect of firm-level institutions on the relationship between knowledge sharing and organizational performance.

 vi.   Determine the joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance.

1.4 Value of the Study

Knowledge sharing is a new concept in strategic management thus the study provides new insights on how to utilize knowledge resource. Knowledge sharing and organizational learning can lessen organizations' dependency on individuals by enriching the structure of intellectual capital of an organization through transformation of individual knowledge to organizational knowledge. The study provides insights through integration of resource based theory, knowledge based theory, dynamic capabilities theory and institutional theory into a single theoretical framework. The study further adds value to strategic management field by measuring performance using sustainable

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balanced scorecard which is stakeholder centric approach considering economic, social and environmental perspectives. The results of this study provide a basis for further empirical tests, replication and advancement in theory validation by other researchers.

At policy level, the performance of medium-sized companies in Kenya is a pointer to Kenya's economic development. Top 100 medium-sized companies contribute heavily to the economic growth through employment creation and innovation which is a key agenda of Kenyan government. The study findings will enhance policy makers' understanding of medium-sized companies' needs which can guide them in formulation of sound support strategies.

Finally, the study provides useful insights for managerial practice as managers can make more informed decisions derived from shared knowledge. The findings on firm-level institutions enhance managers' understanding of how institutional factors influence organizational performance. Managers can develop internal firm capacity to effectively utilize knowledge for innovation and improved performance. The study findings contribute new insights to managers on performance measurement using sustainable balanced scorecard as opposed to focusing on financial measures alone.

1.5 Structure of the Thesis

This thesis comprises of six chapters. Chapter one is the introduction of the study which provides a background of the study comprising of the conceptualization, theoretical anchorage and the context of the study. Each of the four study variables; knowledge

sharing, organizational learning, firm-level institutions and organizational performance was briefly discussed. The chapter presents the research problem, research objectives and concludes by looking at the value of the study in theory, policy and managerial practice.

Chapter two presents conceptual, empirical and theoretical literature review of knowledge sharing, organizational learning, firm-level institutions and organizational performance. It provides an in depth theoretical underpinning of the study and brings on board the pair wise review of the relationships between the study variables. A summary of knowledge gaps that informed the study is given. The chapter presents a conceptual model which was derived from literature to assist in addressing the implied gaps in knowledge. It schematically depicts the relationships among the variables of the study.

Chapter three presents the research methodology. It begins by providing the research philosophy and research design adopted for this study. The population of the study is given. Data collection, validity and reliability of the instrument are also discussed. The study further tabulates how the study variables were operationalized in line with existing literature and discusses how data was analyzed. The chapter concludes by tabulating the objectives, hypotheses and analysis as well as the model estimation.

Chapter four presents the response rate and preliminary tests which include test of normality, homoscendasticity, heteroscedasticity and multicollinearity. The chapter also presents the respondents characteristics as well as the top100 medium-sized companies' profiles. Descriptive statistics are summarized in terms of means, standard deviation and

one sample t-test. The chapter also looks at factor analysis and study variable correlations using Pearson Product moment correlation analysis. In the second part of the chapter, hypotheses were tested and interpreted. Simple, multiple and hierarchical regression analyses were conducted at 95 percent confidence level (α=0.05). The results of the study are presented as model summary, the analysis of variance (ANOVA) and the beta coefficients of each independent factor.

Chapter five discusses the results of the study in line with existing literature to establish whether the results confirm previous studies or they are inconsistent with existing knowledge. The content of this chapter is based on the research objectives and the hypotheses of the study. The discussion mainly focuses on the study findings, how they compare with existing knowledge, theoretical contribution of the study and the knowledge gap filled.

Chapter six presents the summary of findings, conclusion, and recommendations for theory, policy and practice. The chapter also discusses the implications of study findings to theory, policy and managerial practice. The chapter concludes by highlighting the limitations of the study and suggests areas for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter brings on board theoretical, conceptual and empirical literature. It presents review of literature on all the study variables in order to foreground the gaps in knowledge. The chapter presents a summary of knowledge gaps which the study addressed through empirical research using the proposed conceptual framework and model. It concludes by presenting a summary of research hypotheses guiding the study.

2.2 Theoretical Foundation

Extant literature suggests various theories to support the current study variables. Whereas this is the case, this study draws from Resource Based Theory (Wenerfelt, 1984; Barney, 1991), Dynamic Capabilities Theory (Schilke, 2014; Peteraf, Stefano and Verona, 2013; Teece, et al. 1997), Knowledge Based Theory (Grant, 1996) and institutional theory (North, 1991). The study linked the theoretical views into an integrated framework in order to provide better understanding of the relationships between knowledge sharing, organizational learning, firm-level institutions and organizational performance.

2.2.1 Resource Based Theory

Resource Based Theory (RBT) holds that a firm's resources that are rare, valuable, inimitable and non-substitutable determine its sustainable success (Prahalad and Hamel, 1990). Resources include anything that is a strength or weakness of a given firm whether tangible physical capital and intangible resources embedded in human and organizational

capitals (Barney, 1991; Wenerfelt 1984). Successful firms are those that acquire and maintain rare, specialized and inimitable resources for competitive advantage which in turn produces positive returns (Wernerfelt, 1984; Barney, 1991; Peteraf, 1993).

Resource based theory holds that the choice of resources is guided by the motives of efficiency, effectiveness and profitability which enable firms to generate competitive advantage (Conner, 1991). This study considered knowledge as a resource bundle and knowledge sharing as the strategy to obtain the positive returns of organizational learning and ultimately improved organizational performance. The study adds precision to resource based theory by exploring the contribution of knowledge sharing to organizational performance.

Resource based theory provides a useful compliment to Porter's (1980) perspective of firms achieving competitive advantage and in understanding firm resources. However, the concept of resources remains vague in that it is rarely operationally defined and it does not clarify how to transform resources to customer value (Miller and Shamsie, 1996). Critics hold that resource-based theory needs to consider the contexts within which resources will have the best influence on performance by delineating external environment in which different kinds of resources would be most productive (Porter, 1991). He further argues that competitive value of resources can be enhanced or eliminated by changes in technology; competitor behaviour or buyer needs which resource-based inward focus would overlook. In this study, knowledge sharing clarifies how knowledge resource can contribute to better organizational performance.

2.2.2 Dynamic Capabilities Theory

Capabilities are the capacities to coordinate and deploy resources to perform tasks (Teece, et al., 1997). Dynamic capabilities are an extension of the resource based view but emphasizes on reconfiguration of resources (Helfat and Peteraf, 2003; Schilke, 2014). Dynamic Capabilities Theory (DCT) advances the view that capabilities are the antecedent organizational and strategic routines by which managers alter their resource base, acquire and shed resources, integrate them together and recombine them to generate new value creating strategies (Grant, 1996). Organizational learning is a critical dynamic capability. A firm with dynamic capabilities can integrate and redeploy knowledge resources to create new products and processes and as a result obtain greater organizational performance (Chien and Tsai, 2012).

Prieto and Easterby-Smith (2006) state that learning is the process of using the knowledge resources; which facilitate the capacity of integrating and reconfiguring knowledge, thereby gaining competitive advantage. Dynamic capabilities enable firms to integrate and redeploy knowledge resources and as a result obtain greater firm performance (Robert and Grover, 2011). Dynamic capability also enables firms to create new products and processes and to respond to changing market conditions (Helfat, 1997).

Dynamic capabilities theory is useful in that it involves the organizational processes by which resources are utilized to create growth and adaptation within changing environments thus affecting organizational performance (Helfat and Peteraf, 2003; Peteraf et al., 2013). However, the theory needs further theoretical work to show how

firms get to improve (Teece, et.al., 1997). Organizational learning, a major dynamic capability clarifies how knowledge in form of ideas, insights, experiences and information are utilized to create improved performance. This was clarified through the direct and mediating role of organizational learning on organizational performance.

2.2.3 Knowledge Based Theory

Knowledge Based Theory (KBT) posits that the primary role of the firms is the creation and application of knowledge (Spender, 1996). According to Grant (1996) the theory focuses on knowledge as a fundamental source of human productivity. The central premise of this theory is that knowledge that is largely tacit can be a source of competitive advantage. Such knowledge is difficult for competitors to imitate (Barney, 1991). This theory depicts organizations as repositions of knowledge and competences where knowledge is transformed into valuable products and services adapted to market needs to deal with competitive challenges (Kogut and Zander, 1992).

 The ability of a firm to generate knowledge and effectively employ it through productive organizations determines its success and competitiveness (Drucker, 1988). Knowledge is created and held by individuals but it can become embedded within the organization as organizational processes and routines are performed repeatedly (Grant, 1996). Competitive advantage of firms arises from their superior capability in creating and transferring knowledge (Lopez and Esteves, 2013). This study holds that knowledge helps organizational employees to learn and work more effectively contributing to better organizational performance.

Theoretical developments concerning knowledge based theory have enhanced understanding about how knowledge might be a source of competitive advantage. However, little is known about how firms apply knowledge better than other firms (Conner and Prahalad, 1996; Kogut and Zander, 1996). Similarly, this theory suggests that knowledge can be a source of competitiveness; however, it is not clear about how this is achieved (Spender, 1996). The current study focused on knowledge sharing since much remains to be explored in establishing its impact on organizational performance.

2.2.4 Institutional Theory

Institutional theory holds that conformity to social expectations contributes to organizational success (North, 1991). The theory looks at the role of social influence and pressure for social conformity in shaping organizational actions (Oliver, 1997). It provides a theoretical framework that explains organizational phenomena such as processes, strategies and competencies as they emerge from patterns of social interaction and adaptation (Leaptrott, 2005). Oliver (1997) argues that organizations operate in a social framework of norms, values and assumptions about what constitutes appropriate or acceptable economic behaviour. Impliedly, institutions influence resource decisions since economic choices are constrained by technological, informational and human limits (North 1991; Oliver, 1997).

Institutional view holds that institutionalized activities are strongly endorsed by the firm's prevailing culture and that individuals are approval seeking bound by habit and traditions (Scott, 1995). This study holds that knowledge sharing is profoundly

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influenced by firm-level institutions. These are organizational factors that influence whether knowledge will be shared or not and include organizational structure, culture, management style, technology and human resources. The study holds that firm-level institutions can enhance or inhibit knowledge sharing.

Activities are institutionalized at individual, organizational and inter organizational levels (Oliver, 1997). Institutions theory holds that institutions and the way they evolve shape performance of economies (North, 1991). However, institutions are considered unnecessary where efficient markets characterize economies (North, 1991). This study focused on firm-level of analysis which perpetuates institutionalized structures and behaviors. It sheds more light on the role of firm-level institutions by looking at how they impact on the relationship between knowledge sharing and organizational performance.

2.3 Knowledge Sharing and Organizational Performance

Knowledge is considered a critical resource of firms and economies (Yi, 2009). Knowledge sharing is perceived as the activities of disseminating knowledge from one person, group or organization to the other. This study focused on knowledge sharing between individuals within an organization. Today's organizations have recognized that competitive advantage hinges on effective knowledge management (Chen and Chen, 2006). The aim of knowledge sharing is integration of individual knowledge into organizational strategy which is perceived as a basic requirement for the future (Nonaka, 2007). This study suggested that organizational performance can be efficiently enhanced if employees shared information and experiences, opinions and insights with one another.

Organizations that are successful in acquiring internal and external knowledge are said to be more innovative and better performers (Andreeva and Kianto, 2011). According to Yi (2009) knowledge sharing increases productivity, improve the work processes, create new business opportunities and help organizations achieve performance objectives. It is further argued that the goal of knowledge sharing is to enhance organizational action power through shared vision and utilization of past experience (Davenport and Prusak, 1998). This study argued that knowledge sharing enable organizations to respond quickly to change, innovate and achieve competitive success thus improving their performance.

Knowledge sharing enhances the organization's ability to integrate and reconfigure knowledge resources thus contributing to improved performance (Chien and Tsai, 2012). This means that knowledge resources can be perceived as dynamic capabilities that help integrate ideas, skills, expertise and experiences to match changing environment. Teece et al. (1997) holds that accumulating resources is not enough for maintaining competitive advantage but firms need to reconfigure their resources into dynamic capabilities. Knowledge sharing has rarely been examined to be directly contributing to organizational performance. This study sought to make a contribution by empirically testing whether knowledge sharing facilitates organizational performance.

Different researchers have adopted different taxonomies to operationalize knowledge sharing (Yi, 2009; Lin and Lee, 2004; Bock and Kim, 2002). Lin and Lee (2004) measured knowledge sharing by focusing on know-how from work experience, expertise from education and training, business knowledge obtained informally or from partners.

Bock and Kim (2002) measured knowledge sharing by asking participants how frequently they shared knowledge for instance through reports, official documents, manuals, methodologies, experience, know-how and expertise from education and training with other members. The current study adopted the measure of knowledge sharing developed and validated by Yi (2009) which operationalize knowledge sharing as written reports, organizational communications through meetings, personal conversations and shared databases.

Written reports enhance sharing of explicit knowledge. This form of knowledge can be easily tracked, accessed, evaluated, processed by the computer, transmitted electronically or stored in databases and recorded (Bartol and Srivastava, 2002). It is structured knowledge, ambiguous and easy to improve. Competitive advantages based on it are less hard to imitate. Explicit knowledge is expressed in a formal and systematic language, written, auditory or visual way because it can be collected and shared as data, formulas, specifications and manuals (Nonaka, Toyama and Nagata, 2000).

Meetings entails person to group knowledge sharing through formal interactions. Tacit knowledge can be shared through meetings and other organizational communications such as workshops and seminars (Yi, 2009). Tacit knowledge is deeply rooted in an individual's actions, experience, ideals, values or emotions he or she embraces. It encompasses knowhow and our image of reality and the vision for the future (Nonaka, et al., 2000). Tacit knowledge has to be converted into words or numbers that anyone can understand for it to be shared. Meetings and organizational communication creates an

avenue to share tacit knowledge. Tacit knowledge is all about innovation and unlearning the organization's old view of knowledge (Nonaka and Takeuchi, 1995). Employees share tacit and explicit knowledge to enable the organizations achieve their objectives through shared vision and teamwork (Yi , 2009).

Personal conversation entails person to person knowledge sharing. It involves informal interactions among individuals to help and support each other (Yi, 2009). The aim of personal conversation is to help employees work better and more efficiently through shared vision. It helps reduce cost through reduction of mistakes and errors. Knowledge sharing can also be done through communities of practice. These are voluntary groups of employees bound by informal relationships that share similar work roles (Kumaraswamy and Chitale, 2012)

The development of the internet has made unlimited sources of knowledge available and has enhanced knowledge sharing. Shared databases create forums for increased cooperation and coordination between members of different departments and organizations (Dalkir, 2005). It enables best practices to be shared and followed in work methods (Kumaraswamy and Chitale, 2012). Dalkir (2005) asserts that online sharing forums enhance interpersonal relationships amongst employees and help them create, share and transfer knowledge within the organization. Information technology helps keep track of persons with particular expertise and enhances knowledge sharing with them (Bloodgood and Salisbury, 2001). This study sought to establish whether medium-sized companies shared knowledge through written reports, meetings, personal conversations and shared databases and how this impacted on organizational performance.

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2.4 Firm-level Institutions and Organizational Performance

Firm-level institutions refer to an organization's internal environment (Machuki, 2011). Institutions are the rules of the game of a society which evolve and shape performance over time (North, 1991). Managers' norms, habits, unconscious conformity to traditions, corporate culture, shared belief system and political processes supporting given ways of managing, perpetuate institutionalized structures and behaviors (Machuki, Aosa and Letting, 2012). Firm-level institutions influence performance in that, firms can be captives of their own history and can make inappropriate resource decisions (Oliver, 1997). Impliedly, a good organizational infrastructure can enhance the capability to access, use and share knowledge thus influencing on organizational performance.

Scott (1995) view institutions as collection of cognitive, normative and regulative structures and activities that provide stability and meaning to social behaviour. Regulative structures provide explicit guidance to organizational members often through rules, controls, rewards and sanctions. Normative structures guide behaviour through a less explicit system of social norms and values. On the other hand, cognitive structures guide behaviour through construction of social identity. Institutional environment shapes the structure of political, social and economic incentives thereby limits the scope of strategic choices available to individuals and organizations (North, 1991).

At the firm level, organizational structure, organizational culture, human resources, technology and political processes supporting given ways of managing bring about institutionalized structures and behaviors (Oliver, 1997). Organizational structure is the

division of tasks for efficiency, clarity of purpose and coordination between the interdependent parts of the organization to ensure organizational effectiveness (Pearce and Robinson, 2002). Organizational hierarchies are being put aside today as knowledge work calls for more collaboration (Dalkir, 2005). Organizational structures determine organizational processes.

Information technology provides organizational members with quick and effective access to the right amounts of information. Technology is a key enabler in facilitating knowledge sharing. It plays a critical role in capturing, storing and disseminating knowledge (Syed-Ikhsan and Rowland, 2004). It also accelerates the speed at which information is acquired and disseminated throughout the firm. Effective knowledge sharing therefore depends on people sharing their knowledge through computer facilities in the organization (Hope and Hope, 1997).

Organizational culture comprises of beliefs, aspirations and guiding concepts of who we are, what we do, where we are headed and what principles we will stand for in getting there (Pearce and Robinson, 1997). These shared values and beliefs shape an organization's people, organizational structures and control systems to produce behavioral norms. Peters and Waterman (1982) assert that the leaders' ability and education, previous track records and experience, personality and temperament are some of the characteristics that are important for organizational effectiveness. Impliedly, firm-level institutions impact on performance both positively and negatively depending on whether they are favourable or unfavourable.

2.5 Organizational Learning and Organizational Performance

Organizational learning can be perceived as a principal means of achieving strategic renewal of an enterprise (Crossan, Lane and White, 1999). A common belief in strategic management literature is that organizations' learn and what they learn enhance their ability to exist. Fiol and Lyles (1985) hold that for learning to take place, organizations develop the potential to learn, unlearn and relearn based on their past behaviours. They further argue that organizational performance affects the organization's ability to learn and to adapt to changing environment.

Hedburg (1981) holds that organizational learning is not the cumulative result of members' learning. Argyris and Schon (1978) also added their voice by noting that organizational learning is multi-level since insights and innovative ideas are conceived by individuals then these ideas are shared and actions taken at organizational level. This was echoed by Crossan, Lane and White (1999) who contend that organizational learning occurs at individual, group and institutional level. 4i framework was therefore adopted in operationalizing organizational learning. This comprises of four related processes intuition, interpretation, integration and institutionalization and three levels; individual, group and institutional levels of organizational learning (Crossan et al., 1999).

At individual level, intuition and interpretation takes place. Intuition is an individual process; a preconscious recognition of the pattern and possibilities inherent in a personal stream of experience (Weick, 1995). Interpretation entails refining and developing intuitive insights and development of language through conversation process. At group

level, the ideas and insights are explained to group members for shared understanding. At institutional level, dialogue and joint actions enhance coordination of actions through mutual adjustments and routinized actions. Integration and institutionalization takes place at institutional level (Crossan et al., 1999). Integration is the process of developing shared understanding among individuals and taking coordinated actions through mutual adjustment. Institutionalization on the other hand involves ensuring that tasks are defined, actions specified and organizational mechanisms put in place to ensure certain actions occur (Crossan et al., 1999). This study operationalized organizational learning along individual, group and institutional levels of organizational learning and it sought to establish whether organizational learning affects organizational performance.

2.6 Knowledge Sharing, Organizational Learning and Organizational Performance

Knowledge is a fluid mix of framed experiences, values, contextual information and expert insights that provide a framework for evaluating and incorporating new experiences and information (Davenport and Prusak, 1998). This knowledge is embedded in organizational routines, processes, practices and norms and it's through knowledge sharing that organizational learning is enhanced (Kumaraswamy and Chitale, 2012). Organizational learning occurs when knowledge is accumulated over time and learned by organization members (March, 1991).

Organizational learning enable organizations to build and organize knowledge and routines around their business activities and business cultures as well as the way they adopt and develop organizational efficiency by improving the broad skills of their

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workforce (Fiol and Lyles, 1985). Knowledge sharing enhances organizational learning by providing skills, insights and competences to perform work well. Organizational learning develops employee competencies that are valued by clients, hardly imitable, consequently contributing to the competitive advantage of the organization. The ability to share knowledge is the prime reason behind organizational growth (Gupta and Govindarajan, 2000). The ability of an organization to learn and accumulate knowledge from its experience is a capability that can provide competitive advantage.

Crossan et al. (1999) contend that convergence has not occurred on how organizational learning impacts organizational performance. They attribute this to the fact that different researchers apply organizational learning to different domains. Another argument is the problem of too narrow conceptualization of organizational learning. This study sought to make a contribution to the ongoing debate by focusing on the mediating role of organizational learning in the relationship between knowledge sharing and organizational performance.

2.7 Knowledge Sharing, Firm-level Institutions and Organizational Performance

Organizations today have changed their perception of human resources as laborers who only contribute their manpower to perceive them as knowledge workers and important assets to the organization (Gates, 1999). Human resources influence knowledge sharing since success or failure of knowledge sharing depends on the support of top management and investment on their employees. Human resources policies in selection, training and performance appraisal that are aligned with knowledge sharing strategies enhance organizational functioning (Kuo, 2011).

Information technology facilitates knowledge sharing and dissemination of information. However, Prusak, (2001) holds that it is not an alternative to interactions, relations and learning hidden in interpersonal conversations. Successful organizations have good technological infrastructure and management practices in place to motivate employees to share knowledge in a continuous way (Davenport & Prusak, 2000).

Appropriate organizational culture and organizational structure enhances knowledge sharing and organizational performance (Machuki, 2011). Kuo (2011) however notes that insufficient organizational infrastructure and inappropriate diffusion processes decrease the value of knowledge sharing. Establishing an organizational structure and culture that promotes knowledge sharing can foster organizational learning and performance. This study sought to establish whether firm-level institutions have a moderating effect in the relationship between knowledge sharing and organizational performance.

2.8 Knowledge Sharing, Organizational Learning, Firm-level Institutions and Organizational Performance

Organizational learning is one of the factors that sustain an organization's innovative capability (Kuo, 2011). A study by Ramirez, Garcia and Rojas (2011) supports this by noting that organizational learning creates a new approach of continuous improvement leading to the increase of organizational performance. Further, there is extensive literature that indicates the benefits reaped by organizations that have embraced organizational learning (Namada, 2013; Cummings and Whorley, 2009; Crossan, et al., 1999).

Davenport and Prusak (1998) pointed out that the goal of knowledge sharing is to enhance organizational action power through shared vision and utilization of past experiences. Successful knowledge sharing comes from the support of top management as well as adoption of appropriate organizational culture and structure. Research further shows that organizational learning has significant and positive effect on organizational performance (Namada, 2013; Kuo, 2011). There is no known study that looks at the influence of organizational learning and firm-level institutions on the relationship between knowledge sharing and organizational performance.

Lopez and Esteves (2013) have shown that knowledge sharing between and within organizations is a complex phenomenon due to multifaceted nature of boundaries, cultures, structures and processes involved. Easterby-Smith, Lyles and Tsang (2008) noted that there is lack of research studies about the relationship between culture and knowledge sharing. These authors called for further studies to include other concepts, to give holistic perspective and improve the understanding of knowledge sharing.

A number of knowledge gaps have been identified in literature in areas along the conceptualization, methodological, contextual and operationalization differences. First, the effect of firm-level institutions on the relationship between knowledge sharing and organizational performance is scantly known. Secondly, the effect of organizational learning on the relationship between knowledge sharing and performance is unresolved. Finally most studies measure performance using traditional measures which is inadequate hence the need to incorporate more comprehensive measures through sustainable balanced scorecard (Hubbard, 2009).

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2.9 Gaps in Previous Studies

In order to highlight the research gaps identified in the critical review of literature, a summary of studies is provided in Table 2.1.

Table 2.1: Summary of Knowledge Gaps

Study	Focus	Methodology and Context	Findings	Knowledge Gaps	Focus of the Current Study
Namada, (2013)	Effect of OL on performance of EPZ firms in Kenya	Cross sectional survey -Kenya	Positive relationship between OL and non financial performance	Did not look at social and environmental measures of performance	Operationalized performance along SBSC
Manaf (2012)	The influence of KS on Performance	-Survey -Malaysia	KS influence Performance	Focused on individual performance	Looked at organizational performance
Chien and Tsai, (2012)	Dynamic capability, knowledge, learning and performance	-Survey Taiwan	Dynamic capabilities increase store performance	The study is limited in using firms in a specific region	Examined the effect of KS, FLIs and OL on performance in Kenyan context
Chang, Gong & Peng (2012)	Expatriate knowledge transfer and subsidiary performance	Survey Taiwanese MNCs	Expatriate competence in KS enhanced performance	Intervening effect of OL was not investigated	Examined the intervening effect of OL
Gardner, Gino and Staats (2012)	Dynamically integrating knowledge in teams	Survey -Professional services sector	There is a relationship between knowledge integration capability and performance	Did not look at the role of FLIs yet they impact on KS	Examined how FLIs influence the relationship between Knowledge sharing and Organizational performance
Guyo (2012)	The role of HRM in intra-firm sharing of tacit knowledge	Exploratory research -Kenyan state Corporations	Rewards, Mentoring and role modeling influence KS	Did not look at inter-firm KS and FLIs	Examined the effect of both tacit and explicit knowledge on performance
Kumaraswamy &Chitale (2012)	Collaborative KS strategy to enhance OL	Survey	Collaborative KS enhance OL	Did not look at how the two influence firm performance	Looked at the influence of KS and OL on performance
Machuki, Aosa &	Firm-level institutions	Census Survey	FLIs account for relatively	The results for hypothesized	Focused on a different context

Table 2.1: Summary of Knowledge Gaps Cont…

Letting, 2012	and Performance	Publicly quoted companies Kenya	high variation in corporate performance	relationship were significantly not significant due to high non- response	top 100 medium-sized companies to enhance the study findings
Ramirez, Garcia & Rojas (2011)	Knowledge creation, OL and their effects on organizational performance	Survey Spanish companies with highest volume of operation	Knowledge creation & OL lead to increased firm performance	The study did not consider the role of FLIs	Focused on the moderating role of FLIs
Kuo (2011)	How to improve performance through learning and knowledge	-Survey -Taiwan technology companies	OL improves innovation which enhances performance	The study was limited to a given context and may not be generalized	Looked at the Kenyan context
Mosoti and Masheka (2010)	Knowledge Management: The case for Kenya	Survey Selected for profit and non-profit organizations	KM practices increase KS and worker productivity	Did not look at the role of FLIs in reinforcing KM in organizations	Examined the role of FLIs in the relationship between KS and performance.
Ngah & Jussoff (2009)	Tacit KS and SMEs organizational performance	-Conceptual -SMEs in Malaysia	KS is the best tool in enhancing competence and performance	The study was not empirical but conceptual	Empirically tested the effect of OL and FLIs on the relationship between KS and performance
Mwihia (2008)	KM strategy, organizational competence and competitive advantage	-Cross sectional survey - Kenya	There's a significant relationship between KM and competitive advantage	Did not look at organizational learning and the effect of KS on competitive advantage	Narrowed down to KS and examined the intervening role of organizational learning.
Tsai (2001)	Knowledge transfer in intra organizational networks	Survey	KS influences innovation and performance	Did not consider organizational learning and FLIs	Focused on the effect of OL and FLIs on performance.

Source: Literature Review

Selected studies on knowledge sharing, organizational learning, firm-level institutions and organizational performance have been reviewed and synthesized. Various knowledge gaps were identified from the review of literature and tabulated for ease of reference.

These research gaps inform the statement of the problem and the conceptual framework of this study. Table 2.1 also provides suggestions of how the current study addressed the knowledge gaps. A conceptual model derived from literature will assist in addressing the implied gaps in knowledge.

2.10 Conceptual Framework

This study adopts an integrative perspective of different variables. It integrates knowledge sharing, organizational learning, firm-level institutions and organizational performance into a single model. The conceptual framework is based on reviewed theoretical models and discussions presented in the literature review. It presents the researcher's schematization of the study variables and depicts how the study has been thought out.

The study hypothesized that top 100 medium-sized companies can improve their performance by sharing knowledge within and between the companies. Further, it holds that the relationship between knowledge sharing and organizational performance can be mediated by organizational learning and moderated by firm-level institutions. Figure 2.1 depicts these relationships.

Figure 2.1: Conceptual Model

Intervening variable

```
                    ┌─────────────────────────┐
                    │ Organizational          │
                    │ learning                │
                    │ -Individual learning    │         H₃        H₄
                    │ -Group learning         │
                    │ -Institutional          │
                    │ learning                │
                    └─────────────────────────┘
┌─────────────────────┐                              ┌──────────────────────────┐
│ Knowledge           │                              │ Organizational           │
│ sharing             │                              │ Performance              │
│ -Shared             │                              │ -Financial               │
│ databases           │                      H₆      │ Sales growth, return     │
│ -Written reports    │──────────────────────────────▶ on investment,          │
│ -Meetings           │                              │ profitability            │
│ -Personal           │                              │ -Non financial           │
│ conversations       │                              │ Internal processes,      │
└─────────────────────┘                H₅            │ customers, learning      │
                                                     │ and growth, social       │
                              ┌──────────────────┐   │ and environmental        │
                              │ Firm- level      │   │ performance              │
                              │ institutions     │   └──────────────────────────┘
                              │ -Structure       │
                              │ - Culture        │
                              │ -Management      │            H₂
                              │ style            │
                              │ -Technology      │
                              │ -Human resources │                  H₁
                              └──────────────────┘
                             Moderating variable
```

(Independent variable — left side; Dependent variable — right side)

Source: Author 2015

The conceptual model schematically depicts the expected relationships among variables. The independent variable is knowledge sharing comprising of shared databases, written reports, meetings and personal conversations. Organizational performance is the dependent variable comprising of sustainable balanced scorecard measures of performance. The key knowledge gaps of the study were the moderating effect of firm-level institutions and the mediating effect of organizational learning on the relationship between knowledge sharing and organizational performance. The model demonstrates the

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moderating effect of firm-level institutions operationalized as the organizational structure, culture, management style, human resources and technology. The mediating role of organizational learning on the relationship between knowledge sharing and organizational performance was measured through individual, group and institutional learning. Finally, it depicts the joint effect of knowledge sharing, organizational learning and firm-level institutions as the basis for explaining organizational performance.

2.11 Research Hypotheses

This study aimed at answering the research question namely: What is the influence of organizational learning and firm-level institutions on the relationship between knowledge sharing and organizational performance? To answer this research question, six objectives were formulated as shown in section 1.3 of this thesis. The six objectives were supported by the following six hypotheses which are all stated in null.

H_{01}: Knowledge sharing has no significant effect on organizational performance.

H_{02}: Firm-level institutions have no significant effect on organizational performance.

H_{03}: Organizational learning has no significant effect on organizational performance.

H_{04}: Organizational learning has no significant mediating effect on the relationship between knowledge sharing and organizational performance.

H_{05}: Firm-level institutions have no significant moderating effect on the relationship between knowledge sharing and organizational performance.

H_{06}: Knowledge sharing, organizational learning and firm-level institutions have no significant joint effect on organizational performance.

2.12 Chapter Summary

This chapter looked at theoretical foundation of the study. These include resource based theory, dynamic capabilities theory, knowledge based theory and institutional theory focusing on their proposition, relevance to the study and critic of the theory. Literature was reviewed looking at the relationships between the study variables. Literature was reviewed in line with the study objectives.

A summary of knowledge gaps comprising of selected empirical and conceptual studies was provided. The studies reviewed provided insights on knowledge sharing, organizational learning, firm-level institutions and organizational performance. The chapter concluded by providing a conceptual model depicting the hypothesized relationships. Finally, research hypotheses stated in null are summarized.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology of the study. It first outlines the philosophical foundation that underpins the approach taken for this research. It also provides the research design, target population, data collection, validity and reliability of measurement scales, operational definition and measurement of variables, data analysis technique and a summary of objectives, hypotheses and data analysis.

3.2 Research Philosophy

In social sciences, there are different contrasting research philosophies. Two main philosophies in strategic management research are the positivism and phenomenology. This study adopted positivism philosophical stance of the natural sciences which only considers observable and measurable phenomena as knowledge. Positivism philosophy seeks facts of social phenomena with no abstraction or subjective status of individuals considered (Cooper and Schindler, 2006). It enhances objectivity, neutrality and validity of results since it attempts to test theory increasing predictive understanding of phenomena (Saunders, Lewis and Thornhill, 2009).

According to Pfeffer (1993) positivism argues for continued use of real facts, logical, dominant and relevant framework. It is based on deductive theorizing where a number of propositions are generated for testing and empirical verification is sought (Babbie, 2005). Positivism favours the use of quantitative perspective and objective reality that has

explanatory and predictive power. It involved hypotheses testing based on the facts that were obtained from data collection exercise. Phenomenology approach holds that knowledge is based on experience from perspectives of individuals and it's therefore subjective. According to Saunders et al., (2009), phenomenology focuses on immediate experience, personal knowledge and individual interpretations. It favors the use of qualitative perspective in which humans make sense of the world around them and is inherent on perception.

3.3 Research Design

The study adopted a cross-sectional survey which involves collecting data about practices, situations or views at one point in time across members of a population (Cooper and Schindler, 2003). The design helped describe the characteristics of the variables of interest in a situation (Sekaran, 2007). Cross-sectional survey design permitted subjecting the data collected to statistical analysis and allowed for hypotheses testing to establish whether there exist significant relationships among variables at a given point in time.

Cross sectional survey design is associated with deductive approach which seeks to explain causal relationships. This design helped in the generalization of findings to a larger group of organizations rather than the few that participated in the study. This design was used by Namada (2013), Njuguna (2013), Bagire (2012), Ogolla, (2012), Machuki (2011), Awino (2007) among other researchers and enabled them test hypotheses and draw conclusions.

3.4 Population of the Study

The population of the study comprised of all the Top 100 medium-sized companies as per the year 2013 categorization by KPMG and Nation Media Group (Appendix II). These are medium-sized companies which rank ahead of their peers in terms of profit growth, returns to shareholders and liquidity. The ranking is based on financial scope which involves parameters such as average revenue growth, average returns on equity, liquidity, credit collection indicators and financial leverage indicators in a three years period (Top 100 medium-sized companies report, 2013). This population was considered most appropriate for the study variables due to their outstanding performance over their peers given that they operate in the same macro environment. The study sought to establish whether the study variables contributed to their good performance.

Top 100 medium-sized companies ranking emphasize on identifying performers in various industry sectors on the basis that performance is impacted by industry specific factors (Top 100 medium-sized companies report, 2013). All top 100 companies were contacted to participate in the study. The final list is a representation of Kenyan economy since the firms cut across sixteen different sectors which include; agriculture, construction, financial, insurance, pharmaceuticals, publishing, energy, security, service, supplies, tourism, transport, information communication technology, logistics, manufacturing and retail industries as shown on Table 3.1.

Table 3.1 Study Population Distribution Frequency

Sector	Number of Companies	Percentage
Agriculture	2	2%
Construction	11	11%
Energy	3	3%
Financial	2	2%
ICT	7	7%
Insurance	1	1%
Logistics	1	1%
Manufacturing	44	44%
Pharmaceuticals	3	3%
Publishing	2	2%
Retail	1	1%
Security	1	1%
Service	5	5%
Supplies	2	2%
Tourism	10	10%
Transport	5	5%
Total	100	100%

Source: Top 100 Medium-sized companies report, 2013

3.5 Data Collection

Primary data was collected using structured questionnaires adopted from strategic management studies with modifications aimed at addressing the current study objectives. A sample questionnaire is attached as (Appendix 1). This method has the advantage of obtaining data more efficiently in terms of finances and availability of respondents.

The respondents were chief executive officers, senior managers, human resource managers or line managers in the targeted top 100 medium-sized companies. According to upper echelon's theory by Hambrick (2007) organizations are a reflection of its top management. In this regard, managers were best placed respondents since they shape the destiny of organizations. The managers were considered to be the most knowledgeable

informants about the issues under investigation hence a source of credible information. Questionnaires were administered through drop and pick method or sent via mail for the firms that had provided their emails in the directory but this was subject to the preference of the respondents.

3.6 Reliability and Validity Tests

Reliability is a measure of the degree to which a research instrument yields consistent results after repeated trials. Reliability tests checked internal consistency of the questions against the test items bringing on board the idea of replicability. Crocker and Algina (1986) conceptualize reliability as a measure of desired consistency in test scores.

The data collection instrument for this study was tested for reliability through computation of Cronbach's Alpha coefficient for all variables in the model. The coefficient ranges from 0 meaning no consistency, to 1 meaning complete consistency; the higher the coefficient the more reliable is the scale. Some authors consider items whose Alpha coefficient is 0.7 as reliable (Nunnaly, 1978; Nunnaly and Berstein, 1994; Bland and Altman, 1997). Field (2000) considers a cutoff point of 0.6 and higher as adequate. For this study a cutoff point of 0.7 and above was considered adequate.

Validity of an instrument relates to the ability of the instrument to measure the construct as purported (Manaf, 2012). It concerns the accuracy of inferences. Construct validity was ensured since the questionnaire was developed based on tools used in prior studies with modifications so as to address the current study objectives. Content validity was

ensured through the guidance of the expert opinion (Awino, 2007). The supervisors and the discussants during the various presentations double checked the document to ensure that the theoretical dimensions emerged as conceptualized.

Pilot study was used to improve the suitability of the questionnaire. The questionnaire was pretested using ten top 100 medium-sized companies that were randomly selected from the response list. Pilot study was to assess whether the respondents understood the questions in order to avoid comprehension problem. The questions were reviewed accordingly based on the feedback gathered. After data collection, returned questionnaires underwent strict checks to ensure completeness and consistency. Only valid questionnaires were used in the analysis.

3.7 Operationalization of the Study Variables

A meaningful way to understand a construct is to consider how other researchers operationalized and measured the construct in their work (Yi, 2009). The study variables were operationalized and measured using multi-item/indicator anchored on a five-point Likert type scale ranging from 1=Not at all to 5= to a very large extent. The advantage of this scale is that questions are easy to understand and as such lead to consistent answers.

The operationalization of the study's four variables was validated previously since other researchers used similar methods. The study adopted operationalization of knowledge sharing from Yi (2009). Hence knowledge sharing was conceptualized on how knowledge is shared through; written reports, meetings, shared databases and personal

conversations. Operationalization of organizational learning was adopted from a similar approach by Crossan et al. (1999) and Namada (2013) who conceptualized organizational learning on the levels of learning which are: individual learning, group learning and institutional learning.

In operationalizing firm-level institutions, the study adopted a similar approach by Peters and Waterman (1982) and Machuki (2011). Firm-level institutions were operationalized as the firm's internal environment attributes among them: organizational structure, organizational culture, management style, technology and human resources. Finally, operationalization of organizational performance adopted measures of performance from sustainable balanced scorecard by Hubbard (2009) that considers six indicators of performance. These are financial performance, internal business processes, customer satisfaction, employee learning and growth, social performance (corporate social responsibility) and environmental performance (green performance). Table 3.2 outlines the relevant measures and the corresponding operational definitions.

Table 3.2: Operationalization of Study Variables

Variable	Indicators	Operationalization	Question
Knowledge sharing	-Written documents	Knowledge sharing through documented reports as official documents, specifications and manuals.	Q10 i, ii
	Shared databases	Online sharing forums on new information and best practices	Q10 iii, iv, v
	Meetings	-Person to group knowledge sharing through formal interactions to exchange experiences and competences	Q10vi-xiv
	Personal conversations	Person to person conversations through informal interactions to help employees work better	10 xv-xvii

Table 3.2: Operationalization of Study Variables Cont…

Organizational Learning	Individual learning	Individual insights, competences, creativity and innovative ideas as well as individual problem solving skills.	Q11i-vi
	Group learning	Sharing group lessons resulting into group cohesion and group-based conflict resolution	Q11vii-xii
	Institutional learning	Developing shared understanding resulting in improved production processes, new procedures, new patterns, new products, responsiveness	Q11xiii-xx
Firm-Level Institutions	Structure	The division of tasks for efficiency and clarity of purpose	Q12i,ii
	Technology	Computerized facilities that enhance knowledge sharing	Q12iii,iv
	Management style	Participative management style that facilitates communication	Q12v,vi
	Culture	Shared values and beliefs that shape behavioral norms	Q12vii,viii
	Human resources	Staff skills and competences	Q12ix-xiv
Organizational Performance	Financial performance	Sales growth, return on investment, profitability	A composite index for Q13i-iii
	Customer focus	Customer satisfaction outcomes	Q13iv-vii
	Internal business processes	Efficient and effective results	Q13viii-x
	Learning and growth	Employee skill development, innovativeness and productivity	Q13xi-xiv
	Social performance	Impact a firm has on the communities in which it works(corporate social responsibility)	Q13xv
	Environmental performance	The amount of environmental resources a firm uses in its operations.	Q13xvi-xix

Source: Author

The study variables shown in Table 3.2 guided the construction of the research

questionnaire. Some questions were reverse coded to minimize uniform response.

3.8 Data Analysis

The unit of analysis for this study was a top 100 medium-sized company. Data analysis involved data cleaning, editing and coding. The returned questionnaires were checked to ensure completeness. Data was analyzed using a combination of both descriptive and inferential statistics. Descriptive statistics comprised of mean, standard deviation, percentages, frequencies and one sample t-test to explore underlying characteristics of organizations and respondents.

Pretests were carried out to confirm whether the assumptions of regression which was the major data analysis method were met. Normality, multicollinearity, homoscedasticity and heteroscendasticity test were done. Normality tests were done using Shapiro-Wilks test and Q-Q plot; multicollinearity tests were done using variance inflation factor while homoscendasticity and heteroscendasticity was tested using levene test. Correlation of the variables was tested using Pearson product moment correlation to measure the strength and nature of the relationship between variables. Confirmatory factor analysis was done to ascertain whether knowledge sharing, organizational learning and firm-level institutions were distinct constructs.

Simple linear regression, multiple regressions and hierarchical regression were computed to test hypothesized relationships. Simple linear regression was used to test hypothesis 1, 2, and 3. The mediating effect of organizational learning and the moderating effect of firm-level institutions on the relationship between knowledge sharing and organizational performance were tested using hierarchical multiple regression. This examined the

relationship between a set of independent variable and the dependent variable by successively adding a variable for assessment of actual value contributed by each variable. Joint effect was tested using multiple regressions.

To determine the joint effect of knowledge sharing, firm-level institutions and organizational learning on organizational performance all the independent variables were regressed against each indicator of organizational performance. Goodness of fit or the robustness of the model was tested using coefficient of determination. The overall robustness of the regression models was tested using the F-test and p-values. If p-value was less than or equal to 0.05 ($p \leq 0.05$) the null hypothesis was rejected, otherwise, the null hypothesis was not rejected. Table 3.3 shows the summary of Study Objectives, Hypotheses, Analysis, Model Estimation and the Output.

Table 3.3 Objectives, Hypotheses, Analysis and Model Estimation

Research Objective	Hypotheses	Analysis and Model Estimation	Output
Establish the effect of knowledge sharing on organizational performance.	H_{01}: Knowledge sharing has no significant effect on organizational performance.	-Simple regression analysis $Y= \beta_0+\beta_1 X_1+ \beta_2X_2+ \beta_3X_3 + \beta_4X_4+ \varepsilon$ Y=Aggregate mean score of organizational Performance β_0=Constant $\beta_1\dots \beta_4$=Regression coefficient $X_1\dots X_4$= Individual Knowledge Sharing indicators ε= Error term	-Coefficient of determination ($R^{2)}$ shows the variation in performance explained by knowledge sharing. -F-test and p-values helped to assess the overall robustness of the regression model t-test and p-values helped determine individual significance of the study variables
Determine the effect of firm-level institutions on organizational performance	H_{02}: Firm-level institutions have no significant effect on organizational performance.	Simple regression analysis $Y= \beta_0+\beta_1 X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4+ \beta_5X_5+ \varepsilon$ Y=Aggregate mean score of organizational Performance β_0=Constant $\beta_1\dots \beta_5$=Regression coefficient $X_1\dots X_5$= Individual firm-level institutions indicators ε= Error term	-R^2 shows the variation in performance explained by firm-level institutions - F test and p-values helped assess the overall robustness of the regression model t-test and p-values helped determine individual significance of the study variables
Examine the effect of organizational learning on organizational performance.	H_{03}: Organizational learning has no significant effect on organizational performance.	-Simple regression analysis $Y= \beta_0+\beta_1 X_1+ \beta_2X_2+ \beta_3X_{3+} \varepsilon$ Y= Aggregate mean score of organizational Performance β_0= Constant $\beta_1\dots \beta_3$= Regression coefficient $X_1\dots X_3$= Individual, Organizational and institutional learning ε=error term	-R^2 shows the variation in performance explained by organizational learning -F test and p-values helped assess the overall robustness of the regression model t-test and p-values helped determine individual significance of the study variables
Determine the effect of organizational learning on the relationship	H_{04}: Organizational learning has no significant mediating	Hierarchical Regression analysis $Y= \beta_0+\beta_1X_{1+} \beta_2X_2+\varepsilon$ Y= Aggregate mean score of	ΔR^2 reveals the variation in organizational performance's which is due to the introduction of organizational learning- the mediator

Table 3.3 Objectives, Hypotheses, Analysis and Model Estimation Continued…

between knowledge sharing and organizational performance.	effect on the relationship between knowledge sharing and organizational performance.	organizational Performance β_0= Constant β_1, β_2= Regression coefficient X_1=Aggregate mean score of Knowledge sharing X_2= Aggregate mean score of Organizational learning ε=error term	variable. -F test and p-values helped assess the overall robustness of the model t-test and p-values helped determine individual significance of the study variables
Establish the effect of firm-level institutions on the relationship between knowledge sharing and organizational performance.	H_{05}: Firm- level institutions have no significant moderating effect on the relationship between knowledge sharing and organizational performance.	Hierarchical regression analysis $Y= \beta_0+ \beta_1X_1+\beta_3X_3+ \varepsilon$ Y= Aggregate mean score of organizational Performance β_0= Constant β_1, β_3= Regression coefficient X_1= Aggregate mean score of Knowledge Sharing X_3= Aggregate mean score of Firm-level institutions ε=error term	ΔR^2 reveals the variation in organizational performance which is due to the introduction of firm-level institutions -the moderation variable. F test and p-values helped assess the overall robustness of the model t-test and p-values helped determine individual significance of the study variables
Determine the joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance.	H_{06}: Knowledge sharing, organizational learning and firm-level institutions have no significant joint effect on organizational performance.	Multiple regression analysis $Y= \beta_0+\beta_1X_1+ \beta_2X_2+ \beta_3X_3+\varepsilon$ Y= Aggregate mean score of organizational Performance β_0= Constant $\beta_1… \beta_3$=Regression coefficients X_1= Aggregate mean score of Knowledge Sharing X_2= Aggregate mean score of Organizational Learning X_3= Aggregate mean score of Firm-level institutions ε=error term	R^2 shows the variation in performance explained by the joint effect of knowledge sharing, organizational learning and firm-level institutions. F test and p-values helped assess the overall robustness and the significance of the regression model t-test and p-values helped determine individual significance of the study variables

Source: Author

Table 3.3 summarized the objectives of the study, hypothesis, data analysis and model estimation. The output of the F-test or ANOVA was used to show the overall robustness and the significance of the regression model. Coefficient of determination ($R^{2)}$ showed the variation of dependent variable, organizational performance explained by each independent variable. T-test and p-values were used to determine the individual significance of the study variables.

3.9 Chapter Summary

This chapter presented the research methodology adopted for the study. It discusses the research philosophy of the study, the research design, target population of the study, data collection, validity and reliability of the research instrument. It tabulates the operationalization of study variables, data analysis techniques and a summary of objectives, hypotheses and model estimation.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter starts by discussing the response rate and presents preliminary tests which include tests of normality, multicollinearity and homogeneity of variance. The chapter provides general information on respondents and companies' profiles. Cross tabulation of demographic profiles was done for more comprehensive analysis and the results presented. Descriptive statistics on study variables were summarized in means, standard deviation and one sample t-test. The chapter also presented confirmatory factor analysis and correlation of study variables using Pearson product moment correlation analysis.

The second part of this chapter presents results of tests of hypotheses. The chapter is organized in line with the research objectives and hypotheses of the study. In order to test the respective hypothesis, simple, multiple and hierarchical multiple regression analysis were conducted at 95 percent confidence level ($p<0.05$). All hypotheses tests were done on the null hypotheses. Organizational performance was measured using six indicators of sustainable balanced scorecard. Each independent variable was regressed against the six different dimensions of performance and eventually on organizational performance.

The results of this study are presented in Tables depicting the regression results as: model summary with Pearson correlation moment(r) showing the nature and strength of the relationship and coefficient of determination (R^2) explaining how much variation in the dependent variable is explained by the independent variable. The analysis of variance

(ANOVA) shows the overall model significance. The model coefficients show the beta coefficients of each independent factor and whether the factor has a positive or negative relationship with the dependent variable.

4.2 Response Rate

Data was collected from 65 medium-sized companies giving a 65% response rate of the target population of 100 medium-sized companies. A 65% response rate was considered adequate in light of prior studies (Bategeka, 2012; Namada, 2013; Bagire, 2012; Awino, 2007). Bategeka (2012) had a response rate of 71% from small and medium manufacturing firms in Uganda. Namada (2013) had a response rate of 62.5% while Bagire (2012) had a response rate of 66% and Awino (2007) had a response rate of 65%. Table 4.1 shows sector distribution of firms that participated in the study.

Table 4.1: Sector Distribution of Respondent Firms

Firm Sector		Frequency	Percentage
	Agriculture	2	3.1
	Construction	7	10.8
	Energy	3	4.6
	Financial	1	1.5
	ICT	7	10.8
	Insurance	1	1.5
	Logistics	1	1.5
	Manufacturing	30	46.2
	Pharmaceuticals	1	1.5
	Publishing	1	1.5
	Retail	1	1.5
	Security	1	1.5
	Service	1	1.5
	Supplies	2	3.1
	Tourism	2	3.1
	Transport	4	6.2
	Total	65	100.0

Source: Primary Research Data

Table 4.1 shows that most of the respondent firms were from manufacturing sector which constituted 46.2% of the total response rate. The sectors with the lowest response rate were financial, insurance, logistics, pharmaceuticals, security, publishing and service with a response rate of 1.5%. The respondents' firms cut across 16 different sectors which is a good representation of the Kenyan economy. The response was way above the conventionally accepted response rate for surveys of 52.8% according to (Baruch and Holtom, 2008). Therefore it was considered adequate for data analysis.

4.3 Reliability Test

Reliability is the extent to which results are consistent over time. Reliability checks internal consistency of the instrument. Cronbach's Alpha coefficient was used to test the reliability of the study questionnaire. A cut off point of 0.7 was adopted as the recommended by Nunnaly (1978). Table 4.2 shows the reliability results of Cronbach's Alpha test.

Table 4.2: Reliability Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.733	.825	18
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.737	.834	5

Source: Research Data

Table 4.2 shows that all the items under this study had Alpha coefficients value above the recommended 0.7 by Nunnaly (1978); hence the instrument was considered reliable. George and Mallery (2003) contend that a Cronbach Alpha Coefficient greater than 0.9 is

excellent, a coefficient greater than 0.8 is considered good, 0.7 is acceptable, 0.6 is questionable while an alpha coefficient of 0.5 is poor while less than 0.5 is unacceptable. For this study all the items under study had a value of between 0.733 and 0.737 hence acceptable. All the scales of the instrument were therefore deemed reliable.

4.4 Tests of Normality, Multicollinearity and Homoscedasticity

The study data was pretested for the major assumptions of parametric data analysis. Pretesting helped in confirming whether the assumptions of regression analysis were met which are normality, multicollinearity, homoscedasticity and heteroscedasticity. Normality tests were done using Shapiro-Wilk test and Q-Q plots; multicollinearity tests were done using variance inflation factor (VIF) while homoscendasticity and heteroscendasticity were tested using levene test. Checking the assumptions helped decide which statistical test was appropriate.

4.4.1 Normality Test

Data is normally distributed if it is symmetrically around the centre of all scores (Field, 2009). For samples of 3 to 2,000, Shapiro-Wilk test should be used but if the sample size exceeds 2,000 then the Kolmogorov-Smirnov test applies (Field, 2009). In this study, normality was tested using Shapiro-Wilk test since the population of the study comprised of 100 medium-sized companies. Normality test results are presented in Table 4.3.

Table 4.3: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Nonfinancial performance	.127	64	.013	.922	63	.001
Knowledge sharing	.129	64	.010	.943	63	.006
Firm level Institutions	.136	64	.005	.972	63	.155
Financial Performance	.299	64	.000	.772	63	.000

a. Lilliefors Significance Correction
Source: Research Data

The data presented in Table 4.3 reveals that the Shapiro Wilk statistics for all the study variables were greater than 0.5 hence the distribution is normal. The statistics ranged from 0.772 to 0.972 > 0.5. According to Field (2009) in large samples, Shapiro Wilk statistics can be significant even when the scores are only slightly different from a normal distribution. Therefore, the findings should be interpreted in conjunction with histograms or Q-Q plots. To confirm the normality Q-Q plots were used as shown in Figure 4.1.

Figure 4.1: Normal Q-Q plot of Firm-level Institutions

Normal Q-Q Plot of Firm level Instituions
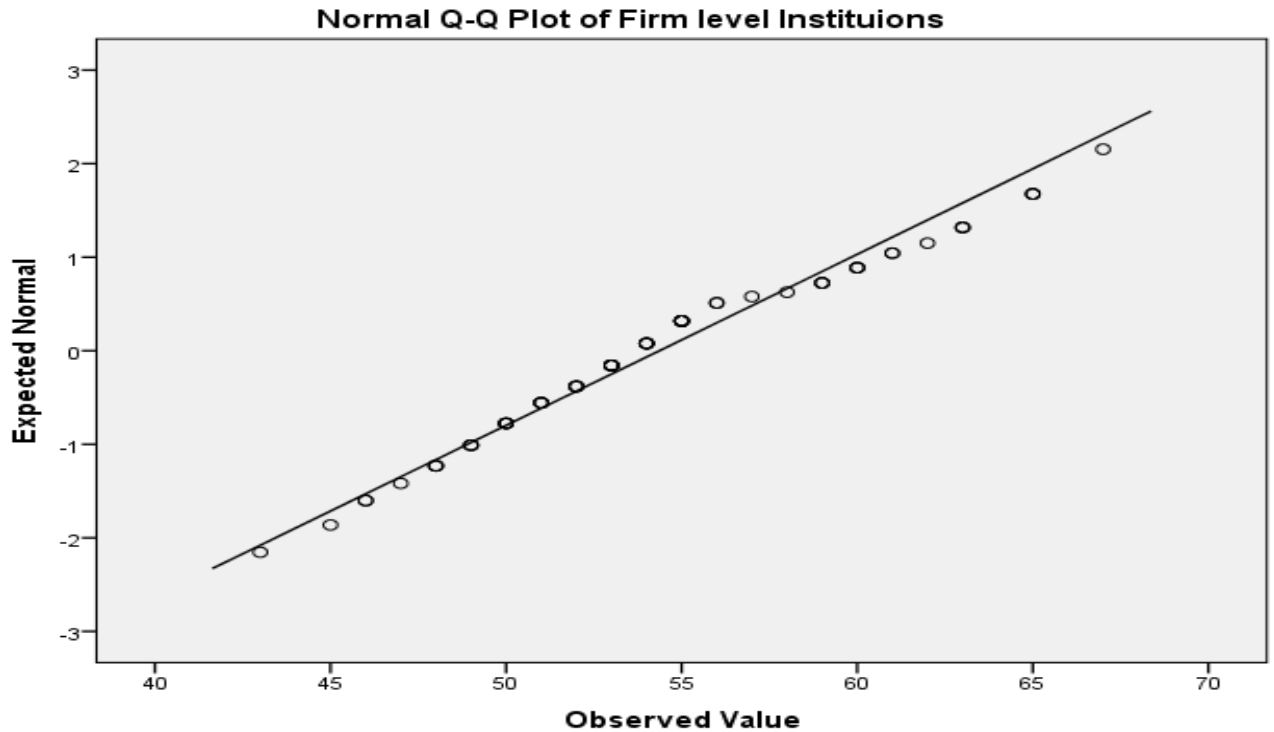
Normal Quantile-Quantile plot also known as normal Q-Q plot was used for verification of normality of firm-level institutions. It shows the expected versus the observed values. Figure 4.1 shows data points close to the diagonal line, an indication that data followed a nearly normal distribution. This confirms that the observed values did not deviate much from the expected values. The finding from the Q-Q plot was that firm-level institutions were normally distributed as they were along the line of best fit.

4.4.2 Multicolinearity Test

Collinearity refers to the study of the relationships among independent variables (Saunders, 2009). Multicollinearity is the degree of correration among independent variables themselves (Hair et al, 2010). It is a situation that arise when two or more predictor variables are closely related and the strong relationships affects the influence of independent variables on the dependent variable of interest (Kothari, 2010). Multicollinearity inflates the size of the error term and weakens the analysis (Hair et al. 2010). However, some moderate correlation between the independent variables is necessary for regression analysis since they are measuring the same dimension of the study hence they are expected to be related to some extent (Field, 2009).

In this study, multicollinearity was tested using variance inflation factor (VIF) and tolerance value achieved through examination of correlation coefficients among variables. The rule of thumb is that variables with variance inflation factor values above 5, indicates multicollinearity (Dennis, 2011). The cut off threshold for tolerance value is 0.2 which corresponds to a VIF value not exceeding 5 since tolerance value is the reciprocal of VIF (Hansen, 2013). Multicollinearity test results are presented in Table 4.4.

Table 4.4: Multicollinearity Test

Coefficients[a]

Variables		Collinearity Statistics	
		Tolerance	VIF
	Written reports	.631	1.584
	Meetings	.905	1.105
	Personal conversations	.759	1.318
	Structure	.500	2.002
	Culture	.490	2.039
	Management style	.475	2.103
	Technology	.448	2.232
	Human resource	.620	1.613
	Individual Learning	.667	1.498
	Group Learning	.525	1.905
	Institutional Learning	.822	1.217
a. Dependent Variable: Shared databases			

Source: Research Data

The results presented in Table 4.4 reveals that VIF values range from 1.105 to 2.232. These values are below the cut off threshold of 5 indicating that there is no threat of multicollinearity. The tolerance values are all above the 0.2 cut off point according to Hansen (2013) ranging from 0.448 to 0.905. This confirms that there is no threat of multicollinearity among the independent variables in the current study.

4.4.3 Homoscedasticity and Heteroscedasticity Tests

Homogeneity of variance or homoscedasticity refers to the extent to which the data values for the dependent and independent variables have equal variances (Hair et al 2010). If the variances happen to be unequal, then heteroscedasticity exists which complicates regression analysis because regression assumes equal variances. In this study, Levene test was used to test for homogeneity of variance. This is an inferential statistic used to assess the equality of variances for a variable (Levene, 1960). In large

samples greater than 30, small differences in group variance can produce a levene test

that is significant (Field, 2009). A useful double check is to look at variance ratio. This is

the ratio of variances between the group with highest and the group with the lowest

variance and the ratio should be below or about 2 or 3 (Field, 2009). Homoscedasticity

test results are presented in Table 4.5.

Table 4.5: Homogeneity of Variances

Variables	Levene Statistic	df1	df2	Sig.
Non financial performance	2.178	14	42	.026
Knowledge sharing	1.260	14	41	.273
Financial Performance	2.546	14	42	.000
Organization learning	2.655	14	42	.001

Source: Research Data

The results presented in Table 4.5 show that all the study variables do not deviate far

away from the expected variance ratio of approximately 2.0 (Field, 2009). This was

interpreted to mean that the variances are equal, hence no threat of heteroscedasticity.

4.5 Respondents' Demographics

Individual respondent's profile comprised of the number of years the respondents had

worked in the organization and the job title or position of the respondents. The number of

years an employee worked in an organization meant understanding of the organization's

operations hence was considered important in evaluating the respondents'

appropriateness as relevant and knowledgeable respondents. The target respondents for

the study in each organization were managers irrespective of their functions. According

to Hambrick and Mason (1984) organizations are a reflection of the top management.

Hence managers were deemed reliable source of credible firm information. Cross

tabulation was done in order to derive more meaning out of the data. In this study the number of years the respondents had worked in their respective firms varied, while the job titles were ranging from CEOs, senior managers, human resource managers and line managers. The results are presented in Table 4.6.

Table 4.6: Cross Tabulation of Number of Working Years and Job Title

Number of Working Years	Job Title				Total
	Senior Manager	HR Manager	Line Manager	CEO	
Below 3 Years	3.3%	13.1%	3.3%		19.7%
3-4 Years	6.6%	8.2%	14.8%		29.5%
5-7Years		23.0%	16.4%	1.6%	41.0%
8-10 Years	1.6%	1.6%	4.9%		8.2%
Above 10 Years		1.6%			1.6%
Total	11.5%	47.5%	39.3%	1.6%	100.0%

Source: Research Data

The results presented in Table 4.6 indicate that the job titles of most of the respondents were human resource managers comprising of 47.5%. The lowest response rate was from the CEOs with a 1.6% response rate. Majority of the respondents 41% had worked in their firms between 5-7 years while only 1.6% of the respondents had worked for over 10 years. Overall, the findings indicate that majority of employees in the medium-sized companies work for the same organization between 5-7 years and then move on to other organizations. This finding is useful in determining top 100 medium-sized companies' ability to attract and retain employees.

The number of working years in an organization is associated with experience and learning thus the respondents with long experiences are assumed to be more efficient due to minimal mistakes and expertise. This finding implies that most of the top 100 medium-sized enterprises were not able to retain their employees which can lead to high expenses

of labour turnover. This finding has a managerial implication as it informs the proprietors and senior management of medium-sized companies to evaluate the cause of the low retention rate. All the respondents held managerial position, they were considered to understand the organizational operations hence suitable source of reliable information.

4.6 Organizational Profile

The characteristics of the surveyed firms comprised of the scope of operation, ownership structure, annual sales and number of full time employees. The scope of operation examined whether the firm was operating nationally (within Kenya), regionally (within East Africa) or at continental level (within Africa). Ownership structure was broken down into sole proprietorship, partnership, joint venture and private limited companies. Number of employees and annual sales was used for classification of medium enterprises.

4.6.1 Cross Tabulation of Scope of Operation and Ownership Structure

In this study the scope of operation was local, regional and continental. The ownership structure varied along sole proprietorship which refers to business owned by a single owner; partnership which means business owned by between 2-20 members; joint ventures which refers to businesses that have temporarily come together to achieve a particular objective and private limited companies which are businesses which are considered as legal entities comprising of 2-50 members. The purpose of the cross tabulation was to establish whether the ownership structure influenced the scope of operation. Table 4.7 presents the results.

Table 4.7: Cross Tabulation of Scope of Operation and Ownership Structure

Scope of Operation		Ownership Structure				Total
		Sole Proprietorship	Partnership	Joint Venture	Private Limited Company	
	National	1.5%	4.6%	1.5%	4.6%	12.3%
	Regional		6.2%	6.2%	43.1%	55.4%
	Continental		4.6%	3.1%	24.6%	32.3%
Total		1.5%	15.4%	10.8%	72.3%	100.0%

Source: Research Data

The results in Table 4.7 indicate that 72.3% of the firms surveyed were private limited companies while sole proprietorship was only 1.5%. On the scope of operation, majority of the medium-sized companies 55.4% were operating regionally, meaning they have operations within Eastern Africa; with only 12.3% operating nationally. On the other hand, none of the sole proprietorship businesses was operating beyond the national boundaries. This suggests that the most common form of business ownership among the medium-sized companies was private limited companies, while the most popular scope was regional. This means that most medium-sized enterprises have internationalized, with operations within East Africa and African continent.

4.6.2 Cross Tabulation of Annual Sales and Ownership Structure

The annual sales of the respondent companies were important for the study since the definition of medium-sized companies comprises annual sales revenue as one of the variables. The average annual sales for medium-sized companies range from Ksh. 70 Million to 1Billion (GoK, 2005), while the ownership structure was varied. The purpose of the cross tabulation was to establish whether ownership structure influenced annual sales. Table 4.8 shows a cross tabulation of annual sales and ownership structure.

Table 4.8: Cross Tabulation of Annual Sales and Ownership Structure

Annual Sales		Ownership Structure				Total
		Sole Proprietorship	Partnership	Joint Venture	Private Limited Company	
	Ksh. 70M -200M				10.8%	10.8%
	Ksh. 201M - 400M	1.5%	1.5%	1.5%	15.4%	20.0%
	Ksh. 401M-600M		1.5%	3.1%	7.7%	12.3%
	Ksh. 601M-800M		10.8%	6.2%	26.2%	43.1%
	Ksh. 800M-1Billion		1.5%		12.3%	13.8%
Total		1.5%	15.4%	10.8%	72.3%	100.0%

Source: Research Data

The results presented in Table 4.8 shows that 43.1% of the responding firms had annual sales of between Ksh. 601 Million to Ksh.800 Million with majority of them being private limited companies. Only 10.8% of the respondent firms had annual sales of between Ksh.70 million to Ksh. 200 million. This indicates that the firms studied met the criterion of medium-sized companies whose annual sales range from 70M to 1 billion. Further it depicts the key role played by private limited companies to Kenyan economy which formed 72.3% of the ownership structure with most of them (26.2%) earning between Ksh.601-800 million annual sales.

4.6.3 Cross Tabulation of Number of Full Time Employees and Ownership Structure

The number of full time employees is one of the factors used in classification of Medium-sized companies hence it was deemed important to this study. The study sought to establish whether the respondents were in the said bracket of between 50-99 employees. The study also sought to establish whether ownership structure influenced the number of employees in the organization. Table 4.9 presents the findings.

Table 4.9: Cross Tabulation of the Number of Full Time Employees and Ownership Structure

Number of Full Time Employees		Ownership Structure				Total
		Sole Proprietorship	Partnership	Joint Venture	Private Limited Company	
	Below 50	1.5%	1.5%	6.2%	13.8%	23.1%
	50-69		9.2%	3.1%	41.5%	53.8%
	70-99		4.6%	1.5%	16.9%	23.1%
	Total	1.5%	15.4%	10.8%	72.3%	100.0%

Source: Research Data

The results presented in Table 4.9 indicate that 53.8% of the medium-sized companies employed 50-69 employees. In addition, 72.3% these employees were employed by private limited companies. The bulk of medium-sized companies is private limited companies and employs the largest number of employees. The finding is important for policy makers to consider favorable policies supporting private limited companies due to their great contribution in employment creation and by extension contribution to Kenyan economy. 23.1% of the medium-sized companies had below 50 employees. This implies that not all medium-sized companies are labour intensive.

4.6.4 Cross Tabulation of Scope of Operation and Annual Sales

The scope of operation ranged from national, regional and continental, while annual sales ranged from 70 million to 1 billion. The aim of the cross tabulation was to assess whether the scope of operation had an implication on organizational performance depicted by annual sales. Table 4.10 shows the results of the cross tabulation.

Table 4.10: Cross tabulation of Scope of Operation and Annual Sales

Scope of Operation		Annual Sales					Total
		Between 70-200M	Between 201-400M	Between 401-600M	Between 601-800M	800M- 1 Billion	
	National	0	3	0	5	0	8
	Regional	2	7	6	16	5	36
	Continental	5	3	2	7	4	21
Total		7	13	8	28	9	65

Source: Research Data

The results presented in Table 4.10 shows that 36 firms out of the 65 respondents were operating in the East African region. This finding has important policy implication with regard to East African regional integration. Majority of the firms (28 firms) operating regionally were earning between Ksh.601 million to 800 million per annum a majority of which are operating regionally. This has strategic management implication on the need of internationalization and expansion of the scope of operation to where opportunities for growth still exists.

4.7 Manifestation of the Study Variables

Descriptive statistics for each of the research variables were measured using Likert-type scale and one-sample t-test. The respondents were asked to indicate the extent to which they agreed or disagreed with the statements representing knowledge sharing, organizational learning, firm-level institutions and performance of medium-sized companies in Kenya. A five-point Likert scale was used ranging from (to a very large extent=5, to a large extent=4, to a moderate extent=3, to a small extent=2 and not at all=1). Table 4.11 presents the summary of means, standard deviation and coefficient of variation of the study variables.

Table 4.11: Summary of Descriptive Statistics of Study Variables

Variables	N	Mean	Std. Deviation	t-values	Sig.(2-tailed)	Coefficient of variation(CV) -percent
Written reports	65	3.9538	.64785	49.204	.000	16.38
Shared databases	65	3.9346	.69355	45.739	.000	17.63
Meetings	65	3.3481	.83195	32.446	.000	24.85
Personal conversations	65	3.9219	.89518	35.049	.000	22.83
Individual learning	65	3.9128	.63267	49.862	.000	16.17
Group Learning	65	3.9949	.64682	49.794	.000	16.19
Institutional learning	65	3.7692	.63555	47.815	.000	16.86
Structure	65	4.0000	.75000	42.999	.000	18.75
Organizational Culture	65	3.5938	1.08699	26.449	.000	30.25
Management styles	65	3.6250	.82616	35.102	.000	22.79
Technology	65	4.0781	.56575	57.666	.000	13.87
Human Resources	65	3.9375	.70991	44.372	.000	18.03
Financial performance	65	4.0417	1.02094	31.670	.000	25.26
Customer focus	65	3.9063	.79620	39.249	.000	20.38
IBP	65	3.8333	.85655	35.802	.000	22.34
Learning and growth	65	3.8281	.96247	31.819	.000	25.14
Social Perspective	65	4.0625	.83333	39.000	.000	20.51
Environmental Performance	65	3.8750	1.05493	29.386	.000	27.22

Source: Research Data

The results of Table 4.11 show that all knowledge sharing indicators except meetings scored above the mean of 3.5. The mean score for knowledge sharing ranged from 3.954 to 3.3481. This meant that the top 100 medium-sized companies shared knowledge to a moderate extent. Written reports had a mean score of 3.95 indicating that most companies shared knowledge through documented reports. Meetings had the lowest score of 3.3 indicating that person to group knowledge sharing through formal interaction was not as

preferred as other means of sharing knowledge. The highest variability was evident in personal conversation with standard deviation of 0.89518 and the lowest variability being written reports with standard deviation of 0.64785.

The results of Table 4.11 further indicate that organizational learning had a mean score ranging from 3.995 to 3.769. Group learning had the highest mean score of 3.99 meaning that top 100 medium-sized companies embraced sharing of group lessons resulting in group cohesion. Institutional learning had the lowest score of 3.7 indicating that shared understanding expected to result in improved production processes, new procedures and new products was achieved to a moderate extent. This implied that there was a general positive appreciation of organizational learning at individual, group and institutional levels. The highest variability was seen in group learning with a standard deviation of 0.64682 and the lowest variability was individual learning with a standard deviation 0.63267.

Technological dimension of firm-level institutions had the highest mean score of 4.078. This means that the top 100 medium-sized companies embraced technology to enhance knowledge sharing and organizational efficiency. Organizational culture had the lowest mean score of 3.6 indicating that the shared values, beliefs that shape behavioral norms were considered as an internal attribute influencing employee behaviour to a moderate extent. The highest variability was evident in organizational culture with a standard deviation of 1.087 while the lowest variability was technology with a standard deviation of 0.56575. Low standard deviation shows that there was more agreement among the

respondents while high standard deviation shows disparity among respondents. This meant that top 100 medium-sized companies' managers were in general appreciation that technology played an important role in influencing knowledge sharing.

On organizational performance, social performance had the highest mean score of 4.0625. This indicates that top 100 medium-sized companies invest heavily in corporate social responsibility. Learning and growth had the lowest mean score of 3.8281 meaning that employee skill development, innovation and productivity was considered to be taking place to a moderate extent among the top 100 medium-sized companies. The highest variability was evident in environmental performance with a standard deviation of 1.05493 and the lowest variability being customer satisfaction with standard deviation of 0.7962.

The results of one sample t-test on Table 4.11 show that for all the variables, p-values were 0.000, less than $p<0.05$. This means that the mean score measures differed statistically significantly across the top 100 medium-sized companies. For knowledge sharing measures, written reports had the highest difference (t= 49.204, $p<0.05$). For organizational learning measures, individual learning had the highest difference (t=49.862, $p<0.05$). Firm-level institutions measures show statistically significant differences with technology having the highest difference (t=57.666, $p< 0.05$). For organizational performance measures, customer satisfaction had the highest difference (t=39.249, $p<0.05$). In conclusion, for all the measures used in the study, statistically significant differences existed in the mean scores across the top 100 medium companies.

4.8: Correlation among the Study Variables

Pearson product moment correlation was used to measure the strength or degree of the relationship between variables. The closer the coefficient is to +/-1, the closer it is to perfect linear relationship and therefore a higher degree of relationship (Cohen, 1988). High correlation poses the threat of multicollinearity. According to Field (2009) the rule of thumb is that coefficients above 0.90 should be rejected due to inflated outcomes of individual predictive power. For this study, all the coefficients were not highly correlated. Table 4.12 shows the correlation among the study variables.

Table 4.12 Correlations among the Study Variables

Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 Written reports	1																	
2 Shared databases	.184	1																
3 Meetings	.001	-.161	1															
4 Personal conversations	.393**	-.217	.097	1														
5 Individual learning	-.054	.248*	-.050	-.066	1													
6 Group Learning	-.001	.025	-.083	.086	.354**	1												
7 Institution learning	.035	.047	-.051	.099	.343**	.056	1											
8 Structure	.225	.068	-.069	.129	.258*	.456**	.020	1										
9 Culture	-.173	-.008	.097	.032	.012	.065	.088	-.116	1									
10 Management styles	-.188	-.106	.152	.066	-.026	.048	.119	-.102	.541**	1								
11 Technology	-.062	-.050	.082	.219	.156	.580**	.073	.458**	.242	.301*	1							
12 Human Resources	-.235	-.083	.056	-143	-.184	-.163	-.093	.173	-.294**	-.217	.150	1						
13 Financial performance	-.156	.016	-.106	-.074	.046	-.036	.160	.158	.159	.213	.019	.456**	1					
14 Customer satisfaction	-.009	-.043	.113	.240	.121	.108	.135	.040	.551**	.567**	.348**	-.329**	.356**	1				
15 IBP	-.043	-.090	.026	-.123	.119	-.151	.266*	-.065	.188	.247*	.064	.075	.597**	.372**	1			
16 Learning and growth	-.316*	-.077	.197	-.195	.190	-.006	.084	-.104	.038	.072	.032	.034	-.116	.118	.074	1		
17 Social perspective	-.213	-.126	-.013	.021	-.027	.115	.062	-.088	.151	.357**	.175	.069	-.028	-.015	-.148	.053	1	
18 Environmental perspective	-.162	-.026	.261*	.172	-.259*	.018	-.207	-.046	.130	.103	.023	.277*	-.152	-.165	-.500**	-.110	.009	1

Key: Method- Pearson Product Moment Correlations

    Sample (n)=65

    **. Correlation is significant at the 0.01 level (2-tailed).

    *. Correlation is significant at the 0.05 level (2-tailed).

    IBP –Internal Business Processes

Source: Research Data

Results presented in Table 4.12 show varied degree of interrelationship among study variables both positive and negative correlation. According to Cohen (1988) interpretation of correlation coefficients, 0.00 to 0.01 shows no correlation; 0.02 to 0.09 show very weak correlation; 0.1 to 0.29 show weak correlation; 0.30 to 0.49 show moderately weak correlation; 0.5 to 0.69 show moderately strong correlation; 0.70 to 0.89 show strong correlation; 0.90 to 0.98 show very strong correlation while 0.99 to 1.00 show almost perfect correlation. Going by Cohen's (1988) classification, the independent variables amongst themselves show weak correlation meaning that there is no threat of multicollinearity. The correlation between the independent and dependent variables reflect presence of moderate associations.

The results presented in Table 4.12 shows that human resources have a statistically significant positive correlation with financial performance (r=0.456, p<0.01). The results show positive statistically significant correlation between customer satisfaction and organization culture (r=0.551, p< 0.01), management style (r=0.567, p< 0.01), human resources(r=0.329, p<0.01) and technology(r=0.348, p< 0.01). This suggests that the more a firm aligns its internal environment attributes conceptualized as firm-level institutions in this study, the more its customer satisfaction performance indicator improves. Environmental performance reflected moderate correlation with knowledge sharing through meetings (r=0.261, p< 0.05), human resources (r=0.277, p< 0.05) and individual learning(r=-0.259, p< 0.05). This finding indicates that human resource skills and competences play a statistically significant role in environmental performance.

4.9 Factor Analysis

Factor analysis was done to confirm that the study variables are related. The study variables were subjected to Principal Component Analysis (PCA) to explain how the set of study variables were structured. Principal component analysis is concerned with establishing which linear components existed within the data and how a particular variable contributed to that component (Field, 2009). Table 4.13 shows the proportion of common variance present in each variable known as communalities.

Table 4.13: Communalities

Variables	Initial	Extraction
Personal conversations	1.000	.761
Meetings	1.000	.680
Shared databases	1.000	.836
Written reports	1.000	.732
Human resource	1.000	.897
Management style	1.000	.896
Structure	1.000	.792
Culture	1.000	.820
Technology	1.000	.751
Institutional Learning	1.000	.699
Group Learning	1.000	.775
Individual Learning	1.000	.741
IBP	1.000	.879
Customer satisfaction	1.000	.760
Learning and Growth	1.000	.695
Social Performance	1.000	.923
Environmental Performance	1.000	.856

Extraction Method: Principal Component Analysis.
 Source: Research Data

The research finding in Table 4.13 shows high communality values for all of the components in the study. The components explained 68% to 92.3% of the variables they were measuring. This formed a good basis of combining most of the components into a

few manageable factors which are a representation of the common items. Eigen values were computed indicating the substantive importance of each factor under analysis. Table 4.14 shows the factors that were retained using principal component analysis.

Table 4.14: Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.976	17.507	17.507	2.976	17.507	17.507	2.412	14.186	14.186
2	2.273	13.368	30.875	2.273	13.368	30.875	2.182	12.836	27.023
3	2.020	11.881	42.756	2.020	11.881	42.756	1.735	10.208	37.231
4	1.703	10.016	52.772	1.703	10.016	52.772	1.597	9.395	46.625
5	1.277	7.513	60.285	1.277	7.513	60.285	1.549	9.114	55.739
6	1.183	6.956	67.241	1.183	6.956	67.241	1.431	8.418	64.157
7	1.058	6.222	73.464	1.058	6.222	73.464	1.294	7.611	71.767
8	1.004	5.908	79.372	1.004	5.908	79.372	1.293	7.605	79.372
9	.764	4.493	83.865						
10	.634	3.732	87.597						
11	.508	2.988	90.585						
12	.473	2.785	93.369						
13	.359	2.111	95.481						
14	.312	1.833	97.313						
15	.204	1.199	98.512						
16	.149	.876	99.389						
17	.104	.611	100.000						

Extraction Method: Principal Component Analysis.
Source: Research Data

The research results in Table 4.14 show that before rotation, factor one accounted for more variance, 17.507 percent compared to 14.186 percent after rotation. However, the cumulative variance explained by the eight extracted factors remained the same before and after rotation of factors. Factors with large Eigen values were retained following Kaiser (1960) recommendation that all factors with Eigen values greater than 1 should

be retained. This is based on the idea that Eigen values of 1 and above represent a substantial amount of variation (Field, 2009). This study adopted Kaiser's Eigen Value-greater-than-one rule and retained 8 factors explaining 79.372 percent of variation. A scree plot was used to confirm whether the 8 factors explained much of the variation. Stevens (2002) argued that a scree plot provides a reliable criterion for factor selection. Each Eigen value was graphed against the factor with which it was associated. This was important in that the relative importance of each factor becomes apparent (Field, 2009). Figure 4.2 shows the results of the scree plot.

Figure 4.2: Scree Plot
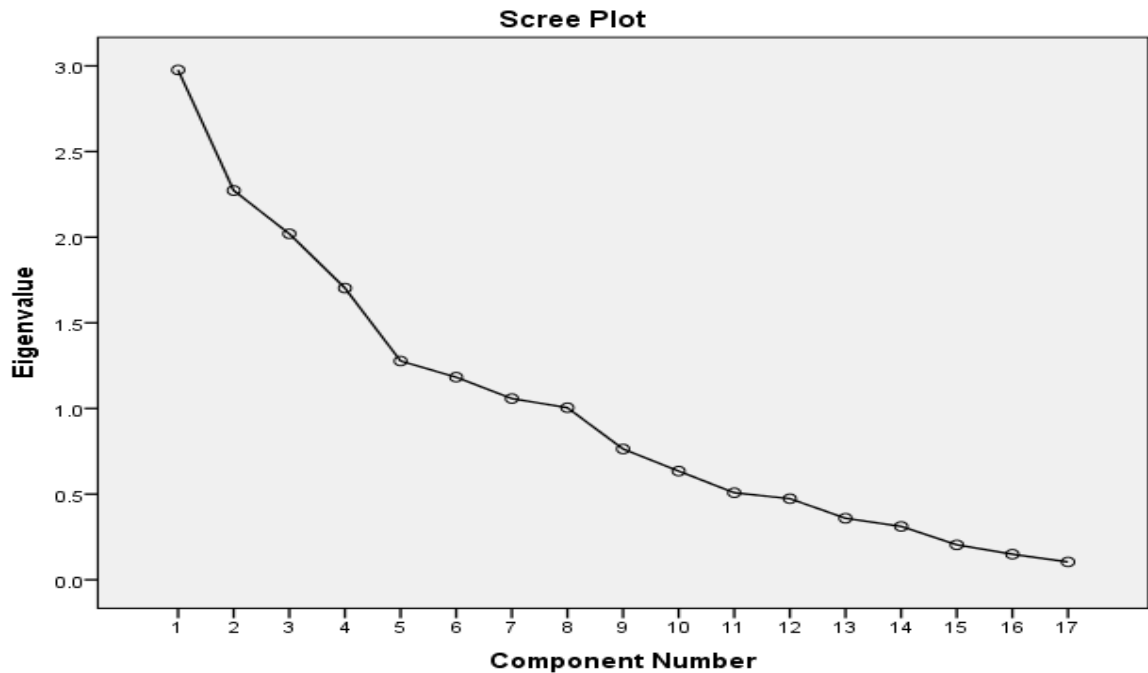
The research results in Figure 4.2 confirmed that 8 factors had Eigen values greater than one. Cattell (1966) argued that the cutoff point of selecting factors should be the point of inflexion of the curve which is the point at which the slope of the line changes dramatically. Only 8 factors are on the left of the inflexion point therefore, only 8 factors should be extracted.

Component Matrix explains the loading of the independent items into the 8 extracted components. Factor loadings of less than 0.5 were excluded following the recommendation by Kaiser (1960) who recommended consideration of loadings of more than 0.5. Table 4.15 shows the results of the component matrix.

Table 4.15: Component Matrix[a]

Variables	Component							
	1	2	3	4	5	6	7	8
Management style	.761							
Customer satisfaction	.754							
Culture	.689							
Technology	.638							
Structure		.664						
Group Learning		.604						
Individual Learning								
Environmental			.736					
IBP			-.584					
Written reports				-.638				
Personal conversations				-.521				
Learning and Growth								
Shared databases					-.550			.543
Human resource								
Social						-.601		
Meetings						.598		
Institutional Learning								

Extraction Method: Principal Component Analysis.
a. 8 components extracted
Source: Research Data

The research results in Table 4.15 shows that factor one had four independent items loading into it while factor two to factor six had two independent items each loading to them. Factor seven did not have any component loading on it while factor 8 had one independent item loading to it.

The eight factors that were extracted were subjected to Varimax with Kaiser Normalization. Varimax is a matrix of factor loadings for each variable onto each factor. Rotation maximizes the loading of each variable on one of the extracted factors while minimizing the loading on all other factors. This process makes it clear which variables relate to which factors and makes interpretation easier (Field, 2009). Table 4.16 shows the rotated component matrix.

Table 4.16: Rotated Component Matrix[a]

Variables	Component							
	1	2	3	4	5	6	7	8
Culture	.837							
Customer satisfaction	.801							
Management style	.721					.568		
IBP	.536							
Group Learning		.850						
Structure		.793						
Technology		.773						
Written reports			.801					
Learning and Growth			-.681					
Personal conversations			.676					
Institutional Learning				.810				
Individual Learning				.631				
Environmental					.782			
Meetings					.756			
Social						.948		
Human resource							.881	
Shared databases								.896

 Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 11 iterations.
 Source: Research Data

The results in Table 4.16 show that four constructs loaded onto factor one. These are organizational culture, customer satisfaction, management style and internal business processes. All these constructs are related to organizational performance in that customer

satisfaction and internal business processes are non financial measures of performance. On the other hand, performance is affected by the culture and management style embraced by the organization. The importance of looking at organizational performance more comprehensively is very critical in this study. This finding confirms the assertions of Hubbard (2009) who contend that sustainable businesses must meet the needs of all stakeholders.

Three constructs loaded onto factor two as shown in Table 4.16. These are group learning, organizational structure and technology. All these construct relate to an organization's internal environment attributes conceptualized in this study as firm-level institutions. According to Davenport and Prusak (2000), firms that develop technological competency are likely to enhance their ability to acquire and disseminate information. Young and Chen (2007) argue that organizational structure creates proper mechanism for encouragement and incentive which increases the motivation for knowledge sharing. The importance of focusing on firm-level institutions is therefore critical in order to establish how they impact on the relationship between knowledge sharing and firm performance.

Table 4.16 shows that three constructs loaded onto factor three. These are written reports, learning and growth and personal conversation. All these constructs relate to knowledge sharing behaviour. Written reports and personal conversation are the means to share knowledge while learning and growth is an outcome of knowledge sharing. Studies confirm that organizations today focus on intangible assets such as new ideas, new information and new knowledge to produce a sequence of innovations thus contributing to organizational performance (Gardner & Morris, 2007).

It is clear from Table 4.16 that two items loaded onto factor four. These are institutional learning and individual learning. These constructs relate to levels of organizational learning. According to Argyris & Schon (1996) individuals are the agents for learning in organizations as organizational learning occurs when individual members detect the discrepancy between actual and expected and try to correct the errors or challenge the underlying assumptions. Successful institutions facilitate the learning of all its members and consciously transforms themselves and their context (Pedler, et al., 1996) leading to improved performance.

Table 4.16 shows that two factors loaded onto factor five. These are environmental perspective and meetings. These constructs relate to environmental performance which was operationalized as the amount of environmental resources a firm uses in its operations (Hubbard, 2009). Meetings on the other hand entail the person to group knowledge sharing. In this case meetings can be very useful means of sharing knowledge on how to improve environmental performance. Studies have proven that sustainable development embodies environmental integrity Hubbard (2009) thus environmental performance is important in this study.

One construct loaded on factor six as shown in Table 4.16. Factor six is social performance which relates to the impact a firm has on the community in which it works in other words corporate social responsibility. Social performance is one of the measures of organizational performance based on sustainable balanced scorecard (Hubbard, 2009).

Table 4.16 shows that factor seven is human resource. Increasing competition on a global scale adds to an increasing demand for a high skilled and well informed workforce to contribute to competitive advantage. Human resource skills and competences influence organizational performance. Factor eight is shared databases which relates to online sharing of knowledge which has an implication on knowledge transfer and organizational performance. Factor analysis played an important confirmatory role in this study by confirming that the seventeen factors were related but not perfectly. It was also useful in extracting eight factors which were organizational performance, firm-level institutions, knowledge sharing, organizational learning, environmental performance, social performance, human resources and shared databases.

4.10 Knowledge Sharing and Organizational Performance

The first objective of the study was to establish the effect of knowledge sharing on organizational performance. To achieve this objective, hypothesis one was stated in null as:

H_{01}: Knowledge sharing has no significant effect on organizational performance.

Knowledge sharing was operationalized as written reports, shared databases, meetings and personal conversations according to Yi (2009). Organizational performance on the other hand was operationalized in line with sustainable balanced scorecard according to Hubbard (2009) as financial performance, internal business processes, customer satisfaction, learning and growth, social performance (corporate social responsibility) and environmental performance (environmental concerns). The financial measures considered

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in this study were a composite index of sales growth, profitability and returns on investment derived from the primary data since secondary data on financial performance was not accessible as the medium-sized companies are not required by law to publish their accounts.

The study set out to establish the effect of knowledge sharing on each of the six parameters of performance, the effect of knowledge sharing on non financial performance and finally on organizational performance. Table 4.17 to Table 4.24 shows the regression results of knowledge sharing on organizational performance.

Table 4.17: Knowledge Sharing and Financial Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.226[a]	.051	-.014	3.53381
a. Predictors: (Constant), Personal conversations, meetings, Shared databases, Written reports				

ANOVA[a]					
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.137	4	9.784	.784	.541[b]
	Residual	724.292	58	12.488		
	Total	763.429	62			
a. Dependent Variable: Y= Financial Performance						
b. Predictors: (Constant), Personal conversations, meetings, Shared databases, Written reports						

Model Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	20.432	4.463		4.578	.000
	Written reports(WR)	-1.257	.794	-.231	-1.584	.119
	Shared databases(SD)	.045	.179	.034	.249	.804
	Meetings(M)	-.059	.069	-.110	-.849	.399
	Personal conversations(PC)	.093	.143	.096	.652	.517
a. Dependent Variable: Y= Financial Performance						

Source: Research Data

The results presented in Table 4.17 indicate positive and low relationship between knowledge sharing and financial performance (r=0.226). Knowledge sharing explains 5.1% (R^2=0.051) of the variation in financial performance with the remaining 94.9% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=0.784, p=0.541). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that knowledge sharing have no statistically significant effect on financial performance.

The model coefficients results show that t-tests has p-values that were greater than 0.05 indicating that individual knowledge sharing measures had no statistically significant effect on financial performance. This can be interpreted to mean that knowledge sharing does not contribute to improvement of financial performance of top 100 medium-sized companies. This finding is important with regard to measurement of organizational performance, in that it shows the inadequacy of using traditional financial measures on the basis of economic perspective alone hence the need for inclusion of non financial measures as discussed in the subsequent sections.

Table 4.18: Knowledge Sharing and Internal Business Processes

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.183[a]	.034	.033	2.61251
a. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports				

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	13.790	4	3.448	.505	.732[b]
1	Residual	395.861	58	6.825		
	Total	409.651	62			
a. Dependent Variable: Y= Internal Business Processes						
b. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)(C)	15.135	3.300		4.587	.000
	Written reports(WR)	.079	.587	.020	.134	.893
	Shared databases(SD)	-.137	.132	-.144	-1.033	.306
	Meetings(M)	.000	.051	-.001	-.007	.995
	Personal conversations(PC)	-.116	.106	-.163	-1.093	.279
a. Dependent Variable: Y= Internal Business Processes						

Source: Research Data

The results presented in Table 4.18 indicate positive and low relationship between knowledge sharing and internal business processes (r=0.183). Knowledge sharing explains 3.4 % (R^2=0.034) of the variation in internal business processes with the remaining 96.6% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=0.505, p=0.732). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that knowledge sharing did not have a statistically significant effect on internal business processes. The model coefficients results show that t-tests has p-values that were greater than 0.05 indicating that individual knowledge sharing indicators has no statistically significant effect on internal business processes. This is interpreted to mean that knowledge sharing does not explain the changes in internal business processes of top 100 medium-sized companies.

Table 4.19: Knowledge Sharing and Customer Satisfaction

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.287[a]	.082	.019	3.16555
a. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.068	4	13.017	1.299	.281[b]
	Residual	581.201	58	10.021		
	Total	633.270	62			
a. Dependent Variable: Y= Customer satisfaction						
b. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	12.470	3.998		3.119	.003
	Written reports(WR)	-.773	.711	-.156	-1.087	.281
	Shared databases(SD)	.063	.160	.053	.391	.697
	Meetings(M)	.035	.062	.071	.556	.580
	Personal conversations (PC)	.271	.128	.306	2.114	.039
a. Dependent Variable: Y= Customer satisfaction						

Source: Research Data

The results presented in Table 4.19 indicate positive and low relationship between knowledge sharing and customer satisfaction (r=0.287). Knowledge sharing explains 8.2% (R^2=0.082) of the variation in customer satisfaction, with the remaining 91.8% being explained by other variables not included in this study. The regression model was not significant at (F=1.299, p=0.281). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that knowledge sharing have no statistically significant effect on customer satisfaction among top 100 medium-sized companies.

The model coefficients results presented in Table 4.19 show that t-tests of personal conversation had a beta coefficient of 0.271 at (p= 0.039). Since the p-value is less than 0.05, this indicates that knowledge sharing through personal conversation has a statistically significant effect on customer satisfaction. Based on the regression results, an equation can be written to explain this effect as follows:

Customer satisfaction = 12.47(C) + 0.271 (PC)

This means that a unit change in knowledge sharing through personal conversations causes an increase by 0.271 on customer satisfaction. This can be interpreted to mean that knowledge sharing through personal conversation positively contributes to customer satisfaction in an organization.

Table 4.20: Knowledge Sharing and Learning and Growth

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.394[a]	.155	.097	3.67322	
a. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports					

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	143.845	4	35.961	2.665	.041[b]
	Residual	782.568	58	13.493		
	Total	926.413	62			
a. Dependent Variable:Y= Learning and Growth						
b. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports						

Model Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	21.815	4.639		4.702	.000
	Written reports (WR)	-1.730	.825	-.288	-2.097	.040
	Shared databases (SD)	-.047	.186	-.033	-.253	.801
	Meetings(M)	.105	.072	.179	1.460	.150
	Personal conversations (PC)	-.113	.149	-.106	-.762	.449
a. Dependent Variable: Y=Learning and Growth						

Source: Research Data

The results presented in Table 4.20 indicate positive and moderate relationship between knowledge sharing and learning and growth (r=0.394). Knowledge sharing explains 15.5% ($R^2 = 0.155$) of the variation in learning and growth. The regression model was statistically significant at (F=2.665, p=0.041). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that knowledge sharing have a statistically significant effect on learning and growth.

The results of Table 4.20 show that t-tests for written reports has p-values less than 0.05 indicating that knowledge sharing through written reports have statistically significant effect on learning and growth. Based on the regression results, an equation can be written to explain this effect as:

Learning and growth= 21.815(C) – 1.730(WR)

This can be interpreted to mean that a unit change in knowledge sharing through written reports causes a negative change of 1.730 on learning and growth.

Table 4.21: Knowledge sharing and Social Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.204[a]	.042	-.024	1.65160
a. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.869	4	1.717	.630	.643[b]
	Residual	158.210	58	2.728		
	Total	165.079	62			
a. Dependent Variable: Y=Social Performance						
b. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)(C)	9.957	2.086		4.773	.000
	Written reports (WR)	-.503	.371	-.199	-1.355	.181
	Shared databases (SD)	-.030	.084	-.049	-.355	.724
	Meetings (M)	.002	.032	.008	.058	.954
	Personal conversations (PC)	.039	.067	.087	.587	.559
a. Dependent Variable: Y= Social Performance						

Source: Research Data

The results presented in Table 4.21 indicate positive and low relationship between knowledge sharing and social performance (r=0.204). Knowledge sharing explains 4.2% (R^2 =0.042) of the variation in social performance. The regression model was not significant at (F=0.630, p=0.643). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that knowledge sharing have no statistically significant effect on social performance.

The model coefficients results show that t-tests has p-values that are greater than 0.05 indicating that individual knowledge sharing measures has no statistically significant effect on social performance. This means that knowledge sharing does not contribute to improvement of social performance of top 100 medium-sized companies. This can be interpreted to mean that even though organizations shared knowledge it has no significant effect on the top 100 medium-sized companies' engagement in social performance or corporate social responsibility.

Table 4.22: Knowledge Sharing and Environmental Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.418[a]	.175	.118	2.88861

a. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102.456	4	25.614	3.070	.023[b]
	Residual	483.957	58	8.344		
	Total	586.413	62			

a. Dependent Variable: Y= Environmental Performance

b. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports

Model Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	6.024	3.648		1.651	.104
	Written reports(WR)	-1.117	.649	-.234	-1.722	.090
	Shared databases(SD)	.168	.146	.148	1.148	.256
	Meetings(M)	.146	.057	.313	2.584	.012
	Personal conversations (PC)	.228	.117	.267	1.943	.057

a. Dependent Variable: Y= Environmental Performance

Source: Research Data

The results presented in Table 4.22 indicate positive and moderate relationship between knowledge sharing and environmental performance (r=0.418). Knowledge sharing explains 17.5% (R^2 =0.175) of the variation in environmental performance with the remaining 82.5% being explained by other variables not included in this study. The regression model was statistically significant at (F=3.070, p=0.023). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that knowledge sharing has a statistically significant effect on environmental performance.

The model coefficients results presented in Table 4.22 show that t-test of meetings had a beta coefficient of 0.146 at (p= 0.012). Since the p-value is less than 0.05, this indicates that knowledge sharing through meetings has a statistically significant effect on environmental performance. Based on the regression results, an equation can be written to explain this effect as follows:

Environmental performance = 6.024 (C) + 0.146(M)

This means that a unit change in knowledge sharing through meetings improves environmental performance by 0.146. This can be interpreted to mean that knowledge sharing through meetings helps the firms reduce the amount of environmental resources they use in their operations.

Table 4.23: Knowledge Sharing and Non Financial Performance (Effect of knowledge sharing on all the non financial parameters combined)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.496[a]	.246	.194	5.71842

a. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	620.269	4	155.067	4.742	.002[b]
	Residual	1896.619	58	32.700		
	Total	2516.889	62			

a. Dependent Variable: Y= Non financial performance
b. Predictors: (Constant), Personal conversations, Meetings, Shared databases, Written reports

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	65.401	7.222		9.055	.000
	Written reports (WR)	-4.044	1.284	-.409	-3.148	.003
	Shared databases(SD)	.017	.290	.007	.060	.953
	Meetings(M)	.287	.112	.297	2.564	.013
	Personal conversations(PC)	.309	.232	.175	1.333	.188

a. Dependent Variable: Y= Non financial performance

Source: Research Data

The results presented in Table 4.23 indicate positive and moderate relationship between knowledge sharing and non financial performance (r=0.496). Knowledge sharing explains 24.6 % (R^2 =0.246) of the variation in non financial performance. This implies that knowledge sharing has a greater effect on non financial measures than it has on financial measures.

The regression model was statistically significant at (F=4.742, p=0.002). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that knowledge sharing have a statistically significant effect on non financial performance. This was an interesting finding given that the effect of knowledge sharing on most of the individual indicators of non financial performance were statistically not significant.

Model coefficient results presented in Table 4.23 reveal that t-tests for written reports have negative beta coefficients of -4.044 at (p=0.003) while beta coefficients for meetings are positive 0.287 at (p=0.013). Based on the regression results, an equation can be written to explain this effect as follows:

Non financial performance = 65.401(C) + 0. 287(M) − 4.044(WR)

This means that a unit change in knowledge sharing through meeting causes an increase of 0.287 on non financial performance while a unit change in knowledge sharing through written reports causes a negative change of 4.044 in non financial performance. This can be interpreted to mean that meetings are an effective way of sharing knowledge due to the positive implications they have on non financial measures of performance.

Table 4.24: **Knowledge Sharing and Organizational Performance (Main Hypothesis)**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.432[a]	.187	.131	7.26542
a. Predictors: (Constant), Written reports, meetings, Shared databases, Personal conversations				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	704.042	4	176.010	3.334	.016[b]
	Residual	3061.609	58	52.786		
	Total	3765.651	62			
a. Dependent Variable: Organizational Performance						
b. Predictors: (Constant), Written reports, Meetings, Shared databases, Personal conversations						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	81.936	9.176		8.929	.000
	Personal conversations (PC)	.326	.295	.151	1.108	.272
	Meetings (M)	.228	.142	.192	1.600	.115
	Shared databases(SD)	.049	.368	.017	.134	.894
	Written reports (WR)	-4.969	1.632	-.411	-3.045	.003
a. Dependent Variable: Organizational Performance						

Source: Research Data

The results presented in Table 4.24 indicate positive and moderate relationship between knowledge sharing and organizational performance (r=0.432). Knowledge sharing explains 18.7% (R^2 =0.187) of the variation in organizational performance with the remaining 81.3% explained by other variables implemented by the top 100 medium-sized companies. The regression model was statistically significant at (F=3.334, p=0.016). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that knowledge sharing have a statistically significant effect on organizational performance.

The model coefficients results presented in Table 4.24 show that t-tests of written reports had a beta coefficient of -4.969 at (p=0.003). Since the p-value is less than 0.05, this indicates that knowledge sharing through written reports has a statistically significant effect on organizational performance. Based on the regression results, an equation can be written to explain this effect as follows:

Organizational performance = 81.936(C) - 4.969 (WR)

This means that a unit change in knowledge sharing through written reports results in a negative change of 4.969 on organizational performance. This can be interpreted to mean that knowledge sharing through written reports is counter-productive to performance in organizations. The analysis of hypothesis one established that knowledge sharing has a statistically significant effect on performance of top 100 medium-sized companies.

4.11 Firm-level Institutions and Organizational Performance

The second objective of the study was to establish the effect of firm-level institutions on organizational performance. To achieve this objective, hypothesis one was stated in null as: H_{02}: Firm-level institutions have no significant effect on organizational performance.

Firm-level institutions comprised of human resources, management style, organizational structure, technology and organizational culture (Peter and Waterman, 1982; North, 1991; Machuki, 2011). The study objective set out to establish the effect of firm-level institutions on each of the six parameters of performance and finally, the main hypothesis on the effect of firm-level institutions on organizational performance was tested. Table 4.25 to Table 4.32 shows the regression results of firm-level institutions on organizational performance.

Table 4.25: Firm-level Institutions and Financial Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.540[a]	.292	.231	3.05968
a. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	224.024	5	44.805	4.786	.001[b]
	Residual	542.976	58	9.362		
	Total	767.000	63			
a. Dependent Variable: Y= Financial Performance						
b. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)(C)	-.264	4.094		-.065	.949
	Structure(OS)	.401	.618	.087	.650	.518
	Culture(OC)	.480	.247	.299	1.946	.057
	Management style(MS)	.329	.368	.138	.896	.374
	Technology(T)	.021	.288	.010	.074	.942
	Human resources (HR)	.367	.100	.448	3.654	.001
a. Dependent Variable: Y= Financial Performance						

Source: Research Data

The results presented in Table 4.25 indicate positive and moderate relationship between firm-level institutions and financial performance (r=0.540). Firm-level institutions explain 29.2% (R^2 =0.292) of the variation in financial performance with the remaining 70.2% explained by other variables implemented by the top 100 medium-sized companies. The regression model was statistically significant at (F=4.786, p=0.001). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that firm-level institutions have a statistically significant effect on financial performance.

The model coefficients results presented in Table 4.25 show that t-tests of human resources had a beta coefficient of 0.367 at (p-value= 0.001). Since the p-value is less than 0.05, this indicates that human resources have a statistically significant effect on financial performance. Based on the regression results, an equation can be written to explain this effect as follows: Financial performance = -0.264(C) + 0.367 (HR). This means that change in human resource skills and competences causes an increase of 0.367 on financial performance. This can be interpreted to mean that financial performance is affected by the human resource skills and competences. If the employees have the right skills and competences, they avoid mistakes and repetitions resulting in greater efficiency and better financial performance.

Table 4.26: Firm-Level Institutions and Internal Business Processes

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.305[a]	.093	.015	2.55077

a. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.626	5	7.725	1.187	.327[b]
	Residual	377.374	58	6.506		
	Total	416.000	63			

a. Dependent Variable: Y= IBP

b. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture

Model Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)(C)	6.789	3.413		1.989	.051
	Structure(OS)	-.270	.515	-.079	-.525	.602
	Culture(OC)	.065	.206	.055	.316	.753
	Management style(MS)	.418	.306	.237	1.365	.178
	Technology(T)	.043	.240	.029	.180	.858
	Human resource(HR)	.074	.084	.122	.879	.383

a. Dependent Variable: Y=Internal Business Processes

Source: Research Data

The results presented in Table 4.26 indicate positive and low relationship between firm-level institutions and internal business processes (r=0.305). Firm-level institutions explain 9.3% (R^2 =0.093) of the variation in internal business processes with the remaining 90.7% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=1.187, p=0.327). Since the calculated p-value was greater than 0.05, the null hypothesis was not rejected and it was concluded that firm-level institutions have no statistically significant effect on internal business processes. The model coefficients results show that t-tests has p-values that are greater than 0.05 indicating that firm-level institutions have no statistically significant effect on internal business processes. This can be interpreted to mean that the firm-level institutions do not explain changes in internal business processes among the top 100 medium-sized companies in Kenya.

Table 4.27: Firm-level Institutions and Customer Satisfaction

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.630[a]	.397	.345	2.57756
a. Predictors: (Constant), Human resource, Management style, structure, Technology, Culture				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	253.660	5	50.732	7.636	.000[b]
	Residual	385.340	58	6.644		
	Total	639.000	63			
a. Dependent Variable: Y= Customer satisfaction						
b. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture						

Model Coefficients[a]		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)(C)	8.307	3.449		2.409	.019
	Structure(OS)	.245	.520	.058	.472	.639
	Culture(OC)	.497	.208	.339	2.394	.020
	Management style (MS)	.416	.310	.190	1.344	.184
	Technology(T)	.276	.243	.147	1.136	.261
	Human resource (HR)	-.155	.085	-.207	-1.830	.072
a. Dependent Variable: Y= Customer satisfaction						

Source: Research Data

The results presented in Table 4.27 indicate positive and strong relationship between firm-level institutions and customer satisfaction (r=0.630). Firm-level institutions explain 39.7% (R^2 = 0.397) of the variation in customer satisfaction with the remaining 60.3% explained by other variables implemented by the top 100 medium-sized companies. The regression model was statistically significant at (F=7.636, p=0.000). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that firm-level institutions have a statistically significant effect on customer satisfaction.

The model coefficients results presented in Table 4.27 show that t-tests of organizational culture had a beta coefficient of 0.497 at (p= 0.020). Since the p-value is less than 0.05, this indicates that organizational culture has a statistically significant effect on customer satisfaction. Based on the regression results, an equation can be written to explain this effect as follows:

Customer satisfaction = 8.307(C) + 0.497(OC)

This means that change in organizational culture causes an increase by 0.497 on customer satisfaction. This can be interpreted to mean that a change of organizational culture defined as the norms, beliefs, attitudes and values of an organization and its employees would positively impact on customer satisfaction.

Table 4.28: Firm-Level Institutions and Learning and Growth

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.175[a]	.031	.053	3.95033	
a. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture					

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.655	5	5.731	.367	.869[b]
	Residual	905.095	58	15.605		
	Total	933.750	63			
a. Dependent Variable: Learning and Growth						
b. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	13.155	5.286		2.489	.016
	Structure (OS)	-.802	.797	-.157	-1.006	.319
	Culture (OC)	-.086	.318	-.049	-.270	.788
	Management style (MS)	.271	.475	.102	.570	.571
	Technology (T)	.211	.372	.093	.567	.573
	Human resource(HR)	.060	.130	.067	.464	.644
a. Dependent Variable: Y= Learning and Growth						

Source: Research Data

The results presented in Table 4.28 indicate positive and low relationship between firm-level institutions and learning and growth (r=0.175). Firm-level institutions explain 3.1% (R^2=0.031) of the variation in learning and growth with the remaining 96.9% explained

by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=0.367, p=0.869). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that firm-level institutions have no statistically significant effect on learning and growth.

The model coefficients results show that t-tests has p-values were greater than 0.05 indicating that individual firm-level institutions measures had no statistically significant effect on learning and growth. This can be interpreted to mean that firm-level institutions do not explain the changes in learning and growth in top 100 medium-sized companies in Kenya.

Table 4.29: Firm-level Institutions and Social Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.662[a]	.439	.390	1.30137

a. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.773	5	15.355	9.066	.000[b]
	Residual	98.227	58	1.694		
	Total	175.000	63			

a. Dependent Variable: Y= Social Performance
b. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)(C)	3.516	1.741		2.019	.048
	Structure(OS)	-.272	.263	-.123	-1.035	.305
	Culture(OC)	-.300	.105	-.391	-2.859	.006
	Management style(MS)	.925	.156	.808	5.915	.000
	Technology(T)	.068	.123	.069	.550	.584
	Human resource (HR)	.011	.043	.028	.260	.796

a. Dependent Variable: Y= Social Performance

Source: Research Data

The results presented in Table 4.29 indicate positive and strong relationship between firm-level institutions and social performance (r=0.662). Firm-level institutions explain 43.9% (R^2=0.439) of the variation in social performance with the remaining 56.1% explained by other variables implemented by the top 100 medium-sized companies. The regression model was statistically significant at (F=9.066, p=0.000). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that firm-level institutions have a statistically significant effect on social performance.

The model coefficients results presented in Table 4.29 show that t-tests of organizational culture had a beta coefficient of -0.300 at (p=0.006) while management style had a beta coefficient of 0.925 at (p=0.000). Since the p-values are less than 0.05, this indicates that knowledge sharing through personal conversation has a statistically significant effect on social performance. Based on the regression results, an equation can be written to explain this effect as follows:

Social performance = 3.516(C) + 0.925 (MS) − 0.300(OC)

This means that a change in management style causes an increase of 0.925 on social performance while a change in organizational culture causes a negative change of 0.300 on social performance. This can be interpreted to mean that investment in social performance or corporate social responsibility defined as the impact a firm has on communities in which it works is influence by management style and organizational culture.

Table 4.30: Firm-level Institutions and Environmental Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.399[a]	.159	.087	3.02392

a. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	100.643	5	20.129	2.201	.066[b]
	Residual	530.357	58	9.144		
	Total	631.000	63			

a. Dependent Variable: Y= Environmental Performance

b. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)(C)	3.578	4.046		.884	.380
	Structure(OS)	-.654	.610	-.156	-1.072	.288
	Culture(OC)	.483	.244	.332	1.984	.052
	Management style(MS)	-.450	.363	-.207	-1.239	.220
	Technology(T)	.266	.285	.143	.932	.355
	Human resource(HR)	.306	.099	.412	3.083	.003

a. Dependent Variable: Y= Environmental Performance

Source: Research Data

The results presented in Table 4.30 indicate positive and moderate relationship between firm-level institutions and environmental performance (r=0.399). Firm-level institutions explain 15.9% (R^2 =0.159) of the variation in environmental performance with the remaining 84.1% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=2.201, p=0.066). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that firm-level institutions have no statistically significant effect on environmental performance in top 100 medium-sized companies in Kenya.

The model coefficients results presented in Table 4.30 show that t-tests of human resources had a beta coefficient of 0.306 at (p= 0.003). Since the p-value is less than 0.05, this indicates that human resources have a statistically significant effect on environmental performance. Based on the regression results, an equation can be written to explain this effect as follows:

Environmental performance = 3.578(C) + 0.306 (HR)

This means that a change in human resources skills and competences cause an increase of 0.306 on environmental performance. This can be interpreted to mean that human resources' level of skills and competences impacts on environmental performance. The more skilled the human resources the more conscious they are about the environment.

Table 4.31: Firm-level Institutions and Non Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.648[a]	.420	.370	5.02313

a. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1058.303	5	211.661	8.389	.000[b]
	Residual	1463.447	58	25.232		
	Total	2521.750	63			

a. Dependent Variable: Y=Non financial performance

b. Predictors: (Constant), Human resource, Management style, Structure, Technology, Culture

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)(C)	35.345	6.721		5.259	.000
	Structure(OS)	-1.752	1.014	-.209	-1.728	.089
	Culture(OC)	.660	.405	.227	1.630	.109
	Management style (MS)	1.580	.603	.364	2.618	.011
	Technology(T)	.864	.474	.232	1.824	.073
	Human resource(HR)	.296	.165	.199	1.796	.078

a. Dependent Variable: Y=Non Financial Performance

Source: Research Data

The results presented in Table 4.31 indicate positive and strong relationship between firm-level institutions and non financial performance (r=0.648). Firm-level institutions explain 42% (R^2 = 0.420) of the variation in non financial performance with the remaining 58% explained by other variables implemented by the top 100 medium-sized companies. The regression model was significant at (F=8.389, p=0.000). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that firm-level institutions have a statistically significant effect on and non financial performance.

The model coefficients results presented in Table 4.31 show that t-test of management style had a beta coefficient of 1.580 at (p=0.011). Since the p-value is less than 0.05, this indicates that firm-level institutions have a statistically significant effect on non financial performance. Based on the regression results, an equation can be written to explain this effect as follows:

Non Financial Performance = 35.345(C) + 1.580 (MS)

This means that a change in management style causes an increase of 1.580 on non financial performance. This can be interpreted to mean that firm-level institutions have a statistically significant effect on non-financial performance.

Table 4.32: Firm-level Institutions and Organizational Performance(Main Hypothesis)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.674[a]	.454	.407	5.95388
a. Predictors: (Constant), Technology, Human resource, Management style, Structure, Culture				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1709.729	5	341.946	9.646	.000[b]
	Residual	2056.021	58	35.449		
	Total	3765.750	63			
a. Dependent Variable: Organizational Performance						
b. Predictors: (Constant), Technology, Human resource, Management style, Structure, Culture						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	33.627	7.967		4.221	.000
	Human resource (HR)	.655	.195	.361	3.351	.001
	Management style (MS)	1.896	.715	.357	2.651	.010
	Structure (OS)	-1.162	1.202	-.114	-.967	.338
	Culture (OC)	1.005	.480	.282	2.094	.041
	Technology (T)	.718	.561	.158	1.279	.206
a. Dependent Variable: Organizational performance						

Source: Research Data

The results of presented in Table 4.32 indicate positive and strong relationship between firm-level institutions and organizational performance (r=0.674). Firm-level institutions explain 45.4% (R^2 =0.454) of the variation in organizational performance. The regression model was statistically significant at (F=9.646, p=0.000). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that firm-level institutions have a statistically significant effect on organizational performance.

The model coefficients results presented in Table 4.32 show that t-tests of human resources had beta coefficient of 0.655 at (p=0.001), management style had beta coefficients of 1.896 at (p= 0.010) while organizational culture had a beta coefficient of

1.005 at (p= 0.041). Since all the p-values are less than 0.05, this indicates that the individual firm-level institutions' indicators have a statistically significant effect on organizational performance. Based on the regression results, an equation can be written to explain this effect as follows:

Organizational performance = 33.627(C) + 0.655 (HR) + 1.896(MS) + 1.005(OC)

This meant that change in human resources, management style and organizational culture causes an increase of 0.655, 1.896 and 1.005 respectively on organizational performance. This can be interpreted to mean that organizational focus on its human resources, management style and organizational culture would impact on its performance.

4.12 Organizational Learning and Organizational Performance

The third objective of the study was to establish the effect organizational learning on organizational performance. To achieve this objective, hypothesis three was stated in null as:

H_{03}: Organizational learning has no significant effect on organizational performance.

Organizational learning was conceptualized in terms of individual, group and institutional learning (Crossan, Lane and White, 1999; Namada, 2013). The study set out to establish the effect of organizational learning on each of the six parameters of performance and finally the effect of organizational learning on organizational performance. Table 4.33 to Table 4.40 shows the results of organizational learning on organizational performance.

Table 4.33: Organizational Learning and Financial Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.188[a]	.035	-.013	3.51150
a. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.162	3	9.054	.734	.536[b]
	Residual	739.838	60	12.331		
	Total	767.000	63			
a. Dependent Variable: Y= Financial Performance						
b. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	12.237	3.890		3.145	.003
	Individual Learning(IL)	-.007	.132	-.008	-.055	.956
	Group Learning(GL)	.006	.124	.006	.047	.963
	Institutional Learning(INSTL)	.130	.092	.190	1.406	.165
a. Dependent Variable: Y=Financial Performance						

Source: Research Data

The results presented in Table 4.33 indicate positive and low relationship between organizational learning and financial performance (r=0.188). Organizational learning explains 3.5% ($R^2 = 0.035$) of the variation in financial performance with the remaining 96.5% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=0.734, p=0.536). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that organizational learning have no statistically significant effect on financial performance.

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The model coefficients results show that t-tests have p-values greater than 0.05 indicating that individual organizational learning measures have no statistically significant effect on financial performance. This can be interpreted to mean that organizational learning does not contribute to improvement of financial performance in medium-sized companies in Kenya.

Table 4.34: Organizational Learning and Internal Business Processes

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.326[a]	.107	.062	2.48887
a. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.332	3	14.777	2.386	.078[b]
	Residual	371.668	60	6.194		
	Total	416.000	63			
a. Dependent Variable: Y= Internal Business Processes						
b. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	9.423	2.757		3.417	.001
	Individual Learning(IL)	.073	.094	.109	.784	.436
	Group Learning(GL)	-.135	.088	-.202	-1.537	.130
	Institutional Learning(INSTL)	.119	.065	.238	1.822	.074
a. Dependent Variable: Y= Internal Business Processes						

Source: Research Data

The results presented in Table 4.34 indicate positive and low relationship between organizational learning and internal business processes (r=0.326). Organizational learning explains 10.7% ($R^2 = 0.107$) of the variation in internal business processes with the remaining 89.3% explained by other variables implemented by the top 100 medium-sized

companies. The regression model was not significant at (F=2.386, p=0.078). Since the

calculated p-value was greater than 0.05, null hypothesis was not rejected and it was

concluded that organizational learning have no statistically significant effect on internal

business processes.

The model coefficients results show that t-tests have p-values greater than 0.05 indicating

that individual organizational learning measures have no statistically significant effect on

internal business processes. This can be interpreted to mean that organizational learning

does not contribute to improvement of internal business processes among medium-sized

companies in Kenya.

Table 4.35: Organizational Learning and Customer Satisfaction

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.175[a]	.031	-.018	3.21299
a. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.600	3	6.533	.633	.597[b]
	Residual	619.400	60	10.323		
	Total	639.000	63			
a. Dependent Variable:Y= Customer satisfaction						
b. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	10.800	3.560		3.034	.004
	Individual Learning (IL)	.043	.121	.052	.354	.724
	Group Learning (GL)	.070	.113	.085	.620	.538
	Institutional Learning (INSTL)	.070	.085	.113	.834	.408
a. Dependent Variable: Y= Customer satisfaction						

Source: Research Data

The results presented in Table 4.35 indicate positive and low relationship between organizational learning and customer satisfaction (r=0.175). Organizational learning explains 3.1% ($R^2 = 0.031$) of the variation in customer satisfaction with the remaining 96.9% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=0.633, p=0.597). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that organizational learning have no statistically significant effect on customer satisfaction.

The model coefficients results show that t-tests have p-values greater than 0.05 indicating that individual organizational learning measures have no statistically significant effect on customer satisfaction. This can be interpreted to mean that organizational learning does not contribute to improvement of customer satisfaction among top 100 medium-sized companies in Kenya.

Table 4.36: Organizational Learning and Employee Learning and Growth

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.206[a]	.043	.005	3.86018
a. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	39.691	3	13.230	.888	.453[b]
1	Residual	894.059	60	14.901		
	Total	933.750	63			
a. Dependent Variable: Learning and Growth						
b. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	11.920	4.277		2.787	.007
	Individual Learning (IL)	.216	.145	.215	1.489	.142
	Group Learning (GL)	-.084	.136	-.083	-.613	.542
	Institutional Learning (INSTL)	.011	.102	.014	.105	.917
a. Dependent Variable: Learning and Growth						

Source: Research Data

The results presented in Table 4.36 indicate positive and low relationship between organizational learning and employee learning and growth (r=0.206). Organizational learning explains 4.3% (R^2 = 0.043) of the variation in employee learning and growth with the remaining 95.7% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=0.888, p=0.453). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that organizational learning have no statistically significant effect on employee learning and growth.

The model coefficients results show that t-tests have p-values greater than 0.05 indicating that individual organizational learning measures have no statistically significant effect on employee learning and growth. This can be interpreted to mean that organizational learning does not contribute to improvement of employee learning and growth among medium-sized companies in Kenya.

Table 4.37: Organizational Learning and Social Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.163[a]	.026	-.022	1.68508
a. Predictors: (Constant), Institutional Learning, Group Learning, individual Learning				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.630	3	1.543	.543	.654[b]
	Residual	170.370	60	2.840		
	Total	175.000	63			
a. Dependent Variable: Y= Social Performance						
b. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning						

Coefficients[a]					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	6.777	1.867		3.630	.001
	Individual Learning (IL)	-.050	.063	-.114	-.781	.438
	Group Learning (GL)	.066	.059	.152	1.108	.272
	Institutional Learning (INSTL)	.031	.044	.094	.692	.492

a. Dependent Variable: Y= Social Performance
Source: Research Data

The results presented in Table 4.37 indicate positive and low relationship between organizational learning and social performance (r=0.163). Organizational learning explains 2.6% (R^2 = 0.026) of the variation in social performance with the remaining 96.5% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=0.543, p=0.654). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that organizational learning have no statistically significant effect on social performance.

The model coefficients results show that t-tests have p-values greater than 0.05 indicating that individual organizational learning measures have no statistically significant effect on social performance. This can be interpreted to mean that organizational learning does not contribute to improvement of social performance among top 100 medium-sized companies in Kenya.

Table 4.38: Organizational Learning and Environmental Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.307[a]	.094	.049	3.08598
a. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	59.603	3	19.868	2.086	.112[b]
1	Residual	571.397	60	9.523		
	Total	631.000	63			
a. Dependent Variable: Y= Environmental Performance						
b. Predictors: (Constant), Institutional Learning, Group Learning, Individual Learning						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant) (C)	16.654	3.419		4.871	.000
	Individual Learning (IL)	-.213	.116	-.257	-1.833	.072
1	Group Learning (GL)	.095	.109	.116	.876	.385
	Institutional Learning (INSTL)	-.077	.081	-.124	-.947	.347
a. Dependent Variable: Y= Environnemental Performance						

Source: Research Data

The results presented in Table 4.38 indicate positive and low relationship between organizational learning and environmental performance (r=0.307). Organizational learning explains 9.4% ($R^2 = 0.094$) of the variation environmental performance with the remaining 90.6% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=2.086, p=0.112). Since the

calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that organizational learning have no statistically significant effect on environmental performance.

The model coefficients results show that t-tests has p-values greater than 0.05 indicating that individual organizational learning measures had no statistically significant effect on environmental performance. This can be interpreted to mean that organizational learning does not contribute to improvement of environmental performance among the top 100 medium-sized companies in Kenya.

Table 4.39: Organizational Learning and Non Financial Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.146[a]	.021	-.028	6.41336
a. Predictors: (Constant), Institutional Learning, Group Learning, individual Learning				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	53.880	3	17.960	.437	.728[b]
1	Residual	2467.870	60	41.131		
	Total	2521.750	63			
a. Dependent Variable: Y= Non financial performance						
b. Predictors: (Constant), Institutional Learning, Group Learning, individual Learning						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant) (C)	55.575	7.105		7.821	.000
	Individual Learning(IL)	.070	.241	.042	.290	.773
1	Group Learning(GL)	.013	.226	.008	.057	.954
	Institutional Learning(INSTL)	.154	.169	.125	.914	.365
a. Dependent Variable: Y= Non financial performance						

Source: Research Data

The results presented in Table 4.39 indicate positive and low relationship between organizational learning and non financial performance (r=0.188). Organizational learning explains 2.1% (R^2 = 0.021) of the variation in non financial performance with the remaining 97.9% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=0.437, p=0.728). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that organizational learning have no statistically significant effect on non financial performance.

The model coefficients results show that t-tests has p-values greater than 0.05 indicating that individual organizational learning measures had no statistically significant effect on non financial performance. This can be interpreted to mean that organizational learning does not contribute to improvement of non financial performance of top 100 medium-sized companies in Kenya.

Table 4.40: Organizational Learning and Organizational Performance (Main Hypothesis)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.181[a]	.033	-.016	7.79213
a. Predictors: (Constant), Individual Learning, Institutional Learning, Group Learning				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	122.714	3	40.905	.674	.572[b]
	Residual	3643.036	60	60.717		
	Total	3765.750	63			
a. Dependent Variable: Organization performance						
b. Predictors: (Constant), Individual Learning, Institutional Learning, Group Learning						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	65.562	8.633		7.594	.000
	Institutional Learning (INSTL)	.249	.205	.165	1.216	.229
	Group Learning (GL)	-.024	.275	-.012	-.087	.931
	Individual Learning (IL)	.077	.293	.038	.262	.795
a. Dependent Variable: Organizational Performance						

Source: Research Data

The results presented in Table 4.40 indicate positive and low relationship between organizational learning and organizational performance (r=0.181). Organizational learning explains 3.3% ($R^2 = 0.033$) of the variation in organizational performance with the remaining 96.7% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=0.674, p=0.572). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that organizational learning have no statistically significant effect on organizational performance.

The model coefficients results show that t-tests have p-values greater than 0.05 indicating that individual organizational learning measures have no statistically significant effect on organizational performance. This can be interpreted to mean that organizational learning does not contribute to improvement of organizational performance among the top 100 medium-sized companies in Kenya.

4.13 Effect of Organizational Learning on the Relationship between Knowledge Sharing and Organizational Performance.

The fourth objective of the study was to establish the effect of organizational learning on the relationship between knowledge sharing and organizational performance. To achieve this objective, hypothesis four was stated in null as:

H_{04}: Organizational learning has no significant mediating effect on the relationship between knowledge sharing and organizational performance.

A mediation effect implies a situation where the effect of the independent variable on the dependent variable is best explained using a third variable (mediator variable) which is caused by the independent variable and is itself a cause of the dependent variable (Preacher and Hayes, 2004). The causal relationship between the independent and dependent variable is said to be indirect.

To test the hypothesis whether organizational learning mediates the relationship between knowledge sharing and organizational performance, a hierarchical multiple regression analysis was conducted. The analysis tested the results of knowledge sharing on organizational performance and the change observed after introduction of the mediator variable, organizational learning.

Durbin-Watson test, tests whether the residuals from the multiple regressions are independent and not auto correlated. The Durbin-Watson statistics range from 0 to 4 with values of 2 meaning that there is no autocorrelation in the residuals (Field, 2009). In this

study the Durbin-Watson statistics had a value of approximately 2, meaning that there is no threat of auto-correlation in the residuals. Hierarchical multiple regression results of knowledge sharing on organizational performance as mediated by organization learning are presented in Table 4.41 and 4.42

Table 4.41: Knowledge Sharing and Financial Performance as Mediated by Organization Learning

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.107[a]	.011	.005	3.51746	.011	.704	1	61	.405	
2	.180[b]	.033	.000	3.50856	.021	1.310	1	60	.257	1.899

a. Predictors: (Constant), Knowledge sharing
b. Predictors: (Constant), Knowledge sharing, Organization learning
c. Dependent Variable: Financial Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.707	1	8.707	.704	.405[b]
	Residual	754.722	61	12.372		
	Total	763.429	62			
2	Regression	24.830	2	12.415	1.009	.371[c]
	Residual	738.598	60	12.310		
	Total	763.429	62			

a. Dependent Variable: Financial Performance
b. Predictors: (Constant), Knowledge sharing
c. Predictors: (Constant), Knowledge sharing, Organization learning

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.065	3.568		5.343	.000
	Knowledge sharing	-.048	.057	-.107	-.839	.405
2	(Constant)(C)	14.796	5.156		2.870	.006
	Knowledge sharing(KS)	-.050	.057	-.111	-.871	.387
	Organization learning (OL)	.056	.049	.145	1.144	.257

a. Dependent Variable: Y=Financial Performance

Source: Research Data

The results presented in Table 4.41 shows that model one explains 1.1% of the variation and is not statistically significant ($R^2=0.011$, F=0.704, p=0.405). On addition of the mediator, the model explains 3.3% of the variation and is not statistically significant ($R^2=0.033$, F=1.009, p=0.371). There is a change of 2.1% ($\Delta R^2=0.021$) with the introduction of organizational learning as a mediator variable. Further, ($\Delta F= 1.310$) and significant F change is 0.257. Therefore organizational learning has a very weak mediating effect on the relationship between knowledge sharing and financial performance, as shown by change in R^2. However, the mediating effect is not statistically significant. Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded organizational learning has no mediating effect on the relationship between knowledge sharing and financial performance.

The model coefficients results show that t-tests has p-values that are greater than 0.05 indicating that knowledge sharing and organizational learning has no statistically significant effect on financial performance. This can be interpreted to mean that organizational learning has no statistically significant effect on the relationship between knowledge sharing and financial performance among top 100 medium-sized companies in Kenya.

Table 4.42: Knowledge Sharing and Non Financial Performance as Mediated by Organization Learning

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.215[a]	.046	.030	6.27388	.046	2.943	1	61	.091	
2	.246[b]	.061	.029	6.27745	.015	.931	1	60	.339	1.411

a. Predictors: (Constant), Knowledge sharing

b. Predictors: (Constant), Knowledge sharing, Organization learning

c. Dependent Variable: Non financial performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	115.835	1	115.835	2.943	.091[b]
	Residual	2401.053	61	39.362		
	Total	2516.889	62			
2	Regression	152.503	2	76.252	1.935	.153[c]
	Residual	2364.386	60	39.406		
	Total	2516.889	62			

a. Dependent Variable: Non financial performance

b. Predictors: (Constant), Knowledge sharing

c. Predictors: (Constant), Knowledge sharing, Organization learning

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	51.389	6.364		8.075	.000
	Knowledge sharing	.175	.102	.215	1.715	.091
2	(Constant) (C)	44.951	9.224		4.873	.000
	Knowledge sharing (KS)	.172	.102	.211	1.688	.097
	Organization learning (OL)	.085	.088	.121	.965	.339

a. Dependent Variable: Non financial performance

Source: Research Data

The results presented in Table 4.42 shows that model one explains 4.6% of the variation and is not statistically significant (R^2=0.046, F=2.943, p=0.091). On addition of the mediator, the model explains 6.1% of the variation and is not statistically significant

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($R^2=0.061$, F=1.935, p=0.153). There is a change of 1.5% ($\Delta R^2=0.015$) with the introduction of organizational learning as a mediator variable. Further, ($\Delta F= 0.931$) and significance F change is 0.339. Therefore organizational learning has a very weak mediating effect on the relationship between knowledge sharing and non financial performance, as shown by change in R^2. However, the mediating effect is not statistically significant. Since the calculated p-value is greater than 0.05, null hypothesis was not rejected and it was concluded that organizational learning has no statistically significant mediating effect on the relationship between knowledge sharing and non financial performance.

The model coefficients results show that t-tests has p-values that are greater than 0.05 indicating that knowledge sharing and organizational learning has no statistically significant effect on non financial performance. This can be interpreted to mean that organizational learning has no statistically significant effect on the relationship between knowledge sharing and non financial performance among top 100 medium-sized companies in Kenya.

4.14 Effect of Firm-level Institutions on the Relationship between Knowledge Sharing and Organizational Performance.

The fifth objective of the study was to establish the effect of firm-level institutions on the relationship between knowledge sharing and organizational performance. To achieve this objective, hypothesis five was stated in null as:

H_{05}: Firm-level institutions have no significant moderating effect on the relationship between knowledge sharing and organizational performance.

A moderator is a variable that specifies the conditions under which a given predictor is related to an outcome. It explains when a dependent variable and independent variables are related and implies an interaction effect. A moderator changes the direction or magnitude of the relationship between two variables which could be enhancing, buffer or antagonistic (Kim, 2001). To test the hypothesis whether firm-level institutions moderated the relationship between knowledge sharing and organizational performance, a hierarchical regression analysis was used to establish the change in statistical parameters and the significance of the models. Hierarchical regression results of knowledge sharing and organizational performance as moderated by firm-level institutions are presented in Table 4.43 and Table 4.44

Table 4.43: Knowledge Sharing and Financial Performance as Moderated by Firm Level Institutions

Model Summary[c]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.107[a]	.011	.005	3.51746	.011	.704	1	61	.405	
2	.539[b]	.290	.266	3.00557	.279	23.548	1	60	.000	1.480
a. Predictors: (Constant), Knowledge sharing										
b. Predictors: (Constant), Knowledge sharing, Firm level Institutions										
c. Dependent Variable: Financial Performance										

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.707	1	8.707	.704	.405[b]
	Residual	754.722	61	12.372		
	Total	763.429	62			
2	Regression	221.422	2	110.711	12.256	.000[c]
	Residual	542.006	60	9.033		
	Total	763.429	62			
a. Dependent Variable: Y=Financial Performance						
b. Predictors: (Constant), Knowledge sharing						
c. Predictors: (Constant), Knowledge sharing, Firm level Institutions						

Coefficients[a]		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	19.065	3.568		5.343	.000
	Knowledge sharing	-.048	.057	-.107	-.839	.405
2	(Constant) (C)	1.590	4.718		.337	.737
	Knowledge sharing (KS)	-.064	.049	-.142	-1.305	.197
	Firm level Institutions (FLIs)	.340	.070	.529	4.853	.000
a. Dependent Variable: Y=Financial Performance						

Source: Research Data

The results presented in Table 4.43 shows that model one explains 1.1% of the variation and is not statistically significant (R^2=0.011, F=0.704, p=0.405). On addition of the moderator, the model explains 29% of the variation and is statistically significant (R^2=0.290, F=12.256, p=0.000. There is a change of 27.9% (ΔR^2=0.279) with the introduction of firm-level institutions as moderator variable. Further, (ΔF= 23.548) and significance F change is 0.000 which is less than 0.05, indicating that the interaction is statistically significant. Therefore firm-level institutions have a statistically significant moderating effect on the relationship between knowledge sharing and financial performance as shown by change in R^2. Since the calculated p-value is less than 0.05, null hypothesis was rejected and it was concluded that firm-level institutions have a statistically significant moderating effect on the relationship between knowledge sharing and financial performance.

The model coefficients results presented in Table 4.43 shows that t-tests of firm-level institutions have beta coefficient of 0.340 at (p= 0.000). Since the p-value is less than 0.05, this indicates that firm-level institutions have a statistically significant moderating

effect on the relationship between knowledge sharing and financial performance. Based on the regression results, an equation can be written to explain this moderating effect as follows:

Financial performance = 19.065(C) + 0.340 firm-level institutions

This was interpreted to mean that firm-level institutions have a statistically significant moderating effect of 0.340 on the relationship between knowledge sharing and financial performance.

Table 4.44: Knowledge Sharing and Non Financial Performance as Moderated by Firm Level Institutions

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.215[a]	.046	.030	6.27388	.046	2.943	1	61	.091	
2	.491[b]	.241	.216	5.64190	.195	15.431	1	60	.000	1.371
a. Predictors: (Constant), Knowledge sharing										
b. Predictors: (Constant), Knowledge sharing, Firm level Institutions										
c. Dependent Variable: Non financial performance										

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	115.835	1	115.835	2.943	.091[b]
	Residual	2401.053	61	39.362		
	Total	2516.889	62			
2	Regression	607.029	2	303.514	9.535	.000[c]
	Residual	1909.860	60	31.831		
	Total	2516.889	62			
a. Dependent Variable: Non financial performance						
b. Predictors: (Constant), Knowledge sharing						
c. Predictors: (Constant), Knowledge sharing, Firm level Institutions						

Coefficients[a]		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	51.389	6.364		8.075	.000
	Knowledge sharing	.175	.102	.215	1.715	.091
2	(Constant) (C)	24.834	8.857		2.804	.007
	Knowledge sharing (KS)	.151	.092	.185	1.640	.106
	Firm level Institutions (FLIs)	.516	.131	.443	3.928	.000
a. Dependent Variable: Y= Non financial performance						

Source: Research Data

The results presented in Table 4.44 shows that model one explains 4.6% of the variation and is not statistically significant (R^2=0.046, F=2.943, p=0.091). On addition of the moderator, the model explains 24.1% of the variation and is statistically significant (R^2=0.241, F=9.535, p=0.000). There is a change of 19.5% (ΔR^2=0.195) with the introduction of firm-level institutions as moderator variable. Further, (ΔF= 15.431) and significance F change is 0.000 which is less than 0.05, indicating that the interaction is statistically significant. Therefore firm-level institutions have a statistically significant moderating effect on the relationship between knowledge sharing and non financial performance as shown by change in R^2. Since the calculated p-value is less than 0.05, null hypothesis was rejected and it was concluded that firm-level institutions have a statistically significant moderating effect on the relationship between knowledge sharing and non financial performance.

The model coefficients results presented in Table 4.44 shows that t-tests of firm-level institutions have beta coefficient of 0.516 at (p= 0.000). Since the p-value is less than 0.05, this indicates that firm-level institutions have a statistically significant moderating effect on the relationship between knowledge sharing and non financial performance. Based on the regression results, an equation can be written to explain this moderating effect as follows:

Non financial performance = 51.389(C) + 0.516 firm-level institutions

This can be interpreted to mean that firm-level institutions have a statistically significant moderating effect of 0.516 on the relationship between knowledge sharing and organizational performance.

4.15 The Joint Effect of Knowledge Sharing, Organizational Learning and Firm-Level Institutions on Organizational Performance

The sixth and final objective of the study aimed at establishing the joint effect of knowledge sharing, firm-level institutions and organizational learning on organizational performance. To achieve this objective, hypothesis six was stated in null as:

H_{06}: Knowledge sharing, firm-level institutions and organizational learning have no significant joint effect on organizational performance.

Knowledge sharing, organizational learning and firm-level institutions' indicators were regressed against the six dimensions of organizational performance. Multiple regressions were used to test for the joint effect. Table 4.45 to Table 4.51 shows the regression results of joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance.

Table 4:45: Joint Effect of Knowledge Sharing, Organization Learning and Firm-Level Institutions on Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.608[a]	.370	.218	3.10241

a. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	282.182	12	23.515	2.443	.014[b]
	Residual	481.247	50	9.625		
	Total	763.429	62			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Human resource, management style, Institutional Learning, Group Learning, Personal conversations, meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.514	7.113		-.635	.529
	Written reports (WR)	-.086	.811	-.016	-.106	.916
	Shared databases (SD)	.043	.171	.033	.251	.803
	Meetings (M)	-.100	.063	-.188	-1.587	.119
	Personal conversations (PC)	.048	.132	.049	.365	.717
	Individual Learning (IL)	.085	.130	.094	.654	.516
	Group Learning (GL)	.018	.143	.020	.129	.898
	Institutional Learning (INSTL)	.098	.084	.144	1.164	.250
	Structure (S)	-.034	.743	-.007	-.046	.964
	Culture (CUL)	.433	.263	.271	1.651	.105
	Management style (MS)	.454	.404	.189	1.124	.267
	Technology (T)	.049	.348	.024	.141	.888
	Human resource (HR)	.417	.117	.511	3.571	.001

a. Dependent Variable: Financial Performance

Source: Research Data

The results presented in Table 4.45 indicate positive and strong relationship between the joint effect of knowledge sharing, organizational learning and firm-level institutions on financial performance (r=0.608). The model explains 37% ($R^2 = 0.370$) of the variation in

financial performance with the remaining 63% explained by other variables implemented by top 100 medium-sized companies. The regression model is statistically significant at (F=2.443, p=0.014). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that knowledge sharing, organizational learning and firm-level institutions have a statistically significant joint effect on financial performance.

The model coefficients results presented in Table 4.45 show that t-tests of human resources have a beta coefficient of 0.417 at (p= 0.001). Since the p-value is less than 0.05, this indicates that human resources' skills and competences have a statistically significant effect on financial performance. Based on the regression results, an equation can be written to explain this effect as follows:

Financial performance = -4.514(C) + 0.417 (HR)

This means that a unit change in human resources skills and competences causes an increase by 0.417 on financial performance. This was interpreted to mean that human resources skills and competences impacts on financial performance of top 100 medium-sized companies in Kenya, hence the need for HR training and knowledge sharing.

Table 4.46: Joint Effect of Knowledge Sharing, Organization Learning and Firm-Level Institutions on Internal Business Processes

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.532[a]	.283	.111	2.42329
a. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	116.033	12	9.669	1.647	.109[b]
	Residual	293.617	50	5.872		
	Total	409.651	62			
a. Dependent Variable: IBP						
b. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	3.818	5.556		.687	.495
	Written reports (WR)	.877	.634	.220	1.384	.173
	Shared databases(SD)	-.201	.133	-.212	-1.509	.137
	Meetings (M)	-.036	.049	-.092	-.731	.468
	Personal conversations (PC)	-.180	.103	-.252	-1.749	.086
	Individual Learning (IL)	.171	.102	.257	1.683	.099
	Group Learning (GL)	-.185	.112	-.278	-1.657	.104
	Institutional Learning (INSTL)	.096	.066	.192	1.450	.153
	Structure (OS)	-.624	.580	-.182	-1.076	.287
	Culture (OC)	.124	.205	.105	.603	.549
	Management style (MS)	.305	.316	.173	.967	.338
	Technology (T)	.413	.272	.275	1.520	.135
	Human resource (HR)	.127	.091	.211	1.387	.172
a. Dependent Variable: Y= Internal Business Processes						

Source: Research Data

The results presented in Table 4.46 indicate positive and moderately strong relationship between the joint effect of knowledge sharing, organizational learning and firm-level institutions and internal business processes (r=0.532). The model explains 28.3% (R^2=0.283) of the variation in internal business processes with the remaining 71.7% explained by other variables implemented by the top 100 medium-sized companies. The regression model was not significant at (F=1.647, p=0.109). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that knowledge sharing, organizational learning and firm-level institutions have no statistically significant joint effect on internal business processes.

The model coefficients results show that t-tests has p-values for knowledge sharing, organizational learning and firm-level institutions measures were greater than 0.05 indicating that they have no statistically significant effect on internal business processes. This means that knowledge sharing, organizational learning and firm-level institutions jointly do not explain the changes in internal business processes.

Table 4.47: Joint Effect of Knowledge Sharing, Organization Learning and Firm-Level Institutions on Customer Satisfaction

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.665[a]	.442	.308	2.65794

a. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	280.038	12	23.337	3.303	.001[b]
	Residual	353.232	50	7.065		
	Total	633.270	62			

a. Dependent Variable: Customer satisfaction

b. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	6.244	6.094		1.025	.310
	Written reports (WR)	-.224	.695	-.045	-.322	.749
	Shared databases (SD)	-.004	.146	-.003	-.027	.979
	Meetings(M)	.002	.054	.004	.036	.971
	Personal conversations(PC)	.155	.113	.175	1.375	.175
	Individual Learning(IL)	.090	.112	.109	.809	.422
	Group Learning(GL)	-.088	.122	-.106	-.718	.476
	Institutional Learning(INSTL)	.006	.072	.009	.077	.939
	Structure(OS)	.131	.637	.031	.206	.838
	Culture (OC)	.493	.225	.338	2.192	.033
	Management style(MS)	.391	.346	.178	1.129	.264
	Technology(T)	.323	.298	.173	1.082	.285
	Human resource(HR)	-.138	.100	-.185	-1.375	.175

a. Dependent Variable: Y= Customer satisfaction

Source: Research Data

The results presented in Table 4.47 indicate positive and strong relationship between the joint effect of knowledge sharing, organizational learning and firm-level institutions on customer satisfaction (r=0.665). The model explains 44.2% (R^2=0.442) of the variation in customer satisfaction with the remaining 55.8% explained by other variables implemented by the top 100 medium-sized companies. The regression model was statistically significant at (F=3.303, p=0.001). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that knowledge sharing, organizational learning and firm-level institutions have a statistically significant joint effect on customer satisfaction.

The model coefficients results presented in Table 4.47 show that t-tests of organizational culture had a beta coefficient of 0.493 at (p= 0.033). Since the p-value is less than 0.05, this indicates that organizational culture has a statistically significant effect on customer satisfaction. Based on the regression results, an equation can be written to explain this effect as follows:

Customer satisfaction = 6.244(C) + 0.493 (OC)

This means that change in organizational culture defined as the beliefs, norms and attitudes causes an increase of 0.493 on customer satisfaction. This can be interpreted to mean that a favorable organizational culture positively contributes to customer satisfaction in an organization.

Table 4.48: Joint Effect of Knowledge Sharing, Organizational Learning and Firm-Level Institutions on Learning and Growth

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.463[a]	.214	.026	3.81507

a. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, personal conversations, meetings, Shared databases , Written reports, Individual Learning, Structure, Culture, Technology

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	198.676	12	16.556	1.138	.353[b]
	Residual	727.737	50	14.555		
	Total	926.413	62			

a. Dependent Variable: Learning and Growth

b. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	17.935	8.747		2.050	.046
	Written reports (WR)	-1.512	.998	-.252	-1.515	.136
	Shared databases (SD)	-.107	.210	-.075	-.512	.611
	Meetings (M)	.093	.078	.159	1.199	.236
	Personal conversations (PC)	-.131	.162	-.123	-.811	.421
	Individual Learning (IL)	.222	.160	.222	1.389	.171
	Group Learning (GL)	-.035	.176	-.035	-.198	.844
	Institutional Learning (INSTL)	.031	.104	.041	.295	.769
	Structure (OS)	-.554	.914	-.108	-.606	.547
	Culture (OC)	-.221	.323	-.126	-.686	.496
	Management style (MS)	.296	.497	.112	.596	.554
	Technology (T)	.117	.428	.052	.274	.785
	Human resource (HR)	-.023	.144	-.026	-.161	.872

a. Dependent Variable: Y= Learning and Growth

Source: Research Data

The results presented in Table 4.48 indicate positive and moderate relationship between joint effect of knowledge sharing, organizational learning and firm-level institutions and learning and growth (r=0.463). The model explains 21.4% (R^2=0.214) of the variation in learning and growth with the remaining 78.6% explained by other variables implemented

by the top 100 medium-sized companies. The regression model was not significant at (F=1.138, p=0.353). Since the calculated p-value was greater than 0.05, null hypothesis was not rejected and it was concluded that knowledge sharing, organizational learning and firm-level institutions have no statistically significant joint effect on learning and growth.

The model coefficients results show that t-tests have p-values that were greater than 0.05 indicating that individual measures of knowledge sharing, organizational learning and firm-level institutions have no statistically significant effect on learning and growth. This can be interpreted to mean that knowledge sharing, organizational learning and firm-level institutions jointly do not explain the changes in learning and growth among top 100 medium-sized companies.

Table 4.49: Joint Effect of Knowledge Sharing, Organizational Learning and Firm-Level Institutions on Social Performance.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.705[a]	.497	.376	1.28868

a. Predictors: (Constant), Human resource, management style, Institutional Learning, Group Learning, personal conversations, meetings, Shared databases, Written reports, individual Learning, structure, culture, Technology

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.045	12	6.837	4.117	.000[b]
	Residual	83.034	50	1.661		
	Total	165.079	62			

a. Dependent Variable: Social Performance
b. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, individual Learning, Structure, Culture, Technology

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	3.484	2.955		1.179	.244
	Written reports (WR)	-.350	.337	-.138	-1.039	.304
	Shared databases (SD)	.080	.071	.133	1.132	.263
	Meetings (M)	-.031	.026	-.125	-1.178	.244
	Personal conversation (PC)	.025	.055	.056	.464	.645
	Individual Learning (IL)	-.008	.054	-.020	-.156	.877
	Group Learning (GL)	.111	.059	.262	1.868	.068
	Institutional Learning (INSTL)	-.011	.035	-.033	-.300	.765
	Structure (OS)	-.327	.309	-.151	-1.061	.294
	Culture (OC)	-.347	.109	-.466	-3.181	.003
	Management style (MS)	1.047	.168	.937	6.239	.000
	Technology (T)	-.086	.145	-.090	-.593	.556
	Human resource (HR)	.010	.049	.026	.207	.837
a. Dependent Variable: Social Performance						

Source: Research Data

The results presented in Table 4.49 indicate positive and strong relationship between joint effect of knowledge sharing, organizational learning and firm-level institutions on social performance (r=0.705). The model explains 49.7% (R^2=0.497) of the variation in social performance with the remaining 50.3% explained by other variables implemented by the top 100 medium-sized companies. The regression model was statistically significant at (F=4.117, p=0.000). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that knowledge sharing, organizational learning and firm-level institutions have a statistically significant joint effect on social performance.

The model coefficients results presented in Table 4.49 show that t-tests of organizational culture had a beta coefficient of -0.347 at (p= 0.003) while t-tests of management style had a beta coefficient of 1.047 at (p= 0.000) Since the p-values are less than 0.05, this

indicates that organizational culture and management style have statistically significant effect on social performance. Based on the regression results, an equation can be written to explain this effect as follows:

Social performance= 3.484(C) +1.047 (MS) - 0.347(OC)

This means that a change in management style causes an increase of 1.047 on social performance while a change in organizational culture causes a negative change of 0.347 in social performance. This was interpreted to mean that the management style and organizational culture have a great impact on the contribution of the firms to the society in which it operates through corporate social responsibility.

Table 4.50: Joint Effect of Knowledge Sharing, Organization Learning and Firm-Level Institutions on Environmental Performance.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.649[a]	.421	.282	2.60593

Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, individual Learning, Structure, Culture, Technology

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	246.870	12	20.572	3.029	.003[b]
	Residual	339.543	50	6.791		
	Total	586.413	62			

a. Dependent Variable: Y= Environmental Performance

b. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant) (C)	4.025	5.975		.674	.504
	Written reports (WR)	-.848	.681	-.178	-1.244	.219
	Shared databases (SD)	.218	.143	.192	1.520	.135
	Meetings (M)	.152	.053	.325	2.858	.006
	Personal conversations (PC)	.266	.111	.312	2.407	.020
	Individual Learning (IL)	-.215	.109	-.269	-1.964	.055
	Group Learning (GL)	.128	.120	.160	1.063	.293
	Institutional Learning (INSTL)	-.074	.071	-.124	-1.041	.303
	Structure (OS)	.105	.624	.026	.168	.867
	Culture (OC)	.505	.221	.360	2.288	.026
	Management style (MS)	-.575	.340	-.273	-1.694	.096
	Technology (T)	-.148	.292	-.082	-.506	.615
	Human resource (HR)	.237	.098	.330	2.409	.020
a. Dependent Variable: Y= Environmental Performance						

Source: Research Data

The results presented in Table 4.50 indicate positive and strong relationship between of joint effect of knowledge sharing, organizational learning and firm-level institutions on environmental performance (r=0.649). The model explains 42.1% (R^2=0.421) of the variation in environmental performance with the remaining 57.9% explained by other variables implemented by the top 100 medium-sized companies. The regression model was statistically significant at (F=3.029, p=0.003). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that knowledge sharing, organizational learning and firm-level institutions have a statistically significant joint effect on environmental performance.

The model coefficients results presented in Table 4.50 show that t-tests of meetings have a beta coefficient of 0.152 at (p= 0.006) while t-tests of personal conversations have a beta coefficient of 0.266 at (p=0.020), organizational culture has beta coefficient of 0.505 at (p=0.026) and human resource has a beta coefficient of 0.237 at (p=0.020). Since the p-values are less than 0.05, this indicates that knowledge sharing through meetings, personal conversations and firm-level institutions indicators among them organizational culture and human resources have a statistically significant effect on environmental performance.

Based on the regression results, an equation can be written to explain this effect as follows:

Environmental performance=4.025(C) + 0.152 (M) + 0.266(PC) +0.505(OC) +0.237(HR)

This implies that a change in knowledge sharing through meetings and personal conversations causes an increase of 0.152 and 0.266 respectively on environmental performance. Organizational culture causes an increase of 0.505 on environmental performance while human resources skills and competences causes an increase of 0.237 on environmental performance. This can be interpreted to mean that knowledge sharing and firm-level institutions have a major effect on environmental performance. The more organizations share knowledge on environmental sustainability, incorporate environmental friendly practices in their corporate culture and regularly train employees on the same, the greater the environmental performance.

Table 4.51: Joint Effect of Knowledge Sharing, Organization Learning and Firm-Level Institutions and Non Financial Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.716[a]	.513	.396	4.95316

a. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1290.197	12	107.516	4.382	.000[b]
	Residual	1226.692	50	24.534		
	Total	2516.889	62			

a. Dependent Variable: Non financial performance

b. Predictors: (Constant), Human resource, Management style, Institutional Learning, Group Learning, Personal conversations, Meetings, Shared databases, Written reports, Individual Learning, Structure, Culture, Technology

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)(C)	35.505	11.356		3.126	.003
	Written reports (WR)	-2.057	1.295	-.208	-1.588	.119
	Shared databases(SD)	-.014	.273	-.006	-.053	.958
	Meetings(M)	.180	.101	.186	1.782	.081
	Personal conversations (PC)	.135	.210	.077	.645	.522
	Individual Learning (IL)	.260	.208	.158	1.253	.216
	Group Learning (GL)	-.069	.228	-.042	-.303	.763
	Institutional Learning (INSTL)	.047	.135	.038	.352	.726
	Structure (S)	-1.269	1.186	-.150	-1.070	.290
	Culture (C)	.553	.419	.190	1.319	.193
	Management style (MS)	1.465	.645	.335	2.270	.028
	Technology (T)	.619	.556	.166	1.114	.270
	Human resource (HR)	.212	.187	.143	1.138	.261

a. Dependent Variable: Non financial performance

Source: Research Data

The results presented in Table 4.51 indicate positive and strong relationship between the joint effect of knowledge sharing, organizational learning and firm-level institutions on non financial performance (r=0.716). The model explains 51.3% (R^2=0.513) of the variation in non financial performance with the remaining 48.7% explained by other

variables implemented by the top 100 medium-sized companies. The regression model was statistically significant at (F=4.382, p=0.000). Since the calculated p-value was less than 0.05, null hypothesis was rejected and it was concluded that knowledge sharing, organizational learning and firm-level institutions have a statistically significant joint effect on non financial performance

The model coefficients results presented in Table 4.51 show that t-tests of management style has a beta coefficient of 1.465 at (p= 0.028). Since the p-value is less than 0.05, this indicates that management style has a statistically significant effect on non financial performance. Based on the regression results, an equation can be written to explain this effect as follows:

Non Financial performance = 35.505(C) + 1.465 (MS)

This means that change in management style causes an increase of 1.465 on non financial performance. This was interpreted to mean that change in management style have a positive and statistically significant impact on non financial performance among the top 100 medium-sized companies in Kenya.

4.16 Chapter Summary

This chapter presented the response rate showing the respondent companies' distribution across different sectors. This was followed by tests of normality using Shapiro-Wilk test and Q-Q plots, tests of multicollinearity using variance Inflation factor (VIF) and tolerance while tests for Homogeneity of variance or homoscedasticity were done using Levene test and variance ratio. The chapter presented the respondents profile as well as

respondents firms' characteristics. Descriptive statistics on study variables were summarized in means, standard deviations and one sample t-test. The chapter provided Factor analysis and the results of correlation tests.

The second part of the chapter presented tests of hypotheses. These were organized according to the objectives of the study. Three hypotheses testing the direct effect were tested using simple regression and the results presented. The moderation, mediation effect were tested using hierarchical multiple regression. The joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance was also tested through multiple linear regression and the results presented.

The results of each hypothesis test were tabulated as the model summary, analysis of variance (ANOVA) and model coefficients. The chapter showed the results of the effect of predictor variables on the dependent variable and whether the effect was statistically significant or not. This guided the decision on whether to reject or fail to reject the null hypothesis. The results in this chapter informed the discussion, summary of findings, conclusions reached and the recommendations made in the subsequent chapters.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter discusses the results of the study in line with existing literature to establish whether the results confirm previous studies or they are inconsistent with existing knowledge. The content of this chapter is based on the research objectives and the hypothesis of the study. The discussion mainly focuses on the study findings, how they compare with existing knowledge, theoretical contribution of the study and the knowledge gap filled.

5.2 Knowledge Sharing and Organizational Performance

The findings of the first hypothesis on the effect of knowledge sharing on organizational performance established that knowledge sharing has a statistically significant effect on organizational performance. The results indicate a positive and statistically significant effect of knowledge sharing on non financial performance especially learning and growth as well as environmental performance. On the contrary, no statistically significant effect was established between knowledge sharing and financial, internal business processes, customer satisfaction and social performance. This study established that knowledge sharing had greater effect on non financial performance than financial performance. This implies that organizations should not only measure performance on the basis of financial measures but should consider non financial indicators of performance.

This study finding is in line with previous findings (Harlow, 2008; Manaf, 2012). Harlow (2008) study on effects of tacit knowledge on firm performance found that tacit knowledge is positively related with firm performance. However, there was a lower relationship on financial outcomes. Harlow concluded that tacit knowledge has a greater effect on innovation than on financial measures. Manaf (2012) found that individual performance increased in a positive direction with knowledge sharing practices. Quigley (2007) found that knowledge sharing had a direct positive influence on performance of managers. Nonaka (2007) added his voice by asserting that integration of individual knowledge into organizational strategy is a basic requirement for future success. Establishing the impact of knowledge sharing on top 100 medium-sized companies is a great contribution given their great impact to Kenyan economy.

Srivastava, Bartol and Locke (2006) assessed the effects of knowledge sharing and efficacy on team performance. Their results upheld a statistically significant positive relationship between knowledge sharing and team performance. Okhuysen and Senhardt (2000) found that if employees share knowledge over time, they develop an ability to recognize and process information in blocks or patterns rather than discrete units. Knowledge sharing leads to development of collective insight and helps in creation of shared mental models (Srivastava, et al, 2006). When knowledge is shared, better decisions would occur during strategy sessions (Brock and Anthony, 2002).

This study makes a major theoretical contribution by showing that knowledge sharing is a useful strategy in influencing organizational outcomes. The results further support resource based theory which examines the resources and capabilities of firms that enable

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them generate competitive advantage (Barney, 1991). This study found that sharing knowledge improves organizational performance. The findings would allow managers to look for ways of enhancing knowledge sharing in their firms.

5.3 Firm-level Institutions and Organizational Performance

The findings of this study reported statistically significant effect of firm-level institutions on organizational performance with firm-level institutions explaining 45.4% of the variation in organizational performance. The results indicated positive and statistically significant effect of firm-level institutions on financial performance, customer satisfaction and social performance. Conversely, no statistically significant effect was established between firm-level institutions and internal business processes, learning and growth and environmental performance. This study established that firm-level institutions enhanced both financial and non financial performance.

The findings of this study are in line with past studies (Njuguna, 2013; Kuo, 2011; Srivastava, et al., 2006). Njuguna (2013) found that internal environment had a positive and statistically significant effect on performance. Kuo (2011) asserts that human resources influence employee beliefs and values which affect organizational culture and eventually affects organizational functioning. Further a study by Srivastava, et al. (2006) found that empowering leadership was positively related to both knowledge sharing and organizational performance.

Machuki (2011) on the other hand found that firm-level institutions or internal environment attributes had statistically not significant results on organizational performance. However, his study reported fairly strong relationship between firm-level institutions and non financial performance indicators. His findings were attributed to low response rate of the study respondents.

These results support institutional theory which holds that institutions shape organizational actions (Oliver, 1997). Most of the firm-level institutions had significant effect on both financial and non financial performance indicators by explaining 29.2% of financial performance and 42% of non financial performance. The finding on the effect of firm-level institutions and organizational performance implies that proper firm-level institutions ought to be in place for improved performance. This finding is useful for managerial practice in that managers can make better strategic decisions with regard to a conducive internal environment for knowledge sharing to take place.

5.4 Organizational Learning and Organizational Performance

The study established that organizational learning had no statistically significant effect on both financial and non financial performance. This was unexpected given the many assertions that organizational learning positively influences organizational performance (Kumaraswamy and Chitale, 2012; Ellinger, et al., 2002; Fiol and Lyles, 1985). A possible explanation of the finding is that organizational learning could be moderated by other variables not considered in this study. The finding could also be due to different conceptualization of organizational learning.

The finding was consistent with Namada (2013) study findings that found no statistically significant effect of organizational learning on financial measures. However, the current study findings were contradictory to her findings on non financial measures since her study reported positive statistically significant influence of organizational learning on non financial measures in export processing zones firms. The unexpected findings could be explained by the assertions of Crossan et al. (1999) who contend that convergence has not occurred since different researchers have applied organizational learning to different domains.

A study by Jiang and Li (2008) established that positive relationship between organizational learning and organizational performance was strong in joint ventures and weaker in contractual alliances. They further found that the relationship was stronger where partners were based in the same industry and weaker when they were across industries. The respondents' companies for this study cut across 16 different industries and hence this could be a possible explanation of the finding.

A possible explanation of the statistically not significant effect of organizational learning on organizational performance could be the age of the firm (Calanton, Cavusgil and Zhao, 2002). These authors hold that it takes time to establish the relationship between organizational learning and organizational performance; therefore, younger firms are at a disadvantage. They argue that the older the organization the stronger the relationship between organizational learning and organizational performance. Most of the medium-sized companies were young companies hence age of the firm could be a possible explanation of the finding.

5.5 Mediating Effect of Organizational Learning on the Relationship between

    Knowledge Sharing and Organizational Performance

The research findings of this study provided partial support for hypotheses four. This was shown by the change in R^2 ($\Delta R^2 = 0.021$) for financial performance and ($\Delta R^2 = 0.015$) for non financial performance). However, the mediating effect was not statistically significant on both financial and non financial performance. This led to the conclusion that knowledge sharing impacts on organizational performance regardless of the state of organizational learning in the top 100 medium-sized companies. Additionally, the relationship between knowledge sharing and organizational performance could be impacted by other factors not included in this study.

Literature suggests a positive relationship between knowledge sharing and organizational learning (Chien and Tsai, 2012; Easterby-Smith and Prieto, 2007; Zollo and Winter, 2002). However, no known study has analyzed the mediation role of organizational learning on the relationship between knowledge sharing and organizational performance in a single model. The current study results contributed to knowledge by integrating organizational learning as a mediator variable in the relationship between knowledge sharing and organizational performance. Further, the study confirms that organizational learning has a statistically not significant mediating effect on the relationship between knowledge sharing and organizational performance among the top 100 medium-sized companies in Kenya. The current finding contributes to the mixed results obtained in previous empirical efforts.

5.6 Moderating Effect of Firm-level Institutions on the Relationship between Knowledge Sharing and Organizational Performance

The current study findings reveal that firm-level institutions have a statistically significant moderating effect on the relationship between knowledge sharing and both financial and non financial performance measures. This means that organizations should have conducive firm-level institutions comprising of enabling organizational structure, culture, technology, management style and human resources.

Previous empirical literature confirms that firm-level institutions moderate the relationship between knowledge sharing and organizational performance (Kuo, 2011; Lord and Farrington, 2006; O'Dell and Grayson, 1998). Kuo (2011) found that insufficient organizational infrastructure and inappropriate transmission processes decrease the value of knowledge resources and lead to employee disappointment. He recommended establishment of an efficient organizational structure and fostering organizational culture that promote knowledge sharing.

Lord and Farrington (2006) held that human resources influences knowledge sharing. They further added that top management support contributes to the success of knowledge sharing. This study confirms their assertions from the positive statistically significant moderating role of firm-level institutions on the relationship between knowledge sharing and organizational performance. The study also agrees with O'Dell and Grayson (1998) who hold that technology, culture and infrastructure enhance knowledge sharing by turning internal information into dynamic improvements that are apparent throughout the companies.

A major contribution of this finding is the theoretical support of institutions theory that holds that conformity to institutional context defined as norms, values, beliefs and social expectations; contributes to organizational success (Oliver, 1991). This study established that knowledge sharing is profoundly influenced by firm-level institutions through their moderating role in the relationship between knowledge sharing and organizational performance. This finding filled the gap in knowledge in that whereas many studies focused on the direct effect of knowledge sharing on organizational performance, the current study explored the moderating effect of firm-level institutions.

5.7 Joint Effect of Knowledge Sharing, Organizational Learning and Firm-Level Institutions on Organizational Performance

The findings of this study reported diverse findings on the joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance. The results indicated positive and statistically significant joint effect of knowledge sharing, organizational learning and firm-level institutions on performance, customer satisfaction, social and environmental performance. Conversely, no significant effect was established between joint effect of knowledge sharing, organizational learning and firm-level institutions on internal business processes and learning and growth. Based on the results of hypothesis six, the study concluded that knowledge sharing, organizational learning and firm-level institutions have a statistically significant joint effect on organizational performance.

The joint effect has been largely unexplored by prior researchers since most studies focused on the independent effects on organizational performance. Machuki, Aosa and Letting (2012) focused on the effect of firm-level institutions on corporate performance while Tsai (2001) looked at knowledge sharing in intra- organizational networks. The joint effect showed that knowledge sharing, organizational learning, firm-level institutions and organizational performance are interrelated. However, empirical research investigating these interrelationships remains scarce especially in Africa. The study contributes to knowledge by bringing on board an integrated framework and empirically testing the synergetic impact of knowledge sharing, organizational learning and firm-level institutions on organizational performance.

The implication of this finding is that managers of top 100 medium-sized companies can make most of knowledge resource through knowledge sharing within their firms and between other companies. They can also improve their firms' performance by establishing an enabling internal environment for knowledge sharing. This is in conformity with Kuo (2011) assertions that organizations require implementation of knowledge management environment in order to offer knowledge resources at the right place and at the right time.

5.8 Chapter Summary

This chapter discussed the results of the study in line with the research objectives and the hypothesis of the study. The study linked the current study findings with the findings from other studies to discover the similarities and differences. The chapter highlighted

how the findings compare with existing knowledge. The findings supported most of the research hypotheses and were generally consistent with previous studies. Inconsistencies with previous studies were discussed and justified. The chapter also discussed the theoretical contribution of the study and the knowledge gaps filled. The chapter clarified the findings which was useful for a better linking with the research contribution in the next chapter.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter summarizes the study findings, conclusions reached and recommendations. It also provides the implications of the study in theory, policy and managerial practice. The limitations encountered during the study are highlighted and the chapter ends with suggestions for future research.

6.2 Summary of the Findings

The current study sought to establish the influence of organizational learning and firm-level institutions on the relationship between knowledge sharing and performance of top 100 medium-sized companies in Kenya. Several hypotheses were formulated and tested empirically guided by the following objectives: First, to establish the effect of knowledge sharing on organizational performance. The second objective was to assess the effect of firm-level institutions on organizational performance. The third was to examine the effect of organizational learning on organizational performance.

The fourth objective was to determine the effect of organizational learning on the relationship between knowledge sharing and organizational performance while the fifth was to establish the effect of firm-level institutions on the relationship between knowledge sharing and organizational performance. Finally, the study aimed at determining the joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance.

The study established that knowledge sharing had a statistically significant effect on organizational performance. Knowledge sharing had a statistically significant effect on non financial performance while it had no statistically significant effect on financial performance. Environmental performance and learning and growth were statistically significantly influenced by knowledge sharing since it explained 17.5% and 39.4% of the variation in environmental performance and learning and growth respectively.

Knowledge sharing did not have a statistically significant effect on internal business processes, customer satisfaction and social performance. The study results also revealed that from the indicators of knowledge sharing, written reports and meetings had a statistically significant effect on non financial measures of performance. Personal conversation had a statistically significant effect on customer satisfaction. Overall findings revealed that knowledge sharing had statistically significant effect on organizational performance.

Evaluation of the effect of firm-level institutions on organizational performance revealed that firm-level institutions had a statistically significant effect on both financial and non financial measures. Firm-level institutions explained 29.2% of the variation in financial performance and 42% of the variation in non financial performance. Firm-level institutions also had a statistically significant effect on customer satisfaction and social performance explaining 39.7% and 43.9% of their variation respectfully. The results revealed that human resources influenced financial performance statistically significantly, while management style influenced non financial performance statistically significantly.

Organizational culture had the greatest effect on customer satisfaction. Finally, organizational culture and management style influenced social performance statistically significantly. The overall finding on the influence of firm-level institutions on organizational performance established a positive and statistically significant effect.

Assessment of the effect of organizational learning on organizational performance showed no statistically significant effect on both financial and non financial measures. Organizational learning explained 3.5% and 2.1% of the variation in financial and non financial performance respectively. This influence was very low and statistically not significant. Hence the study concluded that organizational learning does not influence performance of top 100 medium-sized companies in Kenya.

The mediating effect of organizational learning on the relationship between knowledge sharing and organizational performance was tested by hierarchically regressing the composite indices of the predictor variables against the dependent variable. The results revealed that organizational learning has no statistically significant mediating effect on the relationship between knowledge sharing and organizational performance for both financial and non financial performance.

Moderation tests showed statistically significant effect of firm-level institutions on the relationship between knowledge sharing and organizational performance. This was revealed by the change in R^2 of 27.9% and ($\Delta F= 23.548$) when regressed against financial performance. Therefore firm-level institutions had a statistically significant moderating

effect on the relationship between knowledge sharing and financial performance as shown by change in R^2. The results also revealed that firm-level institutions had a significant moderating effect on non financial performance with change in R^2 of 19.5% and (ΔF= 15.431). The study concluded that firm-level institutions have a statistically significant moderating effect on organizational performance.

Assessment of the joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance revealed that it explained 37% and 51.3% of variation in financial and nonfinancial performance respectively. The joint effect explained 44.2%, 44.9% and 42.1% of the variation in customer satisfaction, social and environmental performance respectively. Therefore, the study concluded that knowledge sharing, organizational learning and firm-level institutions have a statistically significant joint effect on organizational performance.

6.3 Conclusion

The findings of objective one established that knowledge sharing had a positive and statistically significant effect on organizational performance. Based on this finding, the study concludes that knowledge is an important resource bundle and sharing it contributes to achievement of improved organizational performance. This confirms the proposition of resource based theory that resources that are rare, valuable, non-imitable and non substitutable contribute to an organizations competitiveness. This affirms that when knowledge is shared, better decisions are made leading to better performance.

The second objective established that firm-level institutions had a statistically significant effect on both financial and non financial measures. This led to the conclusion that firm-level institutions directly influence organizational performance. The organizational structure, organizational culture, technology, management style and human resource skills and competences directly impacts on organizational performance. This finding led to the conclusion that appropriate firm-level institutions ought to be created for improved organizational performance.

The third objective established that there is no statistically significant relationship between organizational learning and organizational performance. This study concludes that organizational learning did not influence the performance of top 100 medium-sized companies in Kenya. The relationship between organizational learning and organizational performance could be influenced by other variables not included in this study.

The fourth objective established that there is no statistically significant mediation effect of organizational learning on the relationship between knowledge sharing and organizational performance. The study concludes that the contribution of knowledge sharing on organizational performance exists regardless of the state of organizational learning among top 100 medium-sized companies in Kenya. The study further concludes that organizational learning should be evaluated as an independent variable.

The moderating effect of firm-level institutions on the relationship between knowledge sharing and organizational performance was positive and statistically significant. This led to the conclusion that organizational structure, organizational culture, technology,

management style and human resources' skills and competences can enhance or inhibit knowledge sharing in organizations thus affect both financial and non financial performance. The study concludes that enabling structures, adoption of latest technology, participative management style, a general culture of continuous improvement and training of workforce are necessary firm factors to consider in achieving high organizational performance. This gives new appreciation of the moderating role of firm-level institutions in the relationship between knowledge sharing and organizational performance.

The joint effect of knowledge sharing, organizational learning and firm-level institutions on organizational performance was positive and statistically significant on both financial and non financial measures. Based on this outcome, this study concludes that if the top 100 medium-sized companies would have a good firm-level institutions and share knowledge contributing to organizational learning, their performance would improve. Based on these findings, the study concludes that for greater impact on top 100 medium-sized companies, knowledge sharing, organizational learning and firm-level institutions need to be considered jointly for synergetic effects to be achieved.

Organizational performance was operationalized based on a stakeholder centric approach which considered economic social and environmental perspectives. While some findings reported statistically not significant results on financial performance, most findings had statistically significant results on non financial measures. Based on these findings, the study concludes that organizations should not only measure performance on the basis of

financial measures but should consider non financial measures of performance. This confirms the assertions of Hubbard (2009) that organizational performance should be measured using sustainable balanced score card due to the changes in stakeholders' expectations.

6.4 Implications of the Study

This study has brought forth important findings that link knowledge sharing, organizational learning, firm-level institutions and organizational performance. The findings have implications for strategic management theory, policy and managerial practice.

6.4.1 Implications for Theory

The study has contributed by linking the theoretical views into an integrated framework in order to provide better understanding of the relationships between knowledge sharing, organizational learning, firm-level institutions and organizational performance. In resource based view, concept of resources remains vague in that it is rarely operationally defined and it does not clarify how to transform resources to customer value (Miller and Shamsie, 1996). This study made a theoretical contribution on support of resource based theory by clarifying how knowledge resources can contribute to better performance through knowledge sharing. The study makes a theoretical contribution by integrating resource based theory, knowledge based theory, institutional theory and dynamic capabilities theory into a single theoretical framework.

Dynamic capabilities theory is criticized in that the theory needs further theoretical work to show how firms get to improve (Teece, et.al., 1997). This study made a contribution by empirically testing the impact of theoretically grounded constructs on organizational performance. In knowledge based view, little is known about how firms apply knowledge better than other firms (Conner and Prahalad, 1996; Kogut and Zander, 1996). This study made a contribution by empirically testing the role of knowledge sharing in improving organizational performance. In institutional theory, the study has shed more light on the role of firm-level institutions by looking at their moderating role in the relationship between knowledge sharing and organizational performance.

These research findings contribute by extending the frontiers of knowledge by linking knowledge sharing, organizational learning, firm-level institutions and organizational performance into a conceptual framework which was empirically tested. Knowledge sharing is also a relatively new concept in strategic management thus the study provides new insights to scholars in this field. The results of this study provide a basis for further empirical tests, replication and advancement in theory validation by other researchers.

6.4.2 Implications for Policy

Policy makers will benefit by understanding that knowledge sharing impacts on organizational performance. They can formulate sound support strategies for medium enterprises by creating knowledge sharing forums for business incubation. This can be achieved through successful businessmen mentoring upcoming entrepreneurs. By so doing the government would distributes its finances "Uwezo fund" among the youth and

women who are equipped with entrepreneurial skills and this may result in more successful businesses. Additionally, this would enable the government deal with the challenge of unemployment among Kenyan youths through the skills gained from knowledge sharing.

Kenya's Vision 2030, relies heavily on creative talents that can raise the country's international competitiveness through encouraging flourishing of businesses (GoK, 2012). Knowledge sharing plays a vital role in boosting wealth creation, social welfare and international competitiveness. Policy makers can utilize the findings of the study to validate or formulate reforms in political, economic and social pillar of its vision 2030. They can utilize the findings of this study to improve local, regional and global competitiveness of Kenyan firms.

The context of the study was top 100 medium-sized companies in Kenya. Most of these top performers have their operations in the East African region as shown in the descriptive analysis. This finding is useful for policy makers as it confirms that there are opportunities existing in the East African community trading block. The finding can inform the government's efforts in regional integration in order to make policies that will enhance the integration process and enable Kenyan medium-sized businesses to tap the opportunities therein.

6.4.3 Implications for Practice

The study has implications for managerial practice with regard to managers and employee training, coaching and skill development. Knowledge is a very useful resource and knowledge sharing is a major capability that would enhance the transfer of new insights, ideas, information for greater innovation. The study findings provide useful information on the essence of knowledge sharing for managers to make more informed decisions. Managers and employees can improve organizational performance by sharing knowledge through written reports, meetings, seminars, workshops, personal conversations and shared databases on best practices.

On the findings of the direct and moderating role of firm-level institutions, managers can develop internal firm capacity to effectively utilize knowledge for innovation and improved performance. This can be achieved by integrating effective management style, improved technology, enabling structure and culture as well as improving employee competencies in their organizations.

This study has made a significant contribution for managerial practice by identifying the internal environment attributes that are appropriate for enhancing knowledge sharing within an organization. The study further contributes by showing how to make knowledge a strategic resource for improved firm performance by providing a basic framework to shape their knowledge sharing strategies. It also provides medium-sized companies' managers with a strategy to improve their business competitiveness.

Kaplan and Norton (1992) argued that financial measures alone are not sufficient. They championed Balanced Scorecard that included both financial and operational measures. Hubbard (2009) added his voice by improving balanced scorecard to sustainable balanced scorecard by adding the social and environmental dimension to the four dimensions of Kaplan and Norton. The focus of this study on both financial and non financial measures has a practical managerial implication of enabling managers of top 100 medium enterprises to better understand whether or not their companies were achieving their long term objectives. The managers would gain from each performance parameter, resulting in even better performance. Additionally, the sustainable balanced scorecard approach adopted for this study has an important managerial implication with regard to employee compensation in that compensation should not only be based on financial performance only but should consider non financial indicators as well.

6.5 Recommendations for Policy and Practice

The findings of this research led to the formulation of key recommendations. First, the study found out that knowledge sharing contributes to performance of top 100 medium-sized companies in Kenya. The study recommends that medium-enterprises need to create forums to share ideas, insights and information that would contribute to new innovation and local, regional and global competitiveness. The study further recommends knowledge sharing within and between organizations given its impact on organizational performance.

Secondly the study findings revealed that firm-level institutions play a key role in their direct and moderating effect on the relationship between knowledge sharing and organizational performance. The study recommends that managers of medium-sized companies should relook at their internal organizational environments. This signifies that there is need to create enabling organizational structures and culture, technology, participative management style and embrace latest technology since they enhance organizational performance.

The study further justifies the importance of both financial and non financial measures of performance and thus recommends that top 100 medium-sized companies should not only focus on financial measures but also on internal business processes, customer perspective, employee learning and growth, social and environmental perspectives of performance. This gives a more holistic measure of organizational performance.

This research established that employees work for the same organization for between 5-7 years and then move on to other organizations. This implies that most of the top 100 medium enterprises have low retention rate of their employees which can lead to high expenses of labour turnover. This means that the wealth of knowledge accumulated in the years could be lost as employees leave. This study recommends that medium enterprises should motivate their employees for improved retention rate and also to reduce labour turnover costs.

On policy, study reveals that top 100 medium-sized enterprises play a critical role in employment creation. This is a confirmation that this sector plays an important role in eradicating unemployment which positively impacts on the country's economy. This study therefore recommends that the government should formulate favorable policies, supportive of medium-sized companies' initiatives in order to promote entrepreneurial culture and economic growth. The study established that knowledge sharing has a statistically significant effect on performance of medium-sized companies. The study therefore recommends that policy makers should embrace knowledge sharing initiatives such as workshops, seminars and business incubation for the realization of Kenya's Vision 2030.

6.6 Limitations of the Study

A number of limitations were experienced in the course of the study research among them conceptual, methodological and contextual. However, the limitations did not compromise the quality of the findings since several mitigation measures were embraced to minimize the implications of the limitations. First, access to information especially on financial performance was a great challenge as top 100 medium-sized companies are not required by law to publish their financial reports. This was mitigated by including financial measures in the primary data collection instrument. Another limitation was variables studied which was not exhaustive as inclusion of other factors can make the study richer.

Cross sectional research design was adopted as the study research design. This design has the limitation of collecting data at a given point in time preventing investigation over a period of time. This is a limitation due to financial constraints preventing one from carrying out longitudinal studies over a period of time.

The study respondents were managers of medium-sized companies who were considered the most knowledgeable about the operations of their organizations. The limitation experienced was their inaccessibility which lowered the response rate. Some respondents were hostile and denied access to their organizations. Another limitation was that respondents firms were geographically dispersed and this lowered the rate at which data was collected. However, the researcher was able to get 65% response rate which was considered adequate.

6.7 Suggestions for Future Research

This study suggests possible future research areas. Future researchers could include more variables not included in this study conceptualization such as the role of absorptive capacity in the relationship between the study variables. Future researchers could also consider operationalizing the study variables differently from the current approach. The study could be replicated in different study context including small and large companies or in developed or developing countries to enhance generalizability. It would be of further research interest to consider tacit or explicit knowledge against organizational performance or to consider innovation as a mediating factor between knowledge sharing and performance.

Cross sectional research design was used as the research design. Future researchers can consider longitudinal design to overcome the limitations of cross sectional research design by providing the impact of knowledge sharing on organizational performance over time and to establish causal relationships. The findings of this study revealed that organizational learning had no direct and mediating effect on the relationship between knowledge sharing and organizational performance. Future researchers can examine why this was so by looking at other variables not included in this study such as absorptive capacity of employees.

6.8 Chapter Summary

This chapter presented a summary of research findings in line with the objectives of the study. Conclusions were made based on the study findings obtained from the tests of study hypotheses. The implications of the study on strategic management theory, policy and managerial practice have been highlighted. Recommendations were made based on the study findings. Limitations of the study were highlighted and suggestions for further research made to extend this research.

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APPENDICES

Appendix I: Questionnaire

This questionnaire is designed to collect data from Top 100 medium-sized companies as ranked by KPMG Kenya and Nation Media Group in the year 2013 categorization. The purpose of the data is to evaluate: ***The Influence of Organizational Learning and Firm-level Institutions on Relationship between Knowledge Sharing and Performance of Medium-sized Companies in Kenya.*** The data will be used for academic purposes only and will be treated with strict confidence. Your support is highly appreciated.

Part I: Organizational and Respondent Profile

1. Name of the company_____

2. Year of incorporation _____

3. Industry or sector _____

4. Scope of operation (please tick as appropriate)

    i.   National (within Kenya)   [   ]

    ii.   Regional (within East Africa)   [   ]

    iii.   Continental (within Africa)   [   ]

5. Ownership structure (please tick as appropriate)

    i.   Sole proprietorship   [   ]

    ii.   Partnership   [   ]

    iii.   Joint venture   [   ]

    iv.   Private Limited company   [   ]

6. Please indicate your average annual sales turnover in millions.

    Between Ksh. 70-200   [   ]

    Between Ksh. 201-400   [   ]

    Between Ksh. 401-600   [   ]

    Between Ksh. 601-800   [   ]

    Between Ksh. 801-1,000 [   ]

7. Number of full time employees_____

8. Please indicate your job title/ position_____

9. How long have you worked in this company? _____ years

Part II: Knowledge Sharing

10. Please indicate with a tick (√) the extent to which you agree with the following statements.

Key: 1=Not at all; 2=To a small extent; 3=To a Moderate extent; 4= To a large extent; 5=To a very large extent

STATEMENT	1	2	3	4	5
i. Our firm presents written reports about the needs and wishes of our customers					
ii. We do not share documented specific knowledge related to current work operations					
iii. We contribute ideas and thought to the firm through online discussions					
iv. We keep other employees up to date with important firm information through online discussion forums					
v. We share new ideas to redesign work processes online					
vi. We brainstorm suggestions for solving problems in order to improve current organizational policies					
vii. We participate fully in brain storming sessions to find solutions for problems we face within our work					
viii. We share our experiences and knowledge about work with other organizations in meetings					
ix. Inter-organizational review meetings allow opportunities for discussing work methodologies					
x. We hold meetings to share own experiences and practices on specific issues of common interest					
xi. We ask questions that provoke debate and analysis at firm meetings					
xii. We hold meetings to promote excellence at work					

xiii. Experts in certain areas teach on the methods they use in step by step description in trainings					
xiv. We participate in trainings on customer service and quality management for our employees					
xv. New employees are assigned mentors to help them on personal work					
xvi. We don't spend time in personal conversations with others to help them solve work problems					
xvii. We share experiences that can help others avoid risks and problems in personal conversations					

Part III: Organizational Learning

11. Please indicate with a tick (√) the extent to which you agree with the following statements.

Key: 1=Not at all; 2= To a small extent; 3= To a moderate extent; 4= To a large extent; 5= To a very large extent

STATEMENT	1	2	3	4	5
a) Individual learning					
i. Individuals are knowledgeable about their work					
ii. Individuals generate new insights on production improvement					
iii. Individuals take actions that are experimental in nature					
iv. When you don't know something, its normal to ask around until you get the required help or information					
v. Employees do not receive training to subsequently apply to their usual duties					
vi. Individuals generate new ideas on new products and services					

b) Group learning					
vii. Groups adapt their goals in response to emerging needs					
viii. Groups revise their work methods as a result of group discussions					
ix. Groups resolutions are not used to improve production and service delivery					
x. Group work enhances cohesion and shared goals.					
xi. Groups discuss and improve quality.					
xii. We support employees who take calculated risks					
c) Institutional learning					
xiii Our organization makes lessons learned available to all employees to change work methods					
xiv. Institutional learning lead to development of new programs					
xv. Our organization creates systems for measuring gaps between current and expected performance					
xvi. Institutional learning increases production efficiency					
xvii. We do not embrace new leadership style as a result of institutional learning					
xviii. Institutional learning help us improve our capacity					
xix. Organizational structures result from what we learn					
xx. Experiences of other organizations are used to improve our work programmes					

Part IV: Firm- Level Institutions

Firm-level institutions refer to the internal organizational environment which defines the context in which strategic decisions are made. These firm factors include organizational structure, culture, technology, management style, employee skills and competencies.

12. Please indicate with a tick (√) the extent to which you agree with the following statements.

Key: 1=Not at all; 2= To a small extent; 3= To a moderate extent; 4= To a large extent; 5= To a very large extent

STATEMENT	1	2	3	4	5
i. We have enabling structures that allow for knowledge sharing and growth					
ii. There are no systems and procedures for receiving and sharing information from outside the company					
iii. Information technology is used to create databases, information and communication systems that help everyone to understand what is going on and make sound decisions.					
iv. Our firm has the latest information technology systems and connections					
v. Management does not embraces participative management style where everyone's ideas are valued					
vi. Managers facilitate communication and negotiation rather than exerting top-down control					
vii. Knowledge sharing is not embedded in our culture					
viii. There is a general culture of continuous improvement, always trying to learn and do better.					
ix. Colleagues do not help to improve each other's skills and competencies.					
x. Training of our workforce is always taken into					

account to equip them with the necessary skills and competences					
xi. The firm doesn't use benchmarking techniques to improve employee competences					
xii. Managers and supervisors have a task of supporting the development of new competencies in their staff.					
xiii. The firm has competency management system that permits each employee to receive a salary in keeping with the competencies developed.					
xiv. Employee promotion systems influence the development of competencies, ideas and knowledge					

Part V: Firm Performance

13. Please indicate with a tick (√) the extent to which you agree with the following statements

Key: 1=Not at all; 2=Small extent; 3=Moderate extent; 4=Large extent; 5=Very large extent

STATEMENT	1	2	3	4	5
i. The profit margin hits the set targets					
ii. Growth in sales hits the set targets					
iii. Return on investment has been growing					
iv. We have a growing market share					
v. Customer loyalty has improved over time					
vi. Customer complaints have dropped significantly					
vii. Number of new customer has been increasing					
viii. New products are developed frequently					
ix. Our investment in research and development has intensified					
x. The number of defects has been declining					

xi. Employee retention is higher than our competitors					
xii. Employee morale and has been growing					
xiii. Employee productivity is low					
xiv. Employee skill development has been intensified					
xv. Community service budget has been increasing					
xvi. Protecting the environment is our top priority					
xvii. We practice energy efficiency programs					
xviii. We implement water usage efficiency programs					
xix. We encourage reduction in material use					

THANK YOU FOR YOUR TIME AND PARTICIPATION IN THIS STUDY

Appendix II: Top 100 Medium-Sized Companies in Kenya, 2013 Categorization

Rank	Name of Company	Addresses
1	Lean Energy Solutions Ltd.	P.O. Box: 121-00606 Sarit Centre, Westlands, Nairobi, Kenya
2	East African Canvas Co. Ltd	P.O. Box 1483 Karen 00502, Nairobi, Kenya.
3	Digital City Ltd	P.O Box 98 939 Mombasa Road, Mombasa Kenya
4	Plenser Ltd.	P. O. Box 101995, Nairobi 020 6531531
5	Allwin Agencies (K) Ltd	P.O. Box: 70381-00400, Nairobi – KENYA
6	Propack Kenya Ltd	P.O. Box: 48185-00100 Nairobi GPO
7	Vivek Investments Ltd	P.O. Box: 38634-00623 Parklands
8	Powerpoint Systems (Ea) Ltd	P.O. Box: 6321-00200 City Square Nairobi
9	Coninx Industries Ltd.	P.O. Box: 102352-00101 Jamia
10	Synermedica Pharmaceuticals (Kenya) Ltd	P.O. Box: 52096-00200 City Square
11	Coast Industrials & Safety Supplies Ltd	P.O Box 80 380 80100, Mombasa Kenya
12	isolutions Associates	P. O. Box: 11690 00100, GPO Nairobi.
13	Wotech Kenya Limited	P.O Box 14837-00800 Nairobi Kenya
14	Avtech Systems Limited	P.O Box 13060-00100 Nairobi Kenya
15	Kenya Bus Service	P.O Box 41001 00100 Nairobi Kenya
16	Muranga Forwarders	P.O Box 84208 80100 Mombasa
17	Synermed Pharmaceuticals (K) Ltd	P.O Box 52096 00200, GPO Nairobi, Kenya.
18	Tissue Kenya Ltd	P.O Box 48185 00100 Nairobi Kenya
19	Kenya Highland Seed Co Ltd	P.O. Box 63879 00619 Nairobi Kenya
20	Famiar Generating Sys Ltd	P.O Box 31757 Road C, Nairobi
21	Alexander Forbes	P.O Box 52439 00200 City Square, Nairobi, Kenya.

22	Chemicals & School Supplies Ltd.	P.O Box 60630 00200 Nairobi Kenya
23	Charlstone Travel Limited	P.O. Box: 11361-00100, GPO, Nairobi Kenya
24	Onfon Media Ltd	P.O Box 270 00100 Nairobi Kenya
25	Elite Tools Ltd	P.O Box 64466 00620 Nairobi
26	Eurocon Tiles Products Ltd	P.O Box 46332 Nairobi
27	Endevour Africa Limited	3rd Floor A 2 Nairobi City
28	Rongai Workshop & Transport Ltd	P.O Box 15030 20100 Nakuru, Kenya
29	R & R Plastics Ltd	P.O Box 39988 0623 Lunga Lunga Road. Nairobi
30	Chigwell Holdings Ltd	P.O Box 39542 00623 Nairobi
31	Classic Mouldings Limited	Kelico Complex Mombasa Road, A104 Mombasa Road, Nairobi
32	Pewin Cabs Limited	P. O. Box 61555 - 00200 Nairobi, Kenya
33	Novel Technologies Ea Ltd	P.O Box 16727 00620 Nairobi Kenya
34	Xtreme Adventures Ltd	P.O Box 69357-00400 , Nairobi , Kenya
35	Vintage Africa Limited	P.O Box 59470 00200, Nairobi, Kenya
36	Punjani Electrical and Industrial Hardware Limited	P.O. Box: 144 40100 Kisumu
37	Spry Engineering Co. Ltd	P.O. Box 14373 00100 Kenya
38	General Cargo Services Ltd	P.O. Box 38722 00600 Nairobi Kenya
39	Pinnacle (K) Travel & Safaris	P.O. Box 44 162 00100 Nairobi
40	Panesars Kenya Limited	P.O. Box 40612 - 00100 GPO Nairobi, Kenya
41	Specialized Aluminium Renovators Ltd.	P.O. Box 40785 00100 GPO, Nairobi
42	Cube Movers Limited	Elephant Soap House, 18457-00500 Enterprise Rd, Nairobi, Kenya
43	Brogiibro Company Ltd	P.O. Box 22315-00400, Nairobi Kenya
44	Total Solutions Ltd	P.O. Box 43 427 00100 Nairobi
45	Tyremasters Ltd	P.O. Box 17927 Hola Road, Nairobi

46	XRX Technologies Limited	P.O. Box 27346-00100, Nairobi, Kenya
47	Sensation Ltd	Nairobi, Kenya, 374 7053/58/52
48	Eureka Technical Services Ltd	P.O Box 49844 00100 Nairobi Kenya
49	Palbina Travel Limited	P.O Box 10669 00100 Nairobi, Kenya.
50	Waumini Insurance Brokers Ltd	P.O. Box 13475 00800 Nairobi, Kenya
51	ASL Credit Limited	P.O Box 18092 00500, Nairobi.
52	Zaverchand Punja Limited	P.O. Box 80308 80100 Mombasa.
53	Canon Chemicals Ltd	P.O. Box 32184 Enterprise Road, Nairobi
54	Packaging Manufacturers(1976) Ltd	P.O. Box 70251 00400 Lunga Lunga Rd, Nairobi.
55	Trident Plumbers Ltd	P.O Box 7335 00300 Nairobi Kenya
56	Typotech	P.O. Box 18104-00500 Nairobi, Kenya
57	Kinpash Enterprises Ltd	P.O. Box 59353 Baricho Road, Nairobi
58	Vehicle & Equipment Leasing Ltd	P.O. Box 4977 00200 Nairobi, Kenya.
59	Sheffield Steel Systems	P.O. Box: 29 00606 Sarit Centre Nairobi, Kenya
60	Complast Industries Ltd	P.O Box 78313 00507, Nairobi
61	Dune Packaging Limited	P.O. Box 45310 00100 GPO Nairobi, Kenya
62	Hebatullah Brothers Limited	P.O. Box 41008 00100, Nairobi, Kenya
63	Spice World Limited	P.O. Box 78008 00507 Viwandani, Nanyuki Rd, Kenya
64	Museum Hill Wines Ltd	P.O. Box 71944 00622 Nairobi
65	Yogi Plumbers Ltd	P. O. Box 10992 00400, Nairobi Kenya
66	Vajra Drill Ltd	A15, Ramco Court Mombasa Road Nairobi Kenya
67	Melvin Marsh International Ltd	P.O. Box 40270 00100 Nairobi GPO

68	Kandia Fresh Produce Suppliers Ltd	P.O. B ox 42806 00100 Nairobi Kenya
69	Fayaz Bakers Limited	P.O. Box: 81070 80100 Mombasa
70	Specicom Technologies Limited	P.O. Box 4428 00100 Nairobi Kenya
71	Mombasa Canvas Ltd	P.O. Box 89304 80100, Liwatoni Road, off Moi Avenue, Mombasa, Kenya
72	Silverbird Travel Plus Ltd	P. O. Box 14338-00800 Westlands Nairobi
73	Iron Art	P.O. Box 27535 00506, Nairobi, Kenya
74	Radar Limited	P.O. Box 76690 - 00508. Nairobi, Kenya
75	Master Power Systems	P.O. Box 976 - 00606, Nairobi, Kenya
76	Hardware & Welding Supplies	P. O. Box 18006 00500 Dar es Salam road Nairobi, Kenya
77	Masters Fabricators Ltd	P. O. Box 48644 - 00100 Nairobi.
78	Software Technologies Ltd	P. O. Box 17797, Gigiri Shopping Centre Nairobi.
79	Heritage Foods Kenya Ltd	P.O. Box 3256 00100 Nairobi GPO
80	Africa Tea Brokers Ltd	P. O. Box 81883 80100, Mombasa, Kenya
81	Raerex (Ea) Limited	P.O. Box 11548- 00400 Nairobi Kenya
82	Travel shoppe Company Ltd	P.O. Box 79060 00400 Nairobi Kenya
83	Oriental General Stores Ltd	P.O. Box 46430 Baricho Road, Nairobi
84	Chuma Fabricators Ltd	P.O. Box 18581-00500 - Nairobi Kenya
85	Statprint Ltd	P.O. Box 80079, 80100 Mombasa.
86	Sollatek Electronics Ltd	P.O. Box 34246 80118 Mombasa
87	Smart Brands Ltd	P.O Box 4968 00506, Masai Road off Mombasa Road, Nairobi Kenya
88	De Ruiter East Africa Ltd	P.O. Box 687 20117 Naivasha, Kenya
89	Kisima Drilling (Ea) Ltd	P.O. Box 4141 00100 GPO Nairobi

90	Care Chemists	P.O. Box 333 20100 Kenyatta Avenue Nakuru
91	Brollo Kenya Ltd	P.O Box 90651 80100 Mombasa Kenya
92	Canon Aluminium Fabricators Ltd	P.O. Box 30781 00100 Nairobi, Kenya.
93	Satguru Travel & Tours Ltd	P.O. Box 12547 0400 Nairobi
94	Kunal Hardware and Steel	P.O. Box 1819 40100, Kisumu, Kenya.
95	Deepa Industries Limited	P. O. Box 44804, Sasio Road, Nairobi
96	Skylark Creative Products Ltd.	P.O. Box 2740 40100, Kisumu, Kenya
97	Uneek Freight Services Ltd	P.O. Box 75631 Maasai Road, Nairobi
98	BBC Auto Spares Ltd	P.O. Box 17966 00500, Dar es Salaam Rd, Industrial Area, Nairobi
99	Lantech (Africa) Limited.	P.O. Box 6384 - 00200, Nairobi Kenya
100	Polytanks Limited	P. O. Box 18169, Nairobi

Source: Top 100 Medium-Sized Companies Report, 2013