

**LEARNING ORGANIZATION, KNOWLEDGE MANAGEMENT, EMPLOYEE
OUTCOMES AND PERFORMANCE OF LARGE MANUFACTURING FIRMS
IN KENYA**

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IN BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS,
UNIVERSITY OF NAIROBI**

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DECLARATION

I, the undersigned, declare that this thesis is my original work and has not been presented to any other University for academic credit.

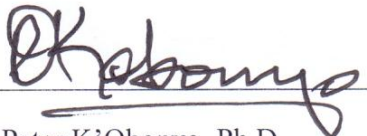
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DEDICATION

This thesis is dedicated to my late parents Elijah O. Ambula and Ruth K. Ambula, my husband Billy L. Aseka, my sister Joy Attogo and children, Sharon Litunya, Emmanuel Litunya and Samuel Litunya for their unwavering support and encouragement.

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ABBREVIATIONS AND ACRONYMS

COYA	:	Company of the Year Award
CSA	:	Central Statistics Agency
DLOQ	:	Dimensions of Learning Organization Questionnaire
FeMSEDA	:	Federal Medium and Small Enterprise Development Agency
GDP	:	Gross Domestic Product
GOK	:	Government of Kenya
HR	:	Human Resource
HRM	:	Human Resource Management
ICT	:	Information Communication Technology
ISO	:	International Standards Organization
KAM	:	Kenya Association of Manufacturers
KBV	:	Knowledge Based View
KIRDI	:	Kenya Industrial Research Development Institute
KM	:	Knowledge Management
NAICS	:	North American Industry Classification System
RBV	:	Resource Based View
SHRM	:	Strategic Human Resource Management
TCCIA	:	Tanzania Chamber of Commerce, Industry and Agriculture
US	:	United States

ABSTRACT

The concept of learning organization has generated a lot of debate among scholars in recent years. Learning organizations have developed as a result of pressures facing modern organizations to adapt and remain competitive in modern business environment. However, few empirical studies have examined the relationship between learning organization and organizational performance. This study sought to contribute to this growing body of knowledge by determining the influence of learning organization on performance of large manufacturing firms in Kenya. Specific objectives focused on examining the mediation of employee outcomes in the relationship between learning organization and firm performance, assessing the moderating effect of knowledge management and establishing the joint effect of the three variables on performance. The study was guided by the positivist approach. Review of literature and identification of knowledge gaps formed the basis of the conceptual model and hypotheses. The study was anchored on four theories: resource based view, knowledge based view, dynamic capabilities theory and human capital theory. The descriptive survey design was used. Data was collected from a cross section of study units. The target population consisted of 108 large manufacturing firms. A structured questionnaire, based on a five-point likert type scale, was used to collect primary data. The key respondents included the human resource manager, finance manager and production manager. Results of tests for normality confirmed that data employed in analysis was normally distributed. The reliability test showed that all the study variables were reliable thus suitable for further analysis. Descriptive statistics and regression analyses were used to analyze data. Results of the study indicated that learning organization has a positive influence on firm performance. The relationship between learning organization and both financial and non-financial performance was positive and significant. Findings of the study did not provide sufficient evidence to support the mediation of employee outcomes in the relationship between learning organization and firm performance. Similarly, the study also established that knowledge management does not moderate the relationship between learning organization and firm performance. However, based on the structure of the research model which included learning organization, employee outcomes and knowledge management, the results seemed reasonable. The combined effect of learning organization, employee outcomes and knowledge management on financial performance was not statistically significant. Results of the study revealed that the joint effect of learning organization, employee outcomes and knowledge management on non-financial performance was greater than the individual effect of the predictor variables. The results of further analysis revealed that learning organization mediates the relationship between knowledge management and non-financial performance. The study also confirmed the mediation of learning organization in the relationship between employee outcomes and non-financial performance. The results present diverse implications for policy, practice and research. The study confirmed that learning organization has a significant influence on employee outcomes such as organizational commitment and job satisfaction. Human resource development practitioners can use the findings of this study to support the case for implementation of learning organization initiatives. This will lead to high levels of organizational commitment and job satisfaction which translate to increased productivity. Policy makers will use the findings of this study to evaluate how well the manufacturing sector can be leveraged through learning organization practices in order to contribute to increased economic growth. The study provided support for the basic proposition of resource based view that superior performance can be achieved from a combination of firm specific resources. The study confirmed that human resource practices combined into an overall system can be valuable and difficult to imitate thus leading to superior performance. Future studies could use longitudinal study to provide a better understanding of the influence of learning organization on firm performance. Organizational factors such as strategy, structure, innovation technology and leadership could be considered as possible influencers in the relationship.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Twenty-first century organizations are facing an unprecedented wave of change and a business environment characterized by turbulence, uncertainty and volatility. Jamali, Sidani and Zouein (2009) observe that modern organizations have no choice but to adapt to this change or face the risk of extinction. This backdrop of change has triggered a reassessment of traditional managerial concepts, processes and systems of delivery and embracing new management philosophies revolving around learning organization practices and principles. Learning organizations have developed as a result of the pressures facing modern organizations to adapt and remain competitive (Probst & Buchel, 1997). These changes in management philosophy and practice can be explained by a number of factors. The advent of globalization, intense competition, proliferation of knowledge workers, changing lifestyles have influenced organizations and management processes. Given this new environment, there is growing realization that companies should not only aim at survival but also strive for excellence to ensure continuity and sustainability (Peters & Waterman, 1982; Hitt, 1996).

The benefits of learning organization are well articulated in the management literature (Khadra & Rawabdeh, 2006; Prieto & Revilla, 2006). The learning organization concept is seen as a resource-oriented approach that is based on the ability of the organization to turn standard resources that are available to all into competences which are unique and cannot be easily copied by competitors (Karash, 2002). Eisenhardt and Martin (2000) propose that in addition to the resources, the organization processes are important because they facilitate the manipulation of resources into value creating strategy. According to Scarborough, Swan and Preston (1999) knowledge management is regarded as any process of creating, acquiring, capturing, sharing and using knowledge to enhance learning and performance in organizations.

The creation of value is associated with transforming input into output which requires a wide array of knowledge usually through combining specialized knowledge of a number of individuals (Grant, 1996). Thus, the critical source of competitive advantage is knowledge integration rather than knowledge as a stand alone entity. Grant (1996) further observes that competitive advantage depends upon how effective firms are in utilizing the knowledge organizational members possess, which is associated with the ability of the firm to access and harness specialized knowledge of its members. Sanchez (2001) suggests that the link between knowledge and learning processes is often associated with the organization capability to learn.

This study is guided by four theories namely: Resource-Based View (RBV), Knowledge-Based View (KBV), Dynamic Capabilities Theory (DCT) and Human Capital Theory (HCT). The study is anchored on RBV which emphasizes the importance of intangible assets as sources of sustainable competitive advantage. Wright and McMahan (1992) argue that RBV provides a rationale on how a firm's human resources could provide potential sources of sustainable competitive advantage. KBV proposes that heterogeneous knowledge bases among firms and the ability to create and apply knowledge are the main determinants of performance difference. DCT suggests that firm processes can be used to integrate and reconfigure resources to match and even create market change (Eisenhardt & Martin, 2000). HCT focuses on development of core competences of the organization through training and development of employees. This study focuses on knowledge management practices such as acquisition, application and sharing and how they can be integrated with learning organization practices to create positive performance outcomes.

The structure of Kenya's manufacturing sector comprises micro, small, medium and large industries classified mainly by employment levels and capital investment. As a country, Kenya has recognized the manufacturing sector for its high potential for wealth creation, employment generation and poverty alleviation. Unfortunately, an assessment of Kenya's competitiveness in manufacturing reveals that the country lags behind Tanzania and is only slightly better than Uganda (Manufacturing Survey, 2012). Several factors have been cited by analysts that make Kenya uncompetitive in the continent, the major factor being the cost of doing business with many industry players citing high power tariffs.

Learning organization and knowledge management provide opportunities for these firms to achieve sustainable competitive advantage given the competitive environment they operate in. The choice of the two concepts is based on the fact that business enterprises are increasingly operating in knowledge-based economies where success is largely determined by the quality of information available. Manufacturing firms provided a wide variation of organization context that helped understand the influence of learning organization, knowledge management and employee outcomes on firm performance.

1.1.1 Learning Organization

The term learning organization was first proposed by Garratt in 1987 to describe organizations that experimented with new ways of conducting business in order to survive in turbulent highly competitive markets (Ortenblad, 2004). Extensive literature review on learning organization provides various definitions. Jamali et al. (2009) observe that there is lack of consensus among researchers and practitioners with regard to a common definition of learning organization and ambiguity still exists regarding what a learning organization is or should be. In addition, Matlay (1997) argues that the definitions appear complementary rather than fundamentally original or conceptually different. This provides overwhelming but unclear information to both researchers and practitioners.

Senge (1990) defined learning organizations as organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning to learn together. Learning in an environment of change positions people as a source of distinctive competence and makes the source of sustainable competitive advantage (Pedler, Burgoyne and Boydell (1991; Rowden, 2001), a position that is supported by proponents of resource based view (Barney, 1991; Grant, 1991, Karash, 2002). Huber (1991) and Garvin (1993) linked learning to the use of information in modifying the behavior of the organization to reflect new knowledge and insights.

A distinction can be made between organizational learning and learning organization. According to Easterby-Smith and Araujo (1999) a learning organization is action oriented and is geared towards using specific diagnostic and evaluative methodological tools which can help identify, promote and evaluate the quality of learning processes inside organizations. On the other hand, organization learning concentrates on collection and analysis of the processes involved in individual and collective learning inside the organization. The idea of organizational learning is accredited to the creation of action learning process (Revans, 1982) which uses small groups, rigorous collection of statistical data and the tapping of groups positive emotional energies (Garratt, 1999). A learning organization is founded on the learning process of individuals in the organization (Wang & Ahmed, 2002). Its main focus is to integrate individual learning into organizational learning.

Organizational learning literature includes both organizational and individual level explanations. Organizational level explanations focus on routines and the role of culture, whereas individual level explanations focus on cognitions and behaviours of individuals (Garavan & McCarthy, 2008). On the contrary, the learning organization concept starts from the premise of a positive relationship between organizational learning and performance which is frequently defined in a number of ways to include profitability, productivity and innovation (Garavan & McCarthy, 2008). Models of learning organization (Watkins & Marsick, 1993; Pedlar, Burgoyne & Boydell, 1999; Senge, 2006) emphasize the need to implement systems, processes, policies and mechanisms designed to promote learning. Their main focus is individual and group outcomes which include production rewards, tools and techniques such as dialogue and systems analysis (Garavan & McCarthy, 2008).

Although there are different definitions and approaches to learning organization, some common characteristics can be identified. First, all approaches to the construct of the learning organization assume organizations are organic entities like individuals and have capacity to learn. Second, sustainable competitive advantage is attributed to the organization's learning capability.

Third, characteristics of the learning organization are reflected at different levels, individual, team and organizational levels. This study was anchored on Lewis (2002) definition of a learning organization as an organization in which employees are continually acquiring and sharing new knowledge and are willing to apply that knowledge in making decisions or performing their work. The study focuses on individual, team and organizational learning and how this learning can lead to improved firm performance.

A central theme of the learning organization literature is that learning is intentional and that the organization through its structures, systems and culture is designed to learn. In this regard, scholars have identified a variety of tools for measuring and diagnosing learning organizations. Pedler et al. (1991) developed the learning organization questionnaire which comprised eleven dimensions: a learning approach to strategy, participative policy making, informing, formative accounting and control, internal exchange, reward flexibility, enabling structures, boundary workers, inter-company learning, a learning climate and self-development opportunities. Garvin (1993) conceptualized learning as comprising the following constructs: systematic problem solving, experimentation with new approaches, learning from organization's own experience and past history, learning from experiences and best practices of others, transferring knowledge quickly and efficiently throughout the organization.. Senge (1994) theoretical framework consists of five disciplines: personal mastery, mental models, shared vision, team learning and systems thinking. The disciplines can be used as valuable guidelines in working towards learning organization status, though the observable characteristics of such organizations are not clearly identified (Yang et al., 2004).

A critical review of the diagnostic tools in terms of scope, depth and validity suggests that the Dimensions of the Learning Organization Questionnaire (DLOQ) developed by Yang et al. (2004) meets the three criteria. This tool consists of seven dimensions: continuous learning, dialogue and inquiry, team learning, embedded systems, empowerment, system connectivity and strategic leadership.

The instrument is intended to gauge the perceptions of employees regarding the seven constructs at a particular point in time (Jamali et al, 2009). A clear and inclusive definition of the construct of learning organization is reflected in this tool. Learning organization is defined from an organizational culture perspective, thus provides adequate measurement domains for scale constructs. The current study focuses on learning organization practices based on the work of Yang et al. (2004).

The validity of (DLOQ) has been proved through evidence of results obtained which suggest that this tool could be used in future research requiring measurement of learning capability (Basim, Sesen & Korkmazurek, 2007). The model identifies the main dimensions of learning organization in the literature and further integrates these dimensions in a theoretical framework that specifies interdependent relationships. The instrument covers learning at individual, team, organizational and global level. The DLOQ also defines the proposed seven dimensions of learning organization from the perspective of action imperatives and thus has practical implications. The scale provides information which could be used by managers wishing to improve learning capability in their firms.

1.1.2 Knowledge Management

Knowledge is defined as the information that is combined with experience, context, interpretation and reflection (Davernport, De Long & Beers, 1998). Knowledge management is the process of capturing the collective expertise and intelligence in an organization and using them to foster innovation through continued organizational learning (Davernport et al. 1998). Effective knowledge management allows knowledge sharing and provides easy access to knowledge, know how, experience and expertise (Gloet & Terziovski, 2004). In addition, Darroch and McNaughton (2002) observe that knowledge management facilitates the learning process in organizations. Hansen, Nohria and Tierney (1999) argue that as the foundation of industrialized economies has shifted from natural resources to intellectual assets, executives have been compelled to examine the knowledge underlying their business and how that knowledge is used. To innovate successfully, firms must create knowledge faster than rivals (Teece & Pisano, 1994) and rapidly translate new knowledge into new products (Grant, 1996).

Knowledge management is an increasingly critical component of sustainable competitive advantage and provides long-term benefits for organizations. However, Li-An Ho (2008) and Kuo (2011) postulate that insufficient organizational structure and inappropriate diffusion processes have decreased the value of knowledge management and led to employee disappointment. Establishing a systematic organizational structure and fostering an organizational culture which promotes active information sharing should be the focus of all modern organizations (Wickramasinghe, 2007). Marshall, Prusak and Shpilberg (1996) argue that appropriate Human Resource Management (HRM) strategies can influence employees' beliefs and values which consequently affect organizational culture. Kuo (2011) suggests that HRM has significant influence on organizational knowledge repository and management.

Successful knowledge management is dependent on a well-functioning human resource management and the employees' perceived behavior in knowledge creation, knowledge sharing and knowledge application (Lord & Farrington, 2006). Nonaka and Takeuchi, (1995) argue that appropriate human resource management system is one of the critical factors for effective knowledge management. As proposed by Svetlik and Stavrou-Costea (2007) HRM practices must be aligned with knowledge management practices to enhance firm performance. Further, Kuo (2011) observed that successful corporate knowledge management comes from the support of top management and the fundamental investment of human resource managers. This implies superior performance depends on how firms utilize the knowledge organizational members possess. Organizations acquire knowledge not only through their own employees but also through formal and informal environmental scanning (Huber, 1991).

Literature on knowledge management proposes various dimensions of the concept. Zack (1999) suggested four elements which include knowledge acquisition, refinement, storage and retrieval as well as presentation. Tiwana (2002) equated knowledge management to creating, packaging, assembling, reusing and revalidating knowledge. Alavi and Leidner (2001) postulate that the ability to create, store, retrieve, transfer and apply knowledge are considered the core attributes of implementing knowledge management in organizations. In line with the aforementioned operational definitions, knowledge management can be classified into three main categories knowledge acquisition, knowledge sharing and knowledge application. These three elements are adopted in the current research.

Drawing from Darroch and McNaughton (2002) knowledge management consists of three processes knowledge acquisition, knowledge application and knowledge sharing. Knowledge acquisition is related to using existing knowledge or capturing new knowledge which enhances an organization's ability to realize its goals as well as increase organizational learning. Nonaka and Takeuchi (1995) suggest that newly acquired knowledge increases stock of knowledge available to organizations, decreases levels of uncertainty and opens new opportunities for applying and exploiting knowledge. Knowledge application is related to the actual use of current knowledge in order to solve existing problems (Alavi & Tiwana, 2002).

Knowledge acquisition is an activity within the domain of knowledge management that has been widely practiced especially among firms that want to gain specific knowledge in a specific context (Ahmad, Mohamad & Ibrahim, 2013). The scholars suggest that the role of individuals in knowledge transfer process is conceptualized as knowledge acquisition process. This process is related to the capabilities of acquiring, integrating, storing, sharing and applying knowledge which is crucial in building and sustaining competitive advantage of the firm (Anh, Baughn, Hang & Neupert, 2006). In order to effectively acquire knowledge, firms need to rely on availability of expertise among employees in the firm. Firms can also acquire knowledge from external sources by hiring people possessing the required knowledge or by purchasing knowledge assets such as patents, research documents or other intelligence material (Wong & Aspinwall, 2004).

Huang and Li (2009) argue that effective knowledge application increases organization capability of managing different sources and types of knowledge and using knowledge to achieve competitive advantage. Knowledge application refers to an organization's timely response to technological change, by utilizing the knowledge and technology generated into new products and services (Song, Bij & Weggeman, 2005). According to Grant (1996) a fundamental asymmetry exists in the economics of knowledge. The acquisition of knowledge requires greater specialization than its application into new products and processes (Song et al. 2005). Hence, innovation requires the coordinated efforts of individual specialists who possess many different types of knowledge. In this regard, the role of the firm is to encourage effective knowledge application of individuals it employs through incentives and direction (Sarin & McDermott, 2003).

Knowledge sharing is a business process that requires collective knowledge, skills, expertise and dissemination of knowledge across organizational units (Chen and Huang, 2009). Knowledge sharing is attributed to a social interaction culture involving the exchange of employee knowledge, experience and skills within the organization (Lin, 2007). According to Hogel et al. (2003) knowledge sharing comprises a set of shared understanding related to providing employees access to relevant information and using knowledge networks within organizations. Jensen (2005) suggests the most important task in knowledge management is to create the best opportunities for information sharing between individuals and coordination of the knowledge that individuals possess. Knowledge has to be articulated in a way that other members of the organization can understand it.

The increasing relevance of knowledge management and the contributions of knowledge management in Kenya present diverse opportunities, innovations and strategies for the nation (Kagiri, 2008). Knowledge management is increasingly being adopted in a number of industries. In the Information, Communication and Technology (ICT) industry, knowledge management is widely used by firms that are leveraging their knowledge assets in the form of patents, copyrights and other intellectual assets for economic gain and effective management (Kagiri, 2008). Salina and Wan Fadzilah (2010) observe that each firm must be able to accumulate certain intangible knowledge assets that are relevant to its diverse operations.

In the current study, knowledge management is associated with getting the right information from different sources, utilizing knowledge to solve work-related problems and sharing knowledge between individuals, departments and business partners. This implies knowledge acquisition, application and sharing should ultimately lead to improved firm performance. The study adopts the three components of knowledge management identified by Darroch and McNaughton (2002) namely knowledge acquisition, knowledge application and knowledge sharing.

1.1.3 Employee Outcomes

Employee outcomes are affective dispositions associated with work-related attitudes (Luthans, 2011). Wright and Kehoe (2013) proposed that employee outcomes consist of affective reactions such as satisfaction and commitment as well as behavioural reactions such as absenteeism and turnover. Huselid (1995) identified job satisfaction and organization commitment as immediate outcomes of human resource management practices, organization culture and leadership. Further, Armstrong (2006) argued that job-related attitudes such as job satisfaction and organizational commitment have far reaching impact on organizational performance. Mulabe (2013) observed that systems of HRM practices increase employee discretionary effort and affect intermediate outcomes such as commitment and satisfaction. In addition, (Ibua, 2014) suggested that job satisfaction and organizational commitment have a strong relationship which affects performance. This study focuses on two immediate outcomes of HRM practices namely: job satisfaction and organizational commitment.

Organizational commitment is the relative strength of an individual's identification and involvement in a particular organization (Mowday, Porter & Steers. 1979). Organizational commitment produces a strong desire to maintain membership in the organization (Meyer & Allen, 1991). Committed employees are those who share common values, beliefs and goals espoused by the firm (Mowday et al., 1979). They display behaviours of increased involvement and citizenship, a strong desire to retain membership in the organization, willingness to exert considerable effort on behalf of the firm and have a tendency of working closely with superiors (Guest, 1987).

Rodriguez and Ventura (2003) found that internal system of human resource management practices are associated with organizational commitment, a strong positive state of psychological and emotional attitude which develops as employees interact with one another. Becker (1960) viewed commitment as desire to remain with an organization resulting from the recognition of the costs associated with termination. The scholar described commitment as a disposition to engage in consistent lines of activity resulting from 'side bets' which would be lost if the activity were discontinued.

For organizational commitment, a 'side bet' is made when something of importance to an individual, for instance, pension and seniority becomes contingent upon continued employment in that organization (Meyer & Allen, 1991). Despite the varied definitions of commitment, three general themes can be identified, affective attachment to the organization, perceived costs associated with leaving the organization and the obligation to remain with the organization.

Meyer and Allen (1991) proposed a three component framework of organizational commitment which includes affective, continuance and normative commitment. Commitment in this sense is attributed to a psychological state that characterizes the employees relationship with the organization and has implications for the decision to continue or discontinue membership in the organization. Affective commitment refers to employees' emotional attachment to, identification with and involvement in the organization. Employees with a strong affective commitment continue employment with the organization because they want to do so. Continuance commitment refers to an awareness of the costs associated with leaving the organization. Employees whose primary link to the organization is based on continuance commitment remain because they need to do so. Finally, normative commitment reflects a feeling of obligation to continue employment in the organization. Employees with a high level of normative commitment feel that they ought to remain with the organization (Meyer & Allen, 1991).

Most studies that have reported positive relationship between commitment and performance used measures of affective commitment. However, an obligation to remain in the organization is associated with an obligation to contribute, in which case normative commitment also positively affects performance. The current study focused on affective, continuance and normative measures of commitment. These three dimensions suggest that people stay with their organizations because they want to (affective commitment), because they feel they ought to (normative commitment) and because they need to (continuance commitment).

Job satisfaction is an emotional state resulting from the appraisal of one's job (Locke, 1976). Pool and Pool (2007) argued that job satisfaction arises from the individuals' perception of their jobs and the degree to which there is a good fit between the individual and the organization. In addition, Locke (1976) observed that satisfied employees have better mental and physical health, they learn new job-related tasks more quickly and are more productive. Job satisfaction is generally recognized as a multifaceted construct that includes both intrinsic and extrinsic job elements. Herzberg's (1966) two factor theory proposed that primary determinants of employee satisfaction are factors intrinsic to the work that is done, that is, recognition, achievement, responsibility, advancement and personal growth in competence. On the other hand, dissatisfaction is caused by hygiene factors that are extrinsic to the work itself. These factors include company policies, supervisory practice, pay system and working conditions. The extent of job satisfaction is reflected in the cumulative effect of met worker expectations. This implies that employees expect their job to provide a mixture of features such as pay, promotion or autonomy for which each employee has certain preferential values.

According to Bernstein and Nash (2008) job satisfaction has three components, emotional, cognitive and behavioural components. The emotional component refers to feelings regarding the job itself such as boredom, anxiety or excitement. The cognitive component refers to beliefs regarding one's job, for instance, feeling that one's job is mentally demanding and challenging. Finally, the behavioural component includes peoples own actions in relation to their work such tardiness, staying late or pretending to be ill in order to avoid work (Bernstein & Nash, 2008). The current study incorporates the emotional and cognitive dimensions of job satisfaction.

There are two types of job satisfaction based on the level of employee's feelings about their jobs. The first and most studied is global job satisfaction which refers to employees' overall feelings about their jobs (Mueller & Kim, 2008). The second is job facet satisfaction which refers to feelings about specific job aspects such as salary, benefits and the quality of relationships with one's co-workers (Mueller & Kim, 2008).

Kerber and Campbell (1987) propose that measurement of job facet satisfaction may be helpful in identifying which specific aspects of a job require improvements. The results may assist the organization in improving overall job satisfaction or minimizing causes of high turnover (Kerber & Campbell, 1987). The current study focuses on job facet satisfaction to identify specific aspects of a job and how they contribute to improved firm performance.

1.1.4 Firm Performance

Firm performance refers to the extent to which an organization is able to meet its objectives and mission. Torrington, Hall and Taylor (2008) attribute organizational performance to bottom financial performance, doing better than competitors, maximum organization effectiveness and achieving specific organization objectives. Mitchell (2002) argues that organizational performance is affected by three factors namely: organization motivation to achieve performance objectives, influence and impact of the external environment and organization capacity to achieve desired performance. Measurement of performance is an essential indicator of the effectiveness of the firm. Firm performance needs to be assessed to highlight strengths and improvement opportunities and reduce gaps (Khadra & Rawabdeh, 2006).

Performance measurement incorporates quantitative (objective) as well as qualitative (subjective) measures. Quantitative measures focus on end results such as sales turnover and return on investment while qualitative measures focus on the process by which end results are achieved such as product or service quality, customer satisfaction, employee satisfaction and commitment (Venkatraman & Ramannujam, 1986). Ahmed, Lim and Zairi (1999) suggest that effective measurement systems are those which are balanced, integrated and designed to highlight critical inputs, outputs and process variables. In addition, a valued measurement system incorporates financial and operational measures such a balanced scorecard approach (Hitt, 1996). The BSC provides a framework for selecting multiple performance indicators that supplement traditional financial measures with qualitative measures such as customer perspective, internal business process and learning and growth. This study focused on perceptual measures of financial performance and non-financial measures such as customer perspective, internal business operations and learning and growth.

Dyer and Reeves (1995) proposed four possible types of measurement for organizational performance. These include human resource (HR) related outcomes (turnover, absenteeism, job satisfaction), organizational related outcomes (productivity, quality service, efficiency), financial accounting outcomes (return on assets, profitability, sales and Tobin's q) and capital market outcomes (stock price, growth, returns). The idea behind this model is that outcomes are hierarchical in nature, outcomes at one level impact those at the next level. However, Youndt, Snell, Dean and Lepak (1996) recognized the difficulty in obtaining objective measures of performance in organizations. The scholars suggested when dealing with organizations in different sectors, standardization is not possible and asking managers to assess their own firm's performance relative to others in the same industry is an acceptable option. Drawing from Dess and Robinson (1984) proposition, the subjective perceptions of a firm's management team are considered adequate in the absence of objective measures. The findings of their study indicated that perceptions of the management team were consistent with performance measured in terms of return on assets (ROA) and sales growth.

1.1.5 Linkages of Key Variables of the Study

Fierce competition, rapid evolution of information technology, economic uncertainty and shifting consumer trends have created a business environment where the main source of competitiveness lies in a company's ability to transform into a learning organization, an organization which constantly generates and diffuses knowledge (Dekoulou & Trivellas, 2015). Though the link between learning organization and knowledge management is still unclear, Brown and Woodland (1999) argue that it is impossible for an organization to sustain competitive advantage without constantly learning and developing new knowledge. Loermans (2002) postulates that rapid change in the extant global business environment demands greater learning at organizational level. This type of learning requires new knowledge to be generated continuously and managed in a systematic way (Loermans, 2002). Fang and Wang (2006) observe that to achieve superior organizational performance, organizations need to base their actions on regular creation and integration of new knowledge and thus adopt learning organization strategies in their daily operations.

Learning organization has been theorized in literature to have a significant influence on work outcomes. Dekoulou and Trivellas (2015) argue that individuals employed by companies that have adopted the learning organization approach are strongly motivated and tend to experience positive psychological outcomes such as commitment and satisfaction. Organizations that provide staff members with adequate resources and opportunities for learning, self-enhancement and professional advancement, enhance their job satisfaction (Rowden & Conine, 2005). Gaertner (2000) states that leadership which promotes teamwork, stimulates questioning, sets examples and offers rewards is widely considered a significant contributor to job satisfaction. In addition, Watkins and Marsick (1993) argue that the adoption of learning organization practices enables employees to acquire new skills and knowledge, to participate in work groups and decisively contribute to organizational vision. The implementation of learning organization strategies not only enriches employees' knowledge but also boosts their commitment to organizational goals, increases their productivity and performance (Bhatnagar, 2007).

1.1.6 Large Manufacturing Firms in Kenya

Kenya's manufacturing sector has been identified as one of the key productive sectors under Vision 2030 due to its contribution to wealth creation, employment generation and poverty alleviation (Manufacturing Survey, 2012). In addition, the sector supports the country's economic development agenda through earning foreign exchange and attracting foreign direct investment (Cheruiyot, Jagongo & Owino, 2012). This study focuses on firms registered with Kenya Association of Manufacturers (KAM). KAM membership constitutes 40 per cent of manufacturing value-added industries in Kenya and comprises of small, medium and large enterprises. Over 80 per cent of these firms are based in Nairobi while the rest are located in other major towns and regions including Coast, Nyanza, Western, Nakuru, Eldoret, Athi River, Nyeri and Thika.

The manufacturing sector accounted for 8.9 percent of GDP and provided 12.4 percent of employment in the formal sector in 2013. The sector recorded positive growth of real output of 4.8 percent in 2013 compared to 3.2 in 2012. This growth is attributed to political stability that prevailed after the March 2013 general elections which increased investor confidence (Economic Survey, 2014).

In addition, stable exchange rates and lower interest rates in the same year also contributed to capital accumulation thus boosting production. The main components of this sector include: food processing such as milling, meat dairy, sugar, fruits and vegetables: chemicals, beverages, tobacco, textile, paper, metal and electronics (KAM, 2014).

Further, Economic survey (2014) shows formal employment in the sector increased by 3.4 per cent from 271.0 thousand persons in 2012 to 280.3 persons in 2013. Loans advanced to the sector increased from Kshs 170.0 billion in 2012 to Kshs 183.7 billion in 2013 mainly as a result of lower interest rates. Export processing zones (EPZ) recorded positive growth in terms of sales, imports, employment, gazette zones and expenditure on local goods and services. In addition, key sub-sectors which registered positive growth included: manufacture of rubber, sugar, fabricated metal, furniture, pharmaceutical, food production, preserved fruits and vegetables.

1.2 Research Problem

Empirical evidence supports the development and operation of a learning organization which leads to improved firm performance. Cappelli and Singh (1992) observe that models of strategic human resource management (SHRM) based on fit assume that different business strategies demand a unique set of behaviours and attitudes from employees. Learning organization as a human resource strategy can lead to unique outcomes from employees which contribute to improved firm performance. Lado and Wilson (1994) propose that a firm's human resource practices could provide a source of sustainable competitive advantage. This improved performance depends on knowledge-based sources which are associated with appropriate learning processes (Andreu et al., 2008). Thus, learning organization requires a holistic approach that focuses on the interaction between various variables such as knowledge management and employee outcomes.

The focus on the manufacturing sector in this study is driven by the fact that this sector has great potential for employment creation, provides a stimulus for growth for other sectors and offers significant opportunities for export expansion (Economic survey, 2014). However, manufacturing firms face a number of challenges which need to be addressed in order to ensure success of the sector. Expensive and often low-quality raw materials, rising labour costs, unreliable and expensive energy have led to high costs of production. In addition, the high cost of inputs as a result of poor infrastructure has led to high prices of locally manufactured products which limit their competitiveness in the regional markets thus hampering the sector's capacity utilization (Manufacturing and Industry Sector Report, 2013). Weak enforcement of standards and tax laws have led to dumping of sub-standard imports and counterfeit goods into the domestic market. This raises the question, could it be that manufacturing firms have not deliberately embraced the concept of learning organization which is evident from their low levels of competitiveness in regional and international markets?

Empirical studies on learning organization and firm performance present inconclusive research findings. Khadra and Rawabdeh (2006) indicate that only one construct, learning and development, significantly influenced performance. Other constructs such as leadership and vision, rewards and recognition, information and knowledge were not significantly related to performance. Prieto and Revilla (2006) found that the path coefficient from learning capability to financial performance was -0.236 and non-significant, therefore the hypothesized relationship between learning capability and performance was not confirmed. A study by Nzube and Omolo (2012) revealed a decrease in firm performance despite the development of learning organization practices in commercial banks in Kenya.

Contextually, a number of studies have been done in manufacturing firms. Ellinger, Young and Houston (2002) study of US manufacturing firms concluded that there is pay off for organizations that embrace practices and strategies consistent with learning organization. A study by Khadra and Rawabdeh (2006) of manufacturing firms in Jordan established that learning and development is a significant predictor of learning organizations which companies can focus on in their efforts to transform their organizations into learning companies.

Locally, Kidombo (2007) confirmed a positive relationship between soft HR practices and performance of large private manufacturing firms. Results from a study by Awino (2007) revealed a strong relationship between core competencies, core capabilities and strategy implementation on performance of large private manufacturing firms in Kenya. However, the studies did not focus on the influence of knowledge management and employee outcomes on the relationship between learning organization and performance which was the focus of the current study.

In addition, methodological gaps can be identified from previous empirical studies. The sample used in Ellinger et al. (2002) only included firms for which secondary data was available. Similarly, studies by Li and Lu (2007) and Cheruiyot et al. (2012) used a convenience sample making generalization of the results questionable. The current study sought to overcome this problem by focusing on large manufacturing firms which is more representative hence likely to increase the generalizability of results.

Garrido and Camerero, (2010), Prieto and Revilla, (2006) and Ellinger et al. (2002) relied on a single source of information whose views are likely to be unrepresentative. Using a single informant for research has limitations as there is a possibility of common method bias. Key informants in this study consisted of human resource manager, finance manager and production manager who provided a more balanced view of performance. In line with previous local studies, cross sectional survey design was adopted in this study which permitted data to be collected at a single point in time.

Other studies did not consider financial measures (Kidombo, K'Obonyo & Gakuu, 2012; Omari, 2012). This narrow conceptualization of the construct of performance limits the ability of scholars to determine the influence of learning organization on financial and non-financial measures of performance. The current study incorporated both financial and non-financial measures of performance. Moreover, these studies have looked at learning organization, knowledge management, employee outcomes and performance in isolation, no attempt has been made to study the four variables together.

Prieto and Revilla (2006) examined the link between learning capability and business performance measured in both financial and non-financial terms. Results indicated that learning had an effect on non-financial performance, which in turn influenced organizational performance by 68.1 percent. A similar study by Khadra and Rawabdeh (2006) on the development of learning organization concept in manufacturing firms in Jordan also indicates a significant influence of 74.5 percent in organizational performance as a result of learning organization practices. A study by Ellinger et al., (2002) on the relationship between learning organization and financial performance of US manufacturing firms revealed that 31.2 percent of variance in financial performance is explained by learning organization dimensions leaving 68.8 percent unaccounted for. Findings from these studies indicate learning organization alone cannot explain variation in firm performance. Other factors need to be considered, key among them knowledge management and employee outcomes. The inclusion of knowledge management and employee outcomes is likely to have a strong contingent effect on the relationship between learning organization and firm performance.

Based on the empirical studies cited, the scholars focused on the direct relationship between learning organization and firm performance. The current study introduced employee outcomes as a mediating variable and knowledge management as a moderating variable in the relationship between learning organization and firm performance. The study attempted to answer the broad question: what is the role of knowledge management and employee outcomes in the relationship between learning organization and firm performance?

1.3 Research Objectives

The broad objective of this study was to determine the role of knowledge management and employee outcomes in the relationship between learning organization and performance of Large Manufacturing Firms in Kenya.

The specific objectives were to:

- i. Determine the influence of learning organization on performance of Large Manufacturing Firms in Kenya.
- ii. Assess the mediation of employee outcomes in the relationship between learning organization and performance of Large Manufacturing Firms in Kenya.
- iii. Examine the moderating effect of knowledge management in the relationship between learning organization and performance of Large Manufacturing Firms in Kenya.
- iv. Establish whether the joint effect of learning organization, knowledge management and employee outcomes on firm performance is greater than the individual effect of each variable on performance of Large Manufacturing Firms in Kenya.

1.4 Value of the Study

Previous studies on learning organization mainly focus on how learning capability leads to improved firm performance. This study introduced a new perspective on the moderating effect of knowledge management on the relationship between learning organization and firm performance. The study further tested the influence of employee outcomes as a mediator in the interrelationships. This joint effect of learning organization, employee outcomes and knowledge management on performance has not been studied before. Thus the study makes a significant contribution to the theory and practice of human resource management.

Policy makers will use the findings of this study to evaluate how well the sector can be leveraged through learning organization, employee outcomes and knowledge management in order to contribute to increased economic growth. Policy makers in Kenya recognize the importance of the manufacturing sector for long-term economic development. The results of the study will assist policy makers in making informed decisions to develop and upgrade Human Resource Management (HRM) practices for sustained superior performance.

However, the manufacturing sector faces a number of input constraints but offers greater scope and depth for improvement. Addressing challenges in manufacturing will stimulate more production to counteract the current shortfall in Kenya's requirements. Top management in the manufacturing sector can apply the findings of this study to develop internal capacity on how to manage learning to deliver sustainable competitive advantage. They will need to create a conducive environment which will encourage learning among employees. From the findings presented by the study, they will be able to evaluate the needs assessment and thereafter design and implement programmes that effectively address any learning or performance gaps. The findings are useful for senior managers in assessing the efficacy of the learning organization concept.

This study also contributes to new knowledge in both commercial and academic research endeavors. The results of the study provide a better understanding of the relationship between learning organization and firm performance while clarifying the intervening effect of employee outcomes and moderating effect of knowledge management. Students and researchers will use the findings as a basis for future studies particularly in areas of learning organization, employee outcomes, knowledge management and firm performance. Limitations of the study findings will also emerge as areas for further research. Future research could consider factors such as strategy, structure, innovation, technology, environment and leadership as possible influencers in the relationship.

1.5 Structure of the Thesis

This thesis is divided into five chapters. Chapter one presents an introduction which covers description of study variables and the context of the study which is large manufacturing firms in Kenya. The research problem, research objectives and value of the study are also discussed.

Chapter two presents a review of both theoretical and empirical literature. The theoretical underpinnings of the study namely: resource based view, knowledge based view, dynamic capabilities theory and human capital theory are discussed. It also presents the key constructs of the study comprising of learning organization, employee outcomes, knowledge management and firm performance and the relationships between them. Finally the chapter provides a summary of empirical studies and knowledge gaps that formed the basis for the conceptual framework and hypotheses.

Chapter three presents research methodology which covers research philosophy, research design, population of the study and sample design. The chapter also addresses data collection method, reliability and validity tests and operationalization of study variables. Finally data analysis techniques are discussed.

Chapter four focuses on pretesting for statistical assumptions, data analysis and interpretation of results. The findings are presented in two parts. The first part presents descriptive statistics which covers means, percentages, standard deviation and coefficient of variation which summarize demographic characteristics of the organization and respondents. Part two provides results of hypotheses testing and discussion of findings.

Chapter five discusses the summary, conclusion and recommendations of the study. In addition, the chapter presents implications of the study which include theoretical implications, implications for practice, implications for policy and contribution to knowledge. Limitations of the study and suggestions for future research are provided.

1.6 Chapter Summary

This chapter presented the background of the study, briefly discussed the variables of the study which include learning organization, knowledge management, employee outcomes and firm performance. The context of the study which is large manufacturing firms in Kenya was also discussed.

In addition, the chapter provided an overview of the theories that underpin the study namely RBV, KBV, DCT and HCT. This chapter also presented the research problem, the objectives of the study, value of the study and structure of the thesis. Chapter two presents the theoretical foundation of the study, literature review, conceptual framework and hypothesis of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a discussion of the theories that underpin the study, followed by a review of literature highlighting relationships between variables of the study. The summary of knowledge gaps from empirical studies reviewed is provided as well as the conceptual framework depicting the relationship between the variables of the study.

2.2 Theoretical Foundation

This study is based on a number of theories including Resource-Based View (RBV), Knowledge-Based View (KBV), Dynamic Capabilities Theory (DCT) and Human Capital Theory (HCT). RBV focuses on the key resources of the firm as determinants of competitive advantage. KBV suggests that knowledge development and deployment lead to superior performance. DCT proposes that competitive success arises from continuous development, alignment and reconfiguration of firm-specific assets. The main focus of HCT is that people possess knowledge, skills and abilities that are of economic value to the firm.

2.2.1 Resource Based View

The study falls within the framework provided by RBV. The RBV proposes that the firm's internal resources are the primary predictors of superior performance (Wernerfelt, 1984). Barney (1991) suggests that internal firm resources which are valuable, rare, inimitable and non-substitutable can provide sources of competitive advantage. The major contribution of the RBV is the idea that firms should focus attention on developing internal assets and processes (Grant, 1991). Learning organization comprises characteristics, principles and systems of an organization that learns collectively which leads to increased firm performance. The learning organization concept is seen as a resource-oriented approach that is based on the ability of the organization to turn standard resources that are available to all into competences which are unique and cannot be easily copied by competitors (Karash, 2002). This study proposes that a system of learning practices can lead to increased firm performance.

Majority of research in the strategic management literature focuses predominantly on industry determinants of organizational performance (Lado & Wilson, 1994; Wright, Dunford & Snell, 2001). The resource-based view of the firm overcomes this bias by stressing the importance of firm-specific resources that can provide sustainable competitive advantage (Khatri, 2000). Contrary to the classical strategic management paradigm that has a special focus on the industry-environment, the RBV is firm focused with emphasis on links among strategy, internal resources and performance (Wright & McMahan, 1992). Teece, Pisano and Shuen (1997) suggest that competitors would experience difficulty in duplicating a competitive advantage based on the combination of firm specific resources because the combination arises from organization process that is causally ambiguous, path dependent and socially complex.

The RBV of the firm focuses on resources and capabilities within the firm to explain the profit and value of the organization (Wernerfelt, 1984; Barney, 1991; Grant, 1996). Barney (1991) proposes that organizations are heterogeneous entities characterized by their particular and unique resource bases. According to this view, the firm presents an explanation for heterogeneous competition based on the assumption that close competitors differ greatly in their resources and capabilities, which determine their capacity to generate profit (Amit & Shoemaker, 1993). Considering a strategic perspective of RBV of the firm, the organization is a collection of unique competencies and capabilities influencing its evolution and strategic growth options (Dierickx & Cool, 1989; Barney, 1991). The resources are the basis of this theory and thus explain the differences in performance between firms. As a result, firms that possess certain competitive advantages obtain higher returns. This study proposed that the joint effect of learning organization, knowledge management and employee outcomes on firm performance is greater than the individual influence of predictor variables, thus lending support to the proposition of RBV. Consistent with Wright et al. (2001) proposition, a synergistic effect rather than a set of independent practices leads to competitive advantage.

Critics of RBV point out that the four conditions of rarity, value, inimitability and non-substitutability are necessary but not sufficient conditions of sustainable competitive advantage. In the current business environment, resources enough are not sufficient. Rubin (1973) argues that mere ownership of resources were not useful by themselves. Organizations need to emphasize customer satisfaction through quality products and services. This is in tandem with Wernerfel (1984) assertion that RBV encourages researchers to explore the usefulness of the resource side rather than the product side

2.2.2 Knowledge Based view

The knowledge-based view of the firm which emerges as an extension of the resource-based view of the firm proposes that heterogeneous knowledge bases among firms and the ability to create and apply knowledge are the main determinants of performance difference (Decarolis & Deeds, 1999). Amin and Cohendet (2004) argue that knowledge is an established theoretical construct that has been proposed as a heterogeneous resource that firms value in different manifestations as a basis of competitive advantage. An organization's superior performance depends on its ability to defend, capitalize and apply knowledge that it creates (Cameli & Tishler, 2004) in combination with other resources and competences of the firm such as contextual factors and in agreement with its strategic direction (Prieto & Revilla, 2006). A similar view is shared by Grant (1996) who argues that firms exist because they are better at integrating and applying specialized knowledge than markets do. The current study looks at acquisition, application and sharing knowledge as components of knowledge management and how it can be created and applied within the organizational context.

Knowledge is considered as a strategic resource that does not depreciate in the way traditional economic factors of production do and can generate increasing returns. Knowledge can be distinguished from traditional factors of production (land, labour and entrepreneurship) in that it is governed by the law of increasing returns (Salina & Wan Fadzilah, 2010). Malhorta (2001) submits that in contrast to traditional factors of production that are governed by diminishing returns, every additional unit of knowledge used effectively results in marginal increase in performance. Curado (2008) observes that the nature of most knowledge-based resources is mainly intangible and dynamic, allowing for idiosyncratic development through path dependency and causal ambiguity which cannot be easily imitated hence leading to sustained competitive advantage.

The basic proposition of KBV is that organizations are heterogeneous entities loaded with knowledge (Hoskisson, Eden, Chung & Wright, 2000). This view considers a firm to be 'a distributive knowledge system' composed of knowledge-holding employees and the role of the firm is to coordinate the work of those employees so that they can create value for the firm (Grant, 1996). Further, Wiklund and Shepherd (2003) argue knowledge resources are particularly important to ensure competitive advantage is sustained as these resources are difficult to imitate hence the basis for sustainable differentiation. An organization exists to create, transfer and transform knowledge into competitive advantage.

2.2.3 Dynamic Capabilities Theory

The term 'dynamic' refers to the capacity to renew competencies so as to adapt to changing business environment (Teece et al, 1997). Capabilities emphasize the key role of strategic management in appropriately adapting, integrating and reconfiguring internal and external organizational skills, resources and functional competences to match the requirements of a changing environment (Poulis, Poulis & Jackson, 2013). Hence, dynamic capability approach focuses attention on the firm's ability to renew its resources in line with changes in its environment (Poulis et al., 2013). Dynamic capabilities are frequently positioned as an extension of the resource-based view which suggests that firm processes can be used to integrate, reconfigure, gain and release resources to match and even create market change (Eisenhardt & Martin, 2000).

Dynamic capabilities are the organizational and strategic routines by which firms achieve new resource reconfigurations as markets emerge, collide, split, evolve and collapse. Wright, Dunford and Snell (2001) observe that such dynamic capabilities require that organizations establish processes that enable them to change their routines, services, products and even markets over time. However, changes of this magnitude are difficult to achieve and the difficulty stems from the human architecture of the firm. Wright and Snell (1998) propose that the firm may require different skill sets and new behavioural repertoires of employees. The new skills and new behaviours must be driven by new HR systems. This study looks at the influence of learning organization practices on employee outcomes and how such outcomes influence firm performance.

2.2.4 Human Capital Theory

Human capital theory proposes that firms should protect core competences through investment in training and development (Becker, 1964). Rumberger and Levine (1991) suggest that organizations develop resources internally only when investments in employee skills are justifiable in terms of future productivity. The value of employees to the firm is related to their uniqueness and the value of capabilities and skills that are difficult to replicate and imitate by competitors (Ulrich & Lake, 1991). In addition, Youndt, Snell, Dean and Lepak (1996) argue that people possess skills, knowledge and abilities which provide economic value to the firm. Thus, the value of human capital is dependent upon its potential to contribute to competitive advantage (Lepak & Snell, 1998).

Barney (1991) contended that human resources can provide a source of sustained competitive advantage when four basic requirements are met. First, they must add value to the firm's production processes, that is, levels of individual performance must be significant. Second, the skills employees possess must be rare, the type that develop over time within a specific context. Third, the combined human capital investment a firm's employees represent cannot be imitated. Investments in firm specific human capital can decrease the probability of imitation by differentiating a firm's employees from those of its competitors. Finally, a firm's human resources must not be subject to replacement by technological advances or other substitutes, if they are to provide a source of sustainable competitive advantage (Barney, 1991).

Other scholars, Snell and Dean (1992) observe that the value of human capital is evident in modern manufacturing organizations that have invested heavily in production innovations such as advanced manufacturing technology, statistical process control and computer numerically controlled machines. Such initiatives tend to depend on employee skills and commitment as key components in the value creation process. Like other organizational assets, employee skills can be classified as core or peripheral assets (Barney, 1991). Core assets are vital to competitive advantage of an organization (Porter, 1985) and often require internal development (Quinn, 1997).

Further, Porter (1998) argues that value is the amount buyers are willing to pay for what a firm provides, hence, these skills must contribute towards consumer-based perceptions of value. Drawing from the above propositions, this study proposed that learning organization approach leads to increase in skills, knowledge and abilities of employees which in turn contribute to improved firm performance.

Nonaka and Takeuchi (1995) contend that the notion of human capital is individualistic as the theory primarily focuses on the role of the individual. The scholars submit that human capital is a private asset owned by the individual but some forms of human capital (firm specific) can only be formed in an organizational context through sharing of information (social capital) and through supportive mechanism of the organization (organizational capital). The theory proposes that increased human capital translates to higher performance but does not address inequalities individuals encounter.

Although the theories present different perspectives, they are useful in explaining the concepts of the study. Given that each theory has some limitations, this study sought to integrate the ideas of the various theoretical approaches to enrich the conceptual framework of the study. Since learning organization, knowledge management and employee outcomes are intangible assets which adhere to (Barney, 1991) conditions namely rare, valuable, imperfectly imitable and non-substitutable, RBV provides the main anchorage for the study.

2.3 Learning Organization and Firm Performance

Learning organization is an organization which learns powerfully and collectively and is continually transforming itself to better collect, manage and use knowledge for corporate success. Faced with unpredictable, always uncertain and highly turbulent business conditions, an organization's capacity to learn may be the only true source of competitive advantage (Rowden, 2001). Garvin (1993) argues that learning organizations ensure that organizations learn from experience, develop continuous improvement programmes, use systematic problem solving techniques and transfer knowledge quickly and efficiently throughout the organization by means of formal training programmes linked to implementation.

Nervis, Dibella and Gould (1995) postulate that learning organizations are designed to anticipate and react to changing external and competitive environments in a positive and proactive manner. Organizations that facilitate learning are better able to respond to challenges of the external environment (Garavan & McCarthy, 2008). Learning organizations are characterized by open communication, team working, empowerment, participative decision making, visionary and idealized notions of organizations (Garavan & McCarthy, 2008). Contrary to this common assumption that learning leads to improved performance, Robey, Kho and Powers (2001) observe that organizational learning may not always be reflected in enhanced performance given that some organizations learn erroneously or apply knowledge incorrectly when dealing with organizational problems.

Systematic assessment of the management literature presents an interesting dilemma regarding the learning organization concept. Proponents of the learning organization concept suggest that adopting learning organization practices should promote individual, team and organizational learning which in turn contribute to improved firm performance (Slater & Narver, 1995; Baker & Sinkula, 1999). However, the scholars contributions are largely prescriptive in nature, few are grounded in practice (Jacobs, 1995; Gardiner, 1999). A number of discussions presented in literature focus on why learning matters, yet few empirical studies address the processes required to build learning organizations and their potential impact on firm performance (Ellinger et al., 2002). Jacobs (1995) suggests that there is little evidence supporting the claim that performance improvement is directly related to the adoption of learning organization practices. Thus, one of the major research challenges is to establish the relationship between characteristics of the learning organization and firm performance (Iles, 1994).

Similarly, Ellinger et al. (2002) argue that one of the major challenges articulated in the literature is to establish relationships between characteristics of the learning organization and organizational performance. In addition, Barron (1996) observe that no quantifiable data are available from any organization which has attempted to deal with a learning organization holistically. Friedman, Lipshitz and Popper (2005) suggest the need for more empirical research on existing learning organization concepts rather than on generating new typologies.

All organizations learn whether they consciously choose to do so or not. Mohanty and Deshmukh (1999) argue that learning is a fundamental requirement for sustained existence. Nervis et al. (1995) observe that all organizations engage in some form of collective learning as part of their development. Some organizations engage in single loop learning which focuses on know why, know how or know what (Mohanty & Deshmukh, 1999). When errors are detected, the correction process relies on past routines and present policies as feedback mechanism.

In contrast, Dodgson (1993) suggests that learning organizations should focus on double loop learning. When an error is detected, it is corrected in ways that involve the modification of the organization's objectives, policies and standard routines (Mohanty & Deshmukh, 1999). The scholars suggest double-loop learning challenges deep-rooted assumptions and ritualistic norms within an organization and provides opportunities for radically different solutions to problems.

Kofman and Senge (1993) envisage the concept of learning organization as a remedy for three fundamental problems inherent in traditional organizations, fragmentation, competition and reactivity. Mohanty and Deshmukh (1999) provide a distinction between the three concepts. First, fragmentation based on specialization creates walls that separate different functions into independent entities. Secondly, an overemphasis on competition undermines collaboration. Divisions compete with one another when they should cooperate and share knowledge. Thirdly, reactivity misdirects management attention to fire fighting rather than creative problem solving. This traditional management is no longer perceived appropriate in the current competitive environment. Consequently, businesses must compete for their survival through continuous learning in order to maintain market advantages (Mohanty & Deshmukh, 1999).

Nevertheless, empirical research provides evidence that learning organization influences firm performance. Li and Lu (2007) study on the applicability of the learning organization concept and its influence on firm performance in China revealed a positive relationship. However, a convenience sample was used making generalization of the results questionable.

A cross-sectional survey would have been more appropriate since comparison across many respondents can be done. Garrido and Camerero (2010) examined the relationship between learning orientation, innovation and performance of 386 British, French and Spanish firms and found a significant relationship. Data was collected from one source, the museum curator, whose views are likely to be subjective. Views from more than one source should have been sought.

A study by Ellinger et al. (2002) on the relationship between learning organization and financial performance of U.S manufacturing firms revealed a positive relationship between learning organization and financial performance. The sample for the study was relatively small. Only five firms for which secondary data was available were included in the study. The generalization of the results is thus questionable. In addition, a single key informant from each firm participated in the study. Using a single informant for research has limitations as there is a possibility of common method bias. Schein (1996) observes that the perspectives of employees at different levels within the organization may vary. Using multiple respondents enables comparison of different views of respondents to be made.

Khadra and Rawabdeh (2006) study of manufacturing firms in Jordan revealed that only one construct, learning and development significantly influenced performance. Other constructs such as leadership and vision, rewards and recognition, information sharing and knowledge, benchmarking and strategic planning were not significantly related to performance. This implies that manufacturing firms in Jordan tend to be more advanced in learning and development than in the other constructs. This can be attributed to indicators of learning and development which include information systems, information databases, education programmes, presentations and seminars and journal subscriptions.

The main purpose of the current study was to assess the relationship between learning organization dimensions articulated by Yang et al. (2004) and firm performance measured in both financial and non-financial terms. The studies discussed above focused on the direct relationship between learning organization and performance. This study predicted that employee outcomes as an intervening variable and knowledge management as a moderator could have a strong effect on this relationship.

2.4 Learning Organization, Employee Outcomes and Firm Performance

Research in human resource strategy that attempts to link learning organization strategies with financial performance across many organizations (Ellinger et al., 2002) sometimes fails to pay attention to intervening variables to help explain why the relationship exists (Baldwin & Danielson, 2002). Maurer et al. (2003) suggest that research could focus on measures of employee development constructs in relation to measures relevant to retention and attraction. Garrido and Camerero (2010) identified innovation as a mediator in the relationship between learning organization and firm performance. Omari (2012) examined the influence of contextual and cognitive factors on the relationship between employee characteristics and employee outcomes in Kenyan public corporations. Results indicate that HR practices have a significant effect on employee outcomes. However, the study did not consider financial measures of performance. The current study incorporated financial measures to provide a more balanced view of firm performance.

Prior research indicates that human resource practices have a significant impact on employee outcomes (Guest, 1987; Huselid, 1995). Guest (1987) suggests that superior systems of HRM practices increase employee discretionary effort and affect intermediate outcomes such as commitment and satisfaction, high quality workforce, high flexibility and adaptability. These outcomes are expected to lead to high job performance. Huselid (1995) argues that investment in high performance work practices is associated with low employee turnover, greater productivity and financial performance. Thus, HRM practices are likely to influence employee outcomes which in turn influence firm performance.

The key elements of employee outcomes which this study focused on are job satisfaction and organizational commitment. Job satisfaction is an attitude formed by individuals in reference to their jobs based on the extent to which there is good fit between the individual and the organization (Pool & Pool, 2007). Organizational commitment reflects the extent to which an individual identifies with an organization and is committed to organizational goals. In order to acquire such competences, individuals must engage in a learning process (Hirst, Knippenberg & Zhou, 2009).

Previous empirical studies have confirmed that learning organization exerts a strong positive impact on job satisfaction. Egan, Yang and Bartlett (2004) revealed that 46 percent of variance in job satisfaction was explained by organizational learning culture. Findings from a study by Chiva and Alegre (2009) conducted in the Spanish Ceramic Tile Industry confirmed a positive association between organizational learning capability and job satisfaction. Chang and Lee (2007) found a positive and significant relationship between learning organization and job satisfaction.

Studies by Mirkamali, Thani and Alami (2011); Erdem, Ilgan and Ucar (2014) revealed that organizational learning behavior was a critical predictor of job satisfaction. Similarly, Dekoulou and Trivellas (2015) confirmed the mediating effect of job satisfaction in the relationship between learning organization and job performance. Findings from a study by Omari (2012) indicated a strong positive correlation between HR practices and job satisfaction with high human resource (HR) practices scores associated with high levels of satisfaction. However, there was a moderate negative correlation between organizational commitment and HR practices with low HR practices scores associated with low levels of commitment.

Other studies revealed a significant relationship between learning organization and organizational commitment. Bhatnagar (2007) confirmed that the implementation of learning organization model enriches individual knowledge and boosts employee commitment, hence increasing their productivity and performance. Kidombo (2007) found that HR strategic orientation accounted for 60 percent variance in organizational commitment. Findings of a study by Aghaei, Ziaee and Shahrbanian (2012) revealed a significant relationship between learning organization and organizational commitment. While most research found positive results, others present mixed results. A study by Carmeli (2003) on the relationship between emotional intelligence and work attitude, behavior and outcomes in Israel indicated that the hypothesized relationship between emotional intelligence and continuance commitment was not confirmed. Though the studies do not point out the mediating role of employee outcomes, the researcher can infer that employee outcomes mediate the relationship between learning organization and firm performance.

2.5 Learning Organization, Knowledge Management and Firm Performance

The globalization of markets, the complexity of business problems and the acceleration of change require transformations in the organization design and strategic approaches (Oltra & Vivas-Lopez, 2013). Further, Yang and Chen (2009) argue that many organizations are striving to improve their efficiency and effectiveness by implementing knowledge management and organizational learning. Knowledge management can be seen as an organization's ability to share and retain knowledge resources of the firm for sustainable competitive advantage (Chuang, 2004). Learning organization can be considered as the process of improving business practices through better knowledge and understanding in a changing environment (Drejer, 2000). Yang and Chen (2009) suggest that to be successful, a firm needs to create an organizational context that integrates organization learning with knowledge management to facilitate sharing and learning.

The accumulation of knowledge and its association with the learning process has intrigued mankind for centuries (Ives et al. 1998). Despite considerable academic discussion concerning the concept of learning organization, organizations are still unclear as to how learning organization practices can improve organizational performance and long-term business viability (Loermans, 2002). Whee et al. (2012) observe that establishing a learning organization through knowledge creation and sharing is not easy and requires an evaluation of existing situation and identifying areas where learning is needed.

Extant literature on knowledge management and learning organization has explored the role of organizations in the acquisition, processing, storage and application of knowledge (Argyris & Schon, 1978). The main focus of this literature is on the acquisition of information by organizations (Grant, 1996). Spender (1992) postulates that firms are not only engaged in knowledge creation but also in knowledge application. The distinction between the two processes is demonstrated in Demsetz (1991) observation that efficiency in knowledge acquisition requires that individuals specialize in specific areas of knowledge, while application of knowledge to produce goods and services requires bringing together many areas of specialization.

Knowledge management is purported to be essential to sustained competitive advantage and continued business success. (Drucker, 1998; Davenport & Prusak, 1998). It is widely accepted that firms which consciously invest in the creation of new knowledge through research and development or through informal learning process tend to do better than those that depend on knowledge created by others (Boisot, 1998). This highlights the importance of the creation of new knowledge as a critical component of an organization's ability to learn and adapt. Further, the concept of learning organization is increasingly relevant to 21st century management because of the increasing complexity, uncertainty and rapidity of organizational environment (Malhorta, 1996). The interaction between learning organization and knowledge management and its contribution to performance is therefore critical. Edvinson and Malone (1997) observe that intangible assets have become more important to business success than traditional factors of production such as land, labour and financial capital. Organizational knowledge is a major component of these intangible assets popularly known as intellectual capital.

Jantunen (2005) states that knowledge is posited in an organization as a strategic asset which can help the firm maintain its competitive advantage in a turbulent environment. The researcher observes that knowledge-based assets and organizational learning capabilities are critical for a firm's innovation activities. Knowledge management aims at getting people to innovate, collaborate and make correct decisions efficiently (June, 2005). In addition, the success of organizations is associated with the organization and individual ability to learn (Li-An Ho, 2008). Thus, learning in organizations is the key for organizations to sustain competitive advantage. According to Pedler et al. (1991) learning organization enables the learning of its members in such a way that it creates positively valued outcomes such as innovation, efficiency, better alignment with the environment and competitive advantage. Senge (1990) suggests that the ability of an organization to learn faster than its competitors may be the only means of achieving competitive advantage.

According to Sarin and McDermott (2005) learning involves making use of information. By relying on experience, firms use information they have acquired, disseminated and integrated. Learning helps reduce transaction costs, support decisions and shape behavior (Sarin & McDermott, 2005). Fiol and Lyles (1995) suggest learning provides a link between different functions, helps frame problems or opportunities and guides decision formulation and implementation. In this regard, learning has been described as a fundamental organization capability because it facilitates various business processes (Day, 1994) such as new product development (Madhavan & Grover, 1998). Information use associated with learning leads to detection and correction of errors and improves the likelihood of effective new product development in a firm (Argyris & Schon, 1978).

Learning organization and knowledge management are said to be closely-linked and dependent on each other (Loermans, 2002). A study by Lemon and Sahota (2004) revealed a positive relationship between learning and knowledge management capability. However, few studies have been done focusing on these two areas of relationship especially in the manufacturing sector. The changes in the global economy require organizations to take a more active role in developing knowledge management and learning organization initiatives (Chinowsky & Carrilo, 2007).

Watkins and Marsick (1996) suggest that to improve performance, organizations need to focus on continuous learning and use of knowledge which can serve as critical factors to success in facilitating individual, team and organizational learning leading to continuous improvement in business operations. Empirical studies suggest that knowledge management and performance are positively related. Lee and Lee (2007) confirmed there is empirical relationship between knowledge management capabilities and organizational performance. Kagiri (2008) examined the influence of knowledge management strategy and organizational competence on competitiveness of Kenya's commercial book publishing industry. The study revealed a strong and significant relationship between knowledge management strategy and organization competence and firm competitiveness. The researcher recommends future studies to take into account the moderating effect of knowledge management on the relationship between management practices and competitive advantage. The current study proposed testing the effect of knowledge management on the relationship between learning organization practices and firm performance.

Other studies, Minbaeva, Pedersen, Bjorkman, Fey and Park (2003) study of 169 multinational corporations operating in USA, Russia and Finland revealed that HR practices exerted significant influence on knowledge acquisition, development and transmission through changes in human capital characteristics. Li-An Ho (2008) examined the link between learning and knowledge management and their impact on 21 Technological Companies in Taiwan. The results indicated that learning organization and knowledge management capability have direct and significant influences on firm performance.

A similar study by Kuo (2011) among employees in Electronic Industrial and Technological companies in Taiwan revealed that HRM strategies led to better organizational learning, organization innovation and knowledge management which contribute to improved organizational performance. Though no known study to the best knowledge of the researcher indicates that knowledge management moderates the relationship between learning organization and performance, the researcher can infer from the results of these studies that knowledge management has a moderating effect on the relationship between learning organization and performance.

2.6 Learning Organization, Knowledge Management, Employee Outcomes and Firm Performance

Environmental trends such as globalization, technical evolution and deregulation are changing the competitive structure of markets in such a way that effectiveness of traditional sources of a firm's competitive advantage is often weakened (Andreu, Baiget & Canale, 2008). Competitive advantages based on physical, financial and even technological assets are less and less sustainable since these assets are easier to access through worldwide markets. Consequently, firms need to concentrate on the development of distinctive, difficult to imitate capabilities that go beyond mere application of physical or financial assets progressively commoditized (Andreu et al., 2008). Such capabilities relate to employees of the firm who develop and apply knowledge and skills in organized, coordinated and distinctive ways.

Morgan (1988) underscored the role of learning in developing full potential of employees at various levels of organizational analysis. The learning of organizational members can be linked to the survival and effectiveness of an organization in a competitive environment characterized by rapidly changing technology. Jones and Hendry (1992) linked the learning of organizational members to the survival and effectiveness of an organization in a competitive environment characterized by rapidly changing technology. Learning in an environment of change positions people as a source of distinctive competence and makes them become the only source of differentiation and sustainable competitive advantage (Storberg-Walker & Gubbins, 2007; Collin, 2007), a position that is supported by proponents of the resource-based view (Jackson & Schuler, 2000; Lopez, Peon, & Ordas, 2006).

Creating a learning environment involves three essential elements: sharing, participating and collaborating (Ortenblad, 2004). The manner in which organizations learn, share knowledge and utilize a learning culture allows them to manage many challenges they face in the modern business era (Dirani, 2009). The relational view of the firm proposed by Dyer and Singh in Andreu et al. (2008) suggests that knowledge sharing is one of the most important sources of competitive advantage derived from external relationships. In addition, knowledge-based practices designed to foster knowledge-based competitive advantage should be associated with appropriate learning processes (Andreu et al., 2008).

The relationship between learning organization and firm performance requires a holistic approach that takes into account employee characteristics and contextual conditions such as employee outcomes and knowledge management. Cheruiyot et al. (2012) examined institutionalization of knowledge management in manufacturing firms in Kenya. The study revealed that organizational factors and technological infrastructure significantly influence institutionalization of knowledge management. Three companies were purposively selected since they had been rated as the best in Company of the Year Award (COYA) and practiced knowledge management in their operations. However, the use of a homogeneous population denies researchers the opportunity to examine inter-industry effects of knowledge management on firm performance. This study focused on large manufacturing firms which are more representative. The study also tested the moderating effect of knowledge management and mediating effect of employee outcomes on the relationship between learning organization and firm performance.

2.7 Knowledge Gaps

Extant literature reveals that learning organization has a significant influence on firm performance. Arising from extensive literature review, most of the studies tend to be prescriptive in nature, few are grounded in practice. Evidence linking learning organization to firm performance is limited. A few studies that have been done focus on the direct relationship between learning organization and performance. Others identify innovation and knowledge management as possible influencers in the relationship. The conclusion that can be drawn from this theoretical and empirical literature is that the existing framework for analyzing the learning organization concept is inadequate and fails to explain how learning organizations develop.

Based on pertinent literature reviewed, the main focus of the studies are identified and knowledge gaps highlighted which informed the current study. The study attempted to address these gaps with a view to making a contribution to the learning organization and performance relationship debate. A summary of previous studies and knowledge gaps is presented in Table 2.1.

Table 2.1 Knowledge Gaps

Researcher	Focus	Methodology	Findings	Knowledge gaps	Current study
Cheruiyot et al (2012)	The study examined factors influencing institutionalization of knowledge management in manufacturing firms in Kenya	Data was collected from 60 senior managers using a structured questionnaire from three selected manufacturing enterprises	Two critical factors influence institutionalization of knowledge management namely organizational practices and technological infrastructure	Three companies were purposively selected to participate in the study. Use of a homogeneous population makes generalization of the results questionable	The target population for this study was large manufacturing firms in Kenya which was more representative.
Kidombo et al (2012)	The study investigated the relationship between human resource strategic orientation and organization commitment in Kenyan manufacturing firms	A questionnaire was used to collect data from 251 HR managers from large manufacturing firms in Kenya	Use of hard HR practices is positively related to affective commitment. Soft HR practices are associated with human capital enhancing strategies which require investment by the company.	Data was collected from a single source, the HR manager. The study did not consider performance measures.	Key informants comprised the HR manager, finance manager, and production manager This study incorporated performance measures
Omari (2012)	The study examined the influence of contextual and cognitive factors on the relationship between employee characteristics and employee outcomes in Kenyan public corporations	A structured questionnaire was used to collect data from 384 employees from 13 public sector organizations	Organization size, HR practices and organization justice have more influence on employee outcomes than age, locus of control, attribution and psychological contract	The study did not consider financial performance measures.	This study incorporated financial measures. Employee outcomes was regarded as a mediating variable in the relationship between learning organization and firm performance
Kuo (2011)	The study examined the link between HRM, organization learning, organizational innovation, KM capability and organizational performance in industrial companies in Taiwan	Used a questionnaire to collect data from 659 employees from electronic industrial listed companies in Taiwan	HRM strategies result in better organizational learning, organizational innovation, KM capability which leads to improved organizational performance	Possible biases of individual participants who provided empirical data makes generalization of results questionable	Key informants comprised, the HR manager, finance manager and production manager whose views were more objective
Garrido and Camerero (2010)	The study examined the relationship between learning orientation, innovation and performance of 386 British, French and Spanish museums	Used a questionnaire to collect data from 386 museum curators of British, French and Spanish museums	Learning orientation significantly influences both innovation and performance	Data was collected from one source, the museum curator. This could have given an imbalanced view of the issues under investigation. Views from more than one source should have been sought	Key informants comprised the HR manager, finance manager and production manager whose views on performance were more objective

Table 2.1 Knowledge Gaps Continued...

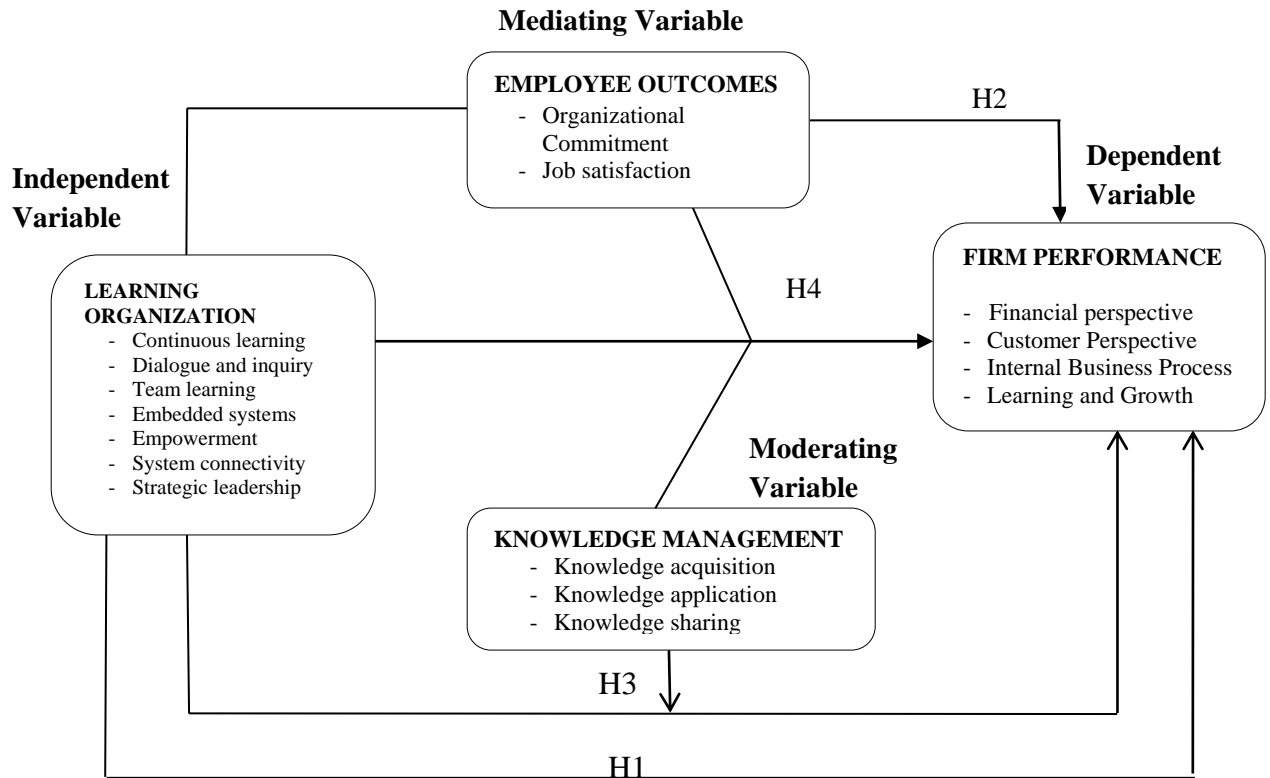
Kagiri (2008)	The study examined the relationship between knowledge management strategy, organizational competence and competitiveness of commercial publishing firms in Kenya	Combined use of questionnaire and interview to collect data from the managing director or any other top manager from 118 firms	The study revealed a strong and significant relationship between knowledge management strategy, organizational competence and firm competitiveness	Focused on knowledge management strategy as independent variable. The need to test the moderating effect of knowledge management is suggested for future studies.	This study tested the moderating effect of knowledge management on the relationship between learning organization and firm performance
Li and Lu (2007)	The study examined applicability of the learning organization concept and its influence on firm performance in China	Used a questionnaire to collect data from 460 respondents from general management ranging from operations, administration, logistics, accounting, HR and marketing from 92 companies in mainland China	Learning organization has a positive influence on firm performance	A convenience sample was used making generalization of results questionable. The study did not other variables which are likely to influence this relationship.	Target population for this study was large manufacturing firms which was more representative. The current study focused on moderating effect of knowledge management and mediating role of employee outcomes.
Khadra and Rawabdeh (2006)	The study examined the development of the learning organization concept in manufacturing firms in Jordan	Used a questionnaire to collect data from managers of 41 manufacturing firms	There is a positive relationship between learning organization practices and organization performance	Jordanian manufacturing companies comprise a homogeneous population thus provide a narrow focus for generalization	Target population was large manufacturing firms which is more representative. This study incorporated knowledge management and employee outcomes
Prieto and Revilla (2006)	The study explored the link between learning capability in organization and business performance in Spanish firms.	Collected data through a structured questionnaire from human resource managers of 111 Spanish companies	Learning capability indirectly influences financial performance through their significant effect on non-financial performance	Study used human resource managers as single informants hence their perceptions are deemed to be subjective	Key informants comprised the HR manager, finance manager and production manager whose views on performance were more objective
Ellinger et al. (2002)	The study examined the relationship between learning organization and firms' financial performance of U.S manufacturing firm	Used a questionnaire to collect data from 208 logistic managers of U.S manufacturing firms	There is a positive relationship between learning organization practices and firms' financial performance	A single informant was used from each firm. Population of the study was selective, only firms for which secondary data was available were included	Target population for this study was large manufacturing firms. Key informants comprised the HR manager, finance manager and production manager

From literature review, it was established that previous studies focus on the direct relationship between learning organization and firm performance. The current study introduced two variables in the relationship. The study investigated the mediation of employee outcomes and the moderating effect of knowledge management in the relationship between learning organization and performance. The study also investigated the joint effect of learning organization, employee outcomes and knowledge management on performance of large manufacturing firms in Kenya.

2.8 Conceptual Model

The schematic diagram presented in Figure 2.1 shows the relationship between four variables of the study namely learning organization (independent variable), knowledge management (moderating variable) employee outcomes (intervening variable) and firm performance (dependent variable). Learning organization was defined by seven elements: continuous learning, dialogue and enquiry, team learning, embedded systems, empowerment, system connectivity and strategic leadership. The extent to which learning organization practices influence firm performance was moderated by knowledge management (acquisition, application and sharing). Employee outcomes (job satisfaction and organizational commitment) mediated the relationship between learning organization and performance of large manufacturing firms in Kenya.

Figure 2.1 Conceptual Model



Source: Current Researcher (2015)

The model proposed that learning organization influences firm performance. The model further, proposed that employee outcomes has a mediates the relationship between learning organization and firm performance. Another linkage suggested was the moderating effect of knowledge management in the relationship between learning organization and firm performance. Finally, the model sought to investigate the joint effect of learning organization, employee outcomes and knowledge management on performance, measured in both financial and non-financial terms.

2.9 Conceptual Hypotheses

The study hypothesized that learning organization influences firm performance. It was hypothesized that this relationship is mediated by employee outcomes and further moderated by knowledge management. In addition, the study hypothesized that the joint effect of learning organization, employee outcomes and knowledge management is greater than the individual effect of the predictor variables. The hypotheses are presented below.

H₁: Learning organization influences firm performance.

H₂: The influence of learning organization on firm performance is mediated by employee outcomes.

H₃: The influence of learning organization on firm performance is moderated by knowledge management.

H₄: The joint effect of learning organization, knowledge management and employee outcomes is greater than the individual effect of each variable on performance of Large Manufacturing Firms in Kenya.

2.10 Chapter Summary

Chapter two discussed the theoretical foundations of the study which include RBV, KBV, DCT and HCT. The chapter also presented detailed theoretical and empirical literature review on the variables of the study that generated knowledge gaps.

The aim of literature review was to provide understanding of the interrelationships between variables of the study and how they relate to firm performance. A conceptual framework and hypotheses of the study were also presented. Chapter three will present the research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter comprises the research philosophy, research design, target population and data collection procedures. It also explains the operationalization of study variables and data analysis techniques for testing the hypotheses.

3.2 Research Philosophy

Research philosophy is the underlying assumption upon which research and development in the field of inquiry is based. The dominant philosophical paradigms in social sciences are phenomenology and positivism. Positivist paradigm is a research orientation which assumes that a useful research is based on theory, hypotheses and quantitative data. A positivist researcher begins with an accurate description of observable events from which laws mathematically describing natural regularities may be extracted (Schrag, 1992). Positivist paradigm adopts a clear quantitative approach to investigating phenomena. The researcher focuses on facts, looks for causality and fundamental laws, reduces phenomena to simplest elements, formulates hypotheses and tests them (Saunders, Lewis & Thornhill, 2007).

On the other hand phenomenology assumes that to be objective a researcher must avoid prior assumptions about theory, hypotheses and quantification as these issues create bias by directing the researcher to focus on certain things at the expense of the total picture. Phenomenology focuses on immediate experience and relies more on case study which is characterized by open and unstructured interviews (Zikmund, 2003). As a method of inquiry, phenomenology describes things as they are, not as the researcher thinks they are. It is thus more thorough and more informed in its observation of experiential phenomena. The main limitation of phenomenology is that it leads to unclear conclusions characterized by less precision, rigor and credibility which are likely to lead to distortions. This study was guided by the positivist approach because it is based on existing body of knowledge, the researcher reviewed literature from previous related studies, a conceptual model was developed and hypotheses formulated which were tested using statistical techniques leading to their acceptance or rejection.

3.3 Research Design

Research design is the plan and structure of investigation conceived so as to obtain answers to research questions (Cooper & Schindler, 2006). A descriptive cross-sectional survey was used and the data was collected from a cross-section of study units. This design was considered appropriate for collecting data from the sampled population with respect to several variables of the study. According to Zikmund (2003) a descriptive survey is concerned with the process of collecting data in order to test hypotheses and answer questions concerning the current status of the phenomena under study.

Cross sectional studies enable the researcher to establish whether significant associations among variables exist at some point in time (Nachmias & Nachmias, 2004). Mulabe (2013) observed that this method allows the researcher to analyze, interpret and report findings as they exist without any manipulation and generalize the findings to the target population. Moreover, the design provides an opportunity to capture population characteristics and test hypotheses. Scholars such as Prieto and Revilla (2006); Li and Lu (2007) used cross-sectional survey design in their studies and drew credible conclusions.

3.4 Population of the Study

The population of the study comprised large manufacturing firms in Kenya. The sampling frame was drawn from the directory of Kenya Association of Manufacturers (KAM, 2014). Classification of manufacturing firms differs in various countries. In USA, large firms have 1000 employees, UK 250 and above, China more than 2000. The company size classification structure for this study is presented in Appendix 7. This study adopted the Kenya Industrial Research and Development Institute (KIRDI) (1997) classification which indicates that large manufacturing firms in Kenya have more than 100 employees. The KAM directory provides a list of 805 manufacturing firms. Out of this, 511 are classified as large. Therefore, the target population was 511 large manufacturing firms with 100 employees and above. The unit of analysis was the organization. The respondents comprised the human resource manager, the finance manager and the production manager.

The number of employees for profit making firms is an appropriate indicator of size because employees can be taken as proxy for sales turnover, capacity utilization and market share (Kidombo, 2007). The main reason for this choice is that these firms are likely to have well developed HR systems and practices. In addition, they represent a heterogeneous population which will increase the generalizability of the results.

3.5 Sample Design

The sample size for this study was 108 large manufacturing firms. The following formula recommended by Kothari (2006), Cooper and Schindler (2006) and Zikmund et al. (2010) was used to determine the sample size.

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

Where:

n = the desired sample size for target population greater than 10,000

p = the proportion in the target population estimated to have characteristics being measured. This is placed at 90% (0.9).

q = (1-p) i.e. the proportion in the target population estimated not to have characteristics being measured, (1-0.9) = 0.1.

pq = measure of sample dispersion

d = standard error of the proportion. For this study, it is placed at 0.05

z = 1.96 i.e 95% confidence level for estimating the interval within which to expect population proportion.

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

$$n = \frac{(1.96)^2 (0.9)(0.1)}{(0.05)^2} = 138$$

n = 138 sample size for target population greater than 10,000

Kothari (2006) further suggests a different formula for computing sample size for a population less than 10,000.

In the current study, the target population is less than 10,000, therefore, the sample size for this study was determined using the following formula:

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

Where;

n_f = The desired sample size (when the population is less than 10,000).

n = The desired sample size (when the population is more than 10,000).

N = The estimate of the population size (i.e. 511 in the case of the current study).

$$\begin{aligned} &= \frac{138}{1 + \frac{138}{511}} \\ &= \frac{138}{1.2700587} \\ &= 108.65639 \end{aligned}$$

In Kenya, large manufacturing firms are grouped into twelve key sectors (KAM, 2014). Proportionate sampling was done as shown in Table 3.1 to determine the desired number of firms from the 12 strata. Sample size for each stratum was computed using the following formula $n = N / \sum N \times 108$.

Where

n = number of firms required from each stratum

N = total number of firms from each stratum

$\sum N$ = population size

Simple random sampling was used to select firms from each stratum to ensure sectoral and geographical representation. The selected firms from each sector are presented in Appendix 6.

Table 3.1: Sampling Strata

Manufacturing sector	Number of firms per sector (N)	Selected firms from each sector
Building, Construction and Mining	15	3
Chemical and Allied	60	13
Energy, Electricals and Electronics	32	7
Food and Beverages	133	28
Leather and Footwear	5	1
Metal and Allied	56	12
Motor vehicle and Accessories	22	5
Paper and Board	50	11
Pharmaceutical and Medical Equipment	21	4
Plastics and Rubber	58	12
Textiles and Apparels	37	8
Timber and Furniture	20	4
Total	511	108

3.6 Data Collection

Primary data was collected using a semi-structured questionnaire which consisted of five sections. Section one, sought general information on demographic characteristics of the respondents and the organization. Demographic information is useful in explaining results that do not conform to hypothesized relationship. Section 2, 3, 4 and 5 addressed the variables of the study such as learning organization, knowledge management, employee outcomes and firm performance. A five point likert-type was used ranging from 1= not at all, 2= little extent, 3= some extent, 4= large extent and 5= very large extent.

Following Cooper and Schindler (2006), the questionnaire was personally administered in order to enhance the response rate and quality of data collected. The respondents were first alerted about the intended study explaining its purpose and inviting their participation. Two trained research assistants assisted in collecting the questionnaires after the initial contact. To increase the rate of response, an introductory letter from the University of Nairobi explaining the purpose of the study accompanied the questionnaires. The respondents were assured of anonymity and confidentiality. Follow up was done through text messages, telephone calls and personal visits. Some respondents declined to take part in the study either because they were too busy or company policy forbids them to participate in such an exercise. Questionnaires which were not received after four reminders were considered non- response.

In line with previous studies, Gardiner and Leat (2001) and Bontis, Crossan and Hulland (2002) key respondents were employees in managerial positions based on the fact that they possess sufficient knowledge in regard to issues under investigation. The questionnaire consisted of five parts: A, B, C, D and E. Part A which sought information on personal and organizational details was filled by the human resource manager. In addition, the human resource manager responded to questions on learning organization (Part B), knowledge management (Part C) and employee outcomes (Part D). Part E section one which focused on financial perspective was completed by the finance manager. Part E section two was concerned with non-financial measures of performance. The key respondent was the production manager.

3.7 Reliability and Validity Tests

Reliability is defined as a characteristic of measurement concerned with accuracy, precision and consistency, a necessary but not sufficient condition for validity (Cooper & Schindler, 2006). Reliability is an indication of the stability and consistency with which an instrument measures the concept. The questionnaire was tested for reliability through computation of Cronbach's Alpha (α) which ranges from 0 to 1. Consistent with Nunnally (1978) suggestion, only constructs above 0.70 were considered for further analysis as they are deemed to be internally consistent and the scales were considered reliable. The results of Cronbach's Alpha reliability tests are presented in Table 3.2.

Table 3.2: Reliability Statistics

Part of Questionnaire	Variable	Number of Items	Cronbach's Alpha	Remark
Part B	Learning Organization	37	.955	Reliable
Part C	Knowledge Management	13	.910	Reliable
Part D	Employee outcomes	20	.933	Reliable
Part E	Firm Performance	18	.860	Reliable

Source: Primary Data (2015)

The results in Table 3.2 indicate that the Cronbach's Alpha for all the variables was above 0.7 revealing a very high degree of reliability. Learning organization had 37 items with a Cronbach's Alpha of 0.955, knowledge management had 13 items and a reliability coefficient of 0.910, employee outcomes had 20 items with a Cronbach's Alpha of 0.933 while firm performance had 18 items with a reliability coefficient of 0.860.

Validity is defined as a characteristic of measurement concerned with the extent to which a test measures what the researcher actually wishes to measure and that differences found with a measurement tool reflect true differences among participants drawn from a population (Cooper & Schindler, 2006). Validity tests used to test the goodness of measures include: discriminant, content, criterion-related and construct validity. Discriminant validity measures the extent to which constructs are distinct from each other. Content validity ensures that the measures include an adequate and representative set of questions that measure concepts. Criterion-related validity relates to the ability to predict some outcome or estimate the existence of the current position. Construct validity testifies to how well the results obtained from the use of a measure fit theories around which the test is designed.

The current study focused on construct and content validity. Construct validity was tested through the use of survey items drawn from existing theory-driven research (Zhao, Li, Lee & Chen, 2011). Wetherington and Daniels (2013) used the dimensions of learning organization questionnaire (DLOQ) developed by Watkins and Marsick to test the relationship between learning organization dimensions and performance in the non-profit sector. Similarly, this study adapted the dimensions of learning organization questionnaire proposed by the said authors.

Content validity was determined by conducting a pilot test on selected managers of five manufacturing firms which do not form part of the population. The data collected through the pilot survey was used to modify the questionnaire in order to improve levels of clarity. The use of perceptual measures of financial performance was informed by the managers of selected firms who categorically declined to provide objective financial data. This is because such information is regarded as classified and cannot be released to any member of the public.

3.8 Operationalization of Study Variables

This section describes operationalization of research variables presented in the conceptual model. Learning organization (independent variable) was operationalized using Yang et al. (2004) dimensions. These included continuous learning, dialogue and inquiry, team learning, embedded systems, employee empowerment, system connectivity and strategic leadership. The scales were adapted and modified to fit the Kenyan context. The moderating variable (Knowledge management) was measured as knowledge acquisition, knowledge application and knowledge sharing. These scales were adapted from Darroch and McNaughton (2002). The mediating variable (employee outcomes) consisted of organizational commitment and job satisfaction. Organizational commitment was measured using scales adapted from Meyer and Allen (1991). Job satisfaction was measured using the Minnesota job satisfaction scale. Both scales were modified to fit the Kenyan context.

Firm performance (dependent variable) was measured using the balanced scorecard (Kaplan & Norton, 1992). The BSC provides a framework for selecting multiple performance indicators that supplement traditional financial measures with qualitative measures such as customer perspective, internal business process and learning and growth. The balanced scorecard was developed to measure a firm's performance in multiple areas. Advocates of this 'measurement diversity' approach argue that a broad set of measures keeps managers from sub-optimizing by ignoring relevant performance dimensions or improving one measure at the expense of others (Ittner, Larcker & Randall, 2003).

Financial performance was measured using perceptual measures based on net profit, gross profit, liquidity, sales and return on shareholders' investment. Non-financial performance comprised of customer perspective, internal business process, learning and growth. Customer perspective focused on customer complaints, customer retention, attraction of new customers and provision of better service. Internal business process was concerned with creativity and innovation, ratio of good output, rate of waste and number of defective products. Time to market new products, introduction of new products, use of knowledge from research and development and employee turnover were used to measure learning and growth. A summary of operationalization of study variables is presented in Table 3.3.

Table 3.3 Operationalization and Measures of Variables

Variable	Operational Definition	Indicators	Questionnaire Item
Learning Organization (Independent Variable)	Continuous learning	<ul style="list-style-type: none"> -Employees openly discuss mistakes in order to learn from them -Employees identify skills they need for future work tasks -Employees look for opportunities to learn new skills -Employees receive money and other resources to support their training and development -Employees are given time to pursue further training -Employees view problems in their work as an opportunity to learn -Employees are rewarded for further training 	5 point likert-type scale 2.1 (1-7)
	Dialogue and inquiry	<ul style="list-style-type: none"> -Employees give open and honest feedback -Employees listen to others views before speaking -Employees are encouraged to ask 'why' regardless of rank/position -Employees treat each other with respect -Employees engage in dialogue because of trust they have in each other 	5 point likert-type scale 2.1 (8-12)
	Team Learning	<ul style="list-style-type: none"> -Teams/groups learn by developing their goals within guidelines provided by management - Members of teams/groups treat each other as equals regardless of rank/position -Teams/groups revise their decisions as a result of group discussion or information collected -Teams/groups are rewarded for their collective achievement - Members of teams/groups learn new skills and knowledge from each other 	5 point likert-type scale 2.1 (13-17)
	Embedded systems	<ul style="list-style-type: none"> -My organization encourages two-way communication -Employees are able to get information they need for their work at the shortest time possible - My organization maintains up-to- date database relevant for decision making -My organization gives employees feedback about their performance -My organization facilitates evaluation of training programmes 	5 point likert-type scale 2.1 (18-22)
	Empowerment	<ul style="list-style-type: none"> -My organization recognizes people for taking initiative -My organization allows employees to use their own discretion in carrying out work assignments - My organization encourages participative decision making - My organization gives employees control over resources they need to accomplish their work -My organization supports employees who take calculated risks 	5 point likert-type scale 2.1 (23-27)

Table 3.3 Continued...

	System connectivity	<ul style="list-style-type: none"> -My organization helps employees balance work and family - My organization encourages people to think from a global perspective - My organization encourages employees to bring the customer’s views into the decision making process - My organization considers the impact of management decisions on employee morale - My organization works with outside community to meet their needs 	<p>5 point likert-type scale 2.1 (28-32)</p>
	Strategic leadership	<ul style="list-style-type: none"> -Organizational leaders generally support requests by employees for training - Organizational leaders share information with employees about competitors, industry trends and strategic goals of the organization - Organizational leaders empower others to internalize the organization vision - Organizational leaders mentor and coach their subordinates - Organizational leaders ensure that the organization actions are consistent with its values 	<p>5 point likert-type scale 2.1 (33-37)</p>
Employee Outcomes (Mediating Variable)	Organizational Commitment	<ul style="list-style-type: none"> -Extent to which employees are willing to work in the organization -Are ready to accept increasingly challenging performance standards -Are willing to contribute much more than their contractual obligation -Always look forward to coming to work -Accept any type of job assignment to keep working for the organization -Make no plans to work elsewhere -Respond positively to dynamic performance requirements -Seek developmental opportunities that enhance their value to the organization -Talk about the organization as a great organization to work for -Are reluctant to change to another employer even if the organization was not doing well 	<p>5 point likert-type scale 3.1 Part 1 (1-10)</p>
	Job satisfaction	<ul style="list-style-type: none"> -Extent to which employees are satisfied with opportunities for advancement -Resources/equipment provided by the organization -The chance to do something that makes use of my abilities -Being able to keep busy all the time -Working conditions -Perceive their jobs to be meaningful -The pay and amount of work done -Methods used to resolve grievances -The way co-workers get along -The competence of supervisors in making decisions 	<p>5 point likert-type scale 3.1 Part 2 (1-10)</p>

Table 3.3 Continued....

Knowledge Management (Moderating Variable)	Knowledge Acquisition	<ul style="list-style-type: none"> - My organization acquires knowledge from external sources on developing new products - My organization acquires market development skills from business partners - My organization acquires new technologies from business partners - My organization obtains information from its research and development activities - My organization collects information on consumer needs and preferences 	5 point likert-type scale 4.1 (1-5)
	Knowledge Application	<ul style="list-style-type: none"> - My organization uses knowledge to solve new problems - My organization uses knowledge to respond to consumer needs and preferences - My organization utilizes different sources and types of knowledge for decision making - My organizational encourages employees to utilize knowledge to solve work related problems 	5 point likert-type scale 4.1 (6-9)
	Knowledge Sharing	<ul style="list-style-type: none"> - In my organization supervisors share knowledge with subordinates - In my organization employees share knowledge through learning by doing and learning by watching - In my organization knowledge is shared across units - In my organization knowledge is shared among business partners 	5 point likert-type scale 4.1 (10-13)
Firm Performance (Dependent Variable)	Financial perspective	<ul style="list-style-type: none"> -My organization's net profit margin has increased over the past five years - My organization's gross profit margin has increased over the past five years -The ability of my organization to meet its current debt has improved over past five years -Growth in sales has increased over the past five years -The rate of return on shareholders' investment has increased over the past five years 	5 point likert-type scale 5.1 1-5
	Customer perspective	<ul style="list-style-type: none"> - My organization has received few customer complaints over the past five years - My organization has retained most of its customers complaints over the past five years - My organization has attracted a large number of new customers over the past five years -In my organization cycle time from order to delivery has improved 	5.1 (6-10)
	Internal Business Process	<ul style="list-style-type: none"> -My organization offers a more expanded range of products than our competitors -Ratio of good output to total output is high -Rate of waste in the production process is low -The number of defective products is low 	5.1 (11-14)
	Learning and Growth	<ul style="list-style-type: none"> -My organization has continually reduced time to market new products -The number of new product launches has increased over the past five years -My organization has achieved high levels of productivity over the past five years -Employees perform tasks that allow them to acquire new skills and knowledge - Employee turnover has reduced over the past five years 	5.1 (15-20)

3.9 Data Analysis

Preliminary analysis involved screening the data to check for errors, editing, coding and finally analyzing to derive information relating to the variables. The test for normality was conducted using the Shapiro-Wilk test and confirmed using the Q-Q plots. For data to be considered normal, the first test should be statistically insignificant (sig. value of more than 0.05). In the Q-Q plot, the observed value for each score is plotted against the expected value from the normal distribution. A reasonably straight line suggests a normal distribution.

Multicollinearity describes a situation when high correlation is detected between two or more predictor variables that cause problems when trying to draw inferences about the relative contribution of each predictor variable to the success of the model. The variance inflation factor (VIF) and tolerance values were used to test for multicollinearity. As a rule of thumb VIF value above 5 is generally considered an indication of a problem of multicollinearity.

Data analysis was conducted using both descriptive statistics (mean scores, percentages and standard deviation) and inferential statistics (simple linear regression, stepwise regression and hierarchical regression analysis). Descriptive statistics comprising of mean scores, percentages, standard deviation and coefficient of variation was used to summarize the characteristics of the organization and respondents. Inferential statistics was applied to establish the nature and magnitude of the relationship between variables and to test the hypothesized relationships.

Simple linear regression analysis was used to determine the influence of learning organization on firm performance (H_1). Stepwise regression analysis was performed to determine the mediation of employee outcomes in the relationship between learning organization and firm performance (H_2) as well as the moderating effect of knowledge management in the relationship between learning organization and firm performance (H_3). H_4 which focused on the joint effect of learning organization, employee outcomes and knowledge management was tested using hierarchical regression analysis. A summary of statistical tests of hypotheses is presented in Table 3.4.

Table 3.4: Summary of Objectives, Hypotheses and Data Analysis Techniques

	Research Objectives	Research Hypotheses	Data Analysis Techniques	Interpretation of Results
1	To determine the influence of learning organization on firm performance	H1: Learning organization influences firm performance	Simple linear regression analysis Firm performance = f (learning organization) $FP = \beta_0 + \beta_1 LO + \epsilon$ FP = Firm Performance β_0 = Intercept β_1 = Coefficient of LO LO = Composite Index of Learning Organization ϵ = error term	R^2 to assess how much of dependent variable variation is due to influence of independent variable F test to assess the overall significance of the model Beta (β) to determine the contribution of each predictor variable to the significance of the model t to determine the significance of individual variables P value < 0.05 to check on statistical significance
2	To assess the mediation of employee outcomes in the relationship between learning organization and firm performance	H2: The influence of learning organization on performance of large manufacturing firms in Kenya is mediated by employee outcomes	Stepwise regression analysis Firm performance = f(learning organization + Employee outcomes) Four step procedure: Step 1: $FP = \beta_0 + \beta_1 LO + \epsilon$ Step 2: $EO = \beta_0 + \beta_1 LO + \epsilon$ Step 3: $FP = \beta_0 + \beta_2 EO + \epsilon$ Step 4: $FP = \beta_0 + \beta_1 LO + \beta_2 EO + \epsilon$ β_0 = Intercept β_1 = coefficient of LO β_2 = coefficient of EO LO = Composite Index of learning Organization EO = Composite Index of Employee Outcomes ϵ = Error Term	R^2 to assess how much of dependent variable variation is due to influence of independent variable F test to assess the overall significance of the model Beta (β) to determine the contribution of each predictor variable to the significance of the model t to determine the significance of individual variables P value < 0.05 to check on statistical significance Mediation is confirmed when LO is no longer significant in the presence of EO

Table 3.4 Continued ...

3	To determine the effect of knowledge management on the relationship between learning organization and firm performance	H3: The influence of learning organization on performance of large manufacturing firms in Kenya is moderated by knowledge management	<p>Stepwise regression analysis Firm performance =f(learning organization + knowledge management)</p> <p>Three step procedure: Step 1: $FP = \beta_0 + \beta_1 LO + \varepsilon$ Step 2: $FP = \beta_0 + \beta_1 LO + \beta_2 KM + \varepsilon$ Step 3: $FP = \beta_0 + \beta_1 LO + \beta_2 KM + \beta_3 LO *KM + \varepsilon$</p> <p>FP= Firm performance β_0 = Intercept β_1 = Coefficient of LO β_2 = Coefficient of KM LO = Composite Index of Learning Organization KM = Composite Index of Knowledge Management ε = Error Term</p>	<p>R^2 to assess how much of dependent variable variation is due to influence of independent variable</p> <p>F test to assess the overall significance of the model</p> <p>Beta (β) to determine the contribution of each predictor variable to the significance of the model</p> <p>t to determine the significance of individual variables</p> <p>P value < 0.05 to check on statistical significance</p> <p>A significant change in R^2 due to interaction of moderating variable (KM) and independent variable (LO) confirms moderation</p>
4	To establish the joint effect of learning organization employee outcomes and knowledge management on firm performance	H4: The joint effect of learning organization, employee outcomes and knowledge management is greater than the individual effect of learning organization on firm performance	<p>Hierarchical Regression analysis Firm performance = f (learning organization + knowledge management + employee outcomes)</p> <p>$FP = \beta_0 + \beta_1 LO + \beta_2 EO + \beta_3 KM + \varepsilon$ FP = firm performance β_0 = Intercept β_1 = Coefficient of LO β_2 = Coefficient of EO β_3 = Coefficient of KM LO = Composite Index of Learning Organization EO = Composite Index of Employee Outcomes KM = Composite Index of Knowledge Management ε = Error Term</p>	<p>R^2 to assess how much of dependent variable variation is due to influence of independent variable</p> <p>F test to assess the overall significance of the model</p> <p>Beta (β) to determine the contribution of each predictor variable to the significance of the model</p> <p>t to determine the significance of individual variables</p> <p>P value < 0.05 to check on statistical significance</p> <p>A significant change in dependent variable due to combined effect of predictor variables rather than independent effect confirms joint effect</p>

H₁ involved testing the relationship between learning organization and firm performance. Learning organization was computed as a composite index of seven dimensions: continuous learning, dialogue and inquiry, team learning, embedded systems, empowerment, system connectivity and strategic leadership. The composite index of non-financial measures which included customer perspective, internal business process, learning and growth was also computed. Simple linear regression was performed on both financial and non-financial measures of performance.

H₂ involved testing the mediation of employee outcomes in the relationship between learning organization and firm performance. The Baron and Kenny (1986) stepwise regression analysis was used to test for mediation. Four procedures were performed and the direction of the relationship in each step determined. In step 1, simple linear regression analysis was used to test the influence of independent variable (learning organization) on dependent variable (firm performance). The second step involved testing the influence of independent variable (learning organization) on mediating variable (employee outcomes). In the third step, the influence of mediator (employee outcomes) on the dependent variable (firm performance) was tested using simple linear regression analysis. In step 4, the influence of independent variable (learning organization) on dependent variable (firm performance) was tested using multiple regression analysis when controlling for mediation (employee outcomes). Mediation is confirmed when the independent variable becomes insignificant when controlling for mediation.

H₃ involved testing for moderating effect of knowledge management on the influence of learning organization on firm performance. The model proposed by Baron and Kenny (1986) was used. Three procedures were performed. The first step involved testing the influence of learning organization on firm performance. The second step, focused on standardizing the independent variable (learning organization) and moderating variable (knowledge management) and testing their influence on performance. The third step involved creating an interaction term as a product of the standard values of independent variable and moderating variable and testing the influence on firm performance. Moderation is supported if the interaction term in step 3 is statistically significant. H₄ involved testing the joint effect of learning organization, knowledge management and employee outcomes on the dependent variable. Hierarchical regression analysis was performed to test the joint effect of predictor variables on dependent variable.

3.10 Chapter Summary

This chapter presented the research methodology adopted for the current study. The chapter described the research philosophy which guided the study, research design, population of the study, data collection method, reliability and validity tests.

The chapter further presented operationalization of the study variables and data analysis techniques. The analytical techniques comprised descriptive statistics and regression analyses. The next chapter presents pretests of statistical assumptions, findings of descriptive statistics, results of hypotheses testing and discussion of the findings.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

The findings of the study based on research objectives and hypotheses are presented in this chapter. The study was set to determine the role of knowledge management and employee outcomes on the relationship between learning organization and performance of large manufacturing firms in Kenya. To achieve this broad objective, the following objectives were formulated: learning organization influences firm performance, knowledge management moderates the relationship between learning organization and firm performance, employee outcomes mediates the relationship between learning organization and firm performance and the joint effect of learning organization, knowledge management and employee outcomes is greater than the individual effect of each variable on performance.

This chapter is divided into two parts. Part one presents descriptive statistics comprising frequency distributions, means, percentages, standard deviations and coefficient of variation which summarize demographic characteristics of the organization and the respondents. Part two presents the results of tests of hypotheses and discussion of findings. The research was conducted in large manufacturing firms in Kenya. The main respondents were employees in managerial positions. In line with previous studies, Gardiner and Heat (2001) and Bontis et al. (2002) key respondents were drawn from management level based on the fact that they possess sufficient knowledge in regard to issues under investigation.

Inferential statistics was applied to establish the nature and magnitude of the relationship between variables and to test the hypothesized relationships. The study utilized both financial and non-financial measures of performance. Separate analyses were performed for financial and non-financial indicators of firm performance. Simple linear regression analysis was used to determine the influence of learning organization on firm performance (H_1).

Stepwise regression analysis was performed to determine the mediation of employee outcomes in the relationship between learning organization and firm performance (H₂) as well as the moderating effect of knowledge management in the relationship between learning organization and firm performance (H₃). H₄ which focused on the joint effect of learning organization, employee outcomes and knowledge management was tested using hierarchical regression analysis.

4.2 Statistical Assumptions

Statistical tests rely on certain assumptions about variables used in analysis. Osborne and Waters (2002) observe that when these assumptions are not met, the results may not be valid. This may lead to type I or type II error or over or underestimation of statistical significance. Testing for assumptions is beneficial as it ensures that the analysis meets the associated assumptions and helps avoid type I or type II errors (Osborne and Waters, 2002). The following assumptions for linear regression were checked: normality, linearity, multicollinearity and homoscedacity.

4.2.1 Normality

Osborne and Waters (2002) propose that regression analysis assumes that data is normally distributed. Data that is not normally distributed can distort relationships and significance tests, hence affect statistical inference. The data was tested for normality using the Shapiro-Wilk test. Tabachnik and Fidell (2007) suggest that a non-significant result (sig. value of more than 0.05) indicates normality. On the other hand, a significance value of .000 suggests violation of the assumption of normality. The results are presented in Table 4.1

Table 4.1: Test of Normality

Variable	Shapiro-Wilk		
	Statistic	df	Sig.
Non- Financial Performance	.981	50	.582
Learning Organization	.973	50	.298
Financial Performance	.960	50	.087
Knowledge Management	.977	50	.450
Employee Outcomes	.969	50	.214

Source: Primary Data (2015)

The results in Table 4.1 show that the significant value for each variable is greater than 0.05. This is an indication that the data employed in analysis is normally distributed around the mean.

4.2.2 Linearity

Linearity of data refers to values of the outcome variable for each increment of a predictor variable which lie along a straight line (Ombaka, 2014). Linearity is an important association between the dependent variable and independent variables. Multiple linear regression can only accurately estimate the relationship between dependent and independent variable if the relationship is linear in nature (Osborne and Waters, 2002). Absence of a linear relationship between independent variables and dependent variable leads to the results of regression analyses to underestimate the true relationship.

The assumption of linearity was measured using the normal probability plot (Q-Q plot). In this plot, the observed value for each score is plotted against the expected value from the normal distribution. A reasonably straight line suggests a normal distribution. As shown in Appendices 9a, 9b, 9c, 9d and 9e, the Q-Q plots indicate that the values did not deviate much from the expected values.

4.2.3 Multicollinearity

Multicollinearity occurs when there is a high degree of correlation between independent variables (Ombaka, 2014). The variance inflation factor (VIF) and tolerance values were used to test for multicollinearity in this study. The VIF indicates whether a predictor variable has a strong linear relationship with other predictor variables. Hair et al. (2006) opine that VIF value greater than 5 is a sign of collinearity and a cause of concern. Multicollinearity increases the standard errors of the coefficients and thus makes some variables statistically not significant while they should otherwise be significant. According to O'Brien (2007) a tolerance value of less than 0.20 indicates serious collinearity problems. The results of the tests of multicollinearity are presented in Table 4.2 and Table 4.3.

Table 4.2: Coefficients for Financial Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.440	.171		2.567	.013		
Learning Organization	2.470	1.624	.355	1.521	.135	.349	2.861
Knowledge Management	-.093	.367	-.066	-.253	.801	.277	3.606
Employee Outcomes	-.028	.265	-.020	-.105	.917	.538	1.857

Source: Primary Data (2015)

As indicated in Table 4.2, the VIF for financial performance ranged from 1.857 to 2.861 indicating absence of multicollinearity between the variables. The tolerance values were above 0.2 and ranged between 0.277 to 0.349, confirming absence of multicollinearity

Table 4.3: Coefficients for Non-Financial Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.045	.017		2.641	.011		
Learning Organization	.443	.139	.498	3.182	.003	.428	2.335
Knowledge Management	.038	.032	.209	1.207	.233	.351	2.849
Employee Outcomes	.009	.024	.047	.361	.720	.611	1.637

a. Dependent Variable: Non-Financial performance

Source: Primary Data (2015)

Table 4.3 reveals that the VIF for non-financial performance ranged from 1.637 to 2.335 indicating absence of multicollinearity between the variables. The tolerance values were above 0.2 and ranged between 0.351 to 0.611, confirming absence of multicollinearity.

4.2.4 Homoscedacity

Homoscedacity refers to the assumption that the dependent variable exhibits similar amounts of variance across the range of values for an independent variable. Homoscedacity describes a situation in which the error term is the same across all values of the independent variable. Homoscedacity was evaluated using a scatter plot in which the regression standard residuals for the independent variables (learning organization, employee outcomes and knowledge management) were plotted against the dependent variable (financial and non-financial performance). Scatterplot is a visual technique that depicts both the direction and the shape of a relationship between variables. From the scatter plots in Appendices 10a and 10b it was confirmed that the variations on either side of the trend line are almost equal (homogenous).

4.3 Response Rate

The target population for this study was 108 large manufacturing firms. The key respondents comprised the human resource manager, the finance manager and the production manager. Data was collected for a period of three months from March 2015 to May 2015. Out of 108 questionnaires administered, 74 questionnaires were filled and returned. However, two questionnaires were incomplete and therefore not used in the analysis. The effective sample used for analysis was 72 forming 66.7 percent response rate. The response rate was considered representative compared to previous studies of large manufacturing firms. Kidombo (2007) obtained 64 percent, Magutu (2013) had 75 percent, Busienei (2013) achieved 69.4 percent response rate while Murgor (2014) had 58.7 percent.

Although there is no consensus among scholars on statistically significant response rate, Saunders et al. (2007) argues that response rates vary depending on the attributes of the chosen questionnaire. For delivered and collected questionnaires as was the case for this study, the scholars considered a response rate of between 30 percent to 50 percent as reasonable and moderately high hence acceptable for use. The response rate for this study is comparatively high compared to studies in international settings Kuo (2011) obtained 37.2 percent response rate while Khadra and Rawabdeh (2006) achieved 54.7 percent response rate.

4.4 Descriptive Statistics

Descriptive statistics were presented using frequencies, percentages, means and standard deviation. The descriptive statistics provided a thorough understanding of the nature of data and formed the basis for hypothesis testing. Part one presents information on demographic characteristics of respondents and organization profile. Part two present the means and standard deviation of study variables which include learning organization, knowledge management, employee outcomes and firm performance.

4.4.1 Demographic Characteristics of Respondents

Demographic characteristics of respondents who participated in the study provide a broad understanding of the nature of the context of the study. The respondents comprised the human resource (HR) manager, the finance manager and the production manager. The HR manager provided information on personal details and organization profile. Respondents were asked to indicate their gender and years of experience in the current firm.

4.4.2 Respondents Gender

The study sought to determine the gender of respondents. The purpose was to get perspectives from both sides of the divide. The frequency distribution of respondents by gender is presented in table 4.4.

Table 4.4: Respondents Gender

Gender	Frequency	Percent
Female	21	29.2
Male	51	70.8
Total	72	100.0

Source: Primary Data (2015)

Table 4.4 reveals that 70.8 percent of respondents were male while 29.2 percent were female. This indicates that majority of the HR managers are male who also double up as business administrators. The gender distribution shows most positions of HR managers in large manufacturing firms are occupied by men, hence a measure of gender parity in private sector employment. Although the predicament of women leaders has proved significant over recent years, there is still a long way to go. Women are still underrepresented in the upper echelons of Kenyan corporations and political system.

Northouse (2007) observed that the glass ceiling prevents women from ascending into elite leadership positions. This concept is often explained by three factors: the human capital differences between men and women, general differences between men and women and prejudice and discrimination against female leaders. Human capital is related to the level of education, work experience and developmental opportunities which are likely to be different between men and women.

The second explanation focuses on differences between men and women in terms of leadership style and effectiveness. The glass ceiling is also associated with stereotyped expectations. Men are stereotyped with masculine characteristics such as confidence, assertiveness, independence, rationality and decisiveness. Stereotypical attributes of women include sensitivity, warmth and helpfulness (Heilman, 2001). This explains why most top positions in private firms are occupied by men.

4.4.3 Length of Service of Respondents

The study set out to establish the respondents' length of service in their current organization. Respondents' length of service can be associated with experience and knowledge acquired over time which leads to superior organization performance (Ibua, 2014). Employees who have worked in an organization for a long period are expected to have a clear understanding of the systems and processes of the organization. Employees tenure is also associated with job satisfaction and commitment. HR managers responded to questions on length of service. The distribution of the respondents' length of service in their current position is presented in Table 4.5.

Table 4.5: Length of Service

Length of Service	Frequency	Percent
0-2 years	23	31.9
3-5 years	20	27.8
6-8 years	7	9.7
9-11 years	4	5.6
12-14 years	9	12.5
above 15 years	9	12.5
Total	72	100.0

Source: Primary Data (2015)

The results in Table 4.5 reveal approximately 59.7 percent of employees have worked in the current company for less than 5 years while 40.3 percent have been in this company for over 5 years. Given that majority of employees have worked in the company for less than five years implies there is high mobility among them. There is a tendency to look for better opportunities and employees quit whenever an opportunity presents itself. The results confirm employees have a tendency to look for work in other companies. Further, the results are consistent with previous studies, Kidombo (2007) and Murgor (2014) which indicate majority of respondents had worked in large manufacturing firms for less than 10 years. The fact that 40.3 percent had worked in the company for more than 5 years implies they had a good understanding of human resource management practices.

4.4.4 Demographic Characteristics of Organization

The Key factors of interest in this study were company size measured in terms of number of employees, type of industry differentiated by sector of economy, age of the organization measured in terms of years the company has been in operation and business ownership.

4.4.5 Company Size

The study sought to measure the size of the company in terms of number of employees permanently employed. Locally, company size is defined in terms of number of employees. Micro firms have 10 or fewer employees, small firms have 11-50, medium-sized firms have 51-100 and large firms have 100 and above employees (KIRDI, 1997). For the purpose of this study, large manufacturing firms are classified as having 100 employees and above. It is assumed firms with 100 employees and above are likely to have well established human resource systems and practices. Table 4.6 presents the results on the number of employees in the selected firms.

Table 4.6: Company Size

Number of Employees	Frequency	Percent
100-150	23	31.9
151-200	11	15.3
201-250	1	1.4
251-300	3	4.2
301-350	1	1.4
351-400	3	4.2
above 400	27	37.5
Total	69	95.8
Missing System	3	4.2
Total	72	100.0

Source: Primary Data (2015)

The results in Table 4.6 indicate that 47.2 percent of large manufacturing firms had between 100 and 200 employees. 11.2 percent had between 200 and 400 employees and 37.5 percent had 400 and above employees. Three firms, which translates to 4.2 percent did not indicate the number of employees. This finding is consistent with previous a study by Kidombo (2007) who measured company size in terms of number of employees and established 58.9 percent had less than 250 employees.

4.4.6 Distribution of Firms by Sector

Large manufacturing firms are classified into twelve key sectors of the economy namely: building, construction and mining, chemical and allied, energy, electricals and electronics, food and beverage, metal and allied, motor vehicle and accessories, paper and board, pharmaceutical and medical equipment, plastics and rubber, textiles and apparel, timber, wood and furniture. Table 4.7 presents the results of distribution of firms by sector of the economy.

Table 4.7: Distribution of Firms by Sector

Sector	Frequency	Percent
Building, Construction and Mining	3	4.2
Chemical and Allied	10	13.9
Energy, Electricals and Electronics	7	9.7
Food and Beverage	17	23.6
Metal and Allied	9	12.5
Motor Vehicle and Accessories	3	4.2
Paper and Board	8	11.1
Pharmaceutical and Medical Equipment	4	5.6
Plastics and Rubber	5	6.9
Textiles and Apparel	3	4.2
Timber Wood and Furniture	3	4.2
Total	72	100.0

Source: Primary Data (2015)

As shown in Table 4.7 all subsectors of large manufacturing firms were represented in the study hence chances of misrepresentation were minimized. Food and beverage had a large representation (23.6 percent) followed by chemical and allied (13.9 percent), metal and allied (12.5 percent), paper and board (11.1percent), energy, electrical and electronics (9.7 percent), plastics and rubber (6.9 percent), pharmaceutical and medical equipment (5.6 percent). Building construction and mining, motor vehicle and accessories, textiles and apparel, timber wood and furniture had 4.2 percent respectively. This finding indicates the diverse nature of large manufacturing firms. The results corroborate with previous studies (Kidombo 2007; Magutu, 2013) in which food and beverage had the largest representation.

4.4.7 Age of Large Manufacturing Firms

The study sought to measure the number of years large manufacturing firms have been in operation. Findings are presented in Table 4.8.

Table 4.8: Number of Years the Company has been in Operation

Age of the Company	Frequency	Percent
0-5 years	2	2.8
6-10 years	3	4.2
11-15 years	3	4.2
16-20 years	4	5.6
21-25 years	6	8.3
above 25 years	54	75.0
Total	72	100.0

Source: Primary Data (2015)

Table 4.8 indicates that 75 percent of large manufacturing firms have been in operation for over 25 years and 25 percent have been in existence for less than 25 years. Majority of the firms have been in existence for over 25 years hence have well established processes and systems. Idua (2014) observes older organizations have experience curve benefits which enable them to achieve superior performance. The findings are consistent with previous studies (Awino, 2007; Busienei, 2013) which indicate majority of large manufacturing firms have been in operation for over 20 years.

4.4.8 Business Ownership

The respondents were asked to indicate the ownership structure at two levels: private and public. Table 4.9 presents the findings on business ownership.

Table 4.9: Business Ownership

Business Ownership	Frequency	Percent
Public	8	11.1
Private	64	88.9
Total	72	100.0

Source: Primary Data (2015)

As shown in Table 4.9, 88.9 percent were large private manufacturing firms and 11.1 percent were public manufacturing firms. According to KAM 2014 report, 80 percent of all local manufacturing firms are owned by Asians. Vision 2030 reports that most manufacturing firms are family-owned and operated.

4.4.9 Learning Organization

Drawing from Yang et al. (2004) learning organization was operationalized as continuous learning, dialogue and inquiry, team learning, embedded systems, empowerment, system connectivity and strategic leadership. The measurement scale consisted of 37 items measured on a five-point likert type scale ranging from 1 = not at all to 5 = very large extent. The respondents were asked to indicate the extent to which their organizations focused on defined constructs of learning organization. The aggregate score of learning organization was computed as an average of the mean score for the seven dimensions. Statements with a high mean indicate that the respondents are in agreement (> 3.00). Statements with a low mean is an indication respondents do not agree (< 3.00).

Standard deviation (SD) summarizes how far away from the mean the data values typically are (Cooper and Schindler, 2006). Standard deviation is the most widely used measure of spread because it improves interpretation by removing the variance square and expressing the deviations in their original units. A small SD (< 1) implies that most of the sample means are near the center (mean) and a good estimator of the population mean. A large SD ($1 >$) indicates that the sample mean is a poor estimator of the population mean since data points are spread over a large set of values (Harper, 2000). The results of the seven constructs of learning organization are presented in Table 4.10.

Table 4.10: Means and Standard Deviations for Learning Organization

Continuous Learning	N	Mean	Standard Deviation	Coefficient of Variation
Employees openly discuss mistakes in order to learn from them	71	3.68	1.039	0.282
Employees identify skills they need for future work tasks	71	3.75	1.010	0.269
Employees look for opportunities to learn new skills	71	3.77	.898	0.238
Employees receive money and other resources to support their training and development	72	3.33	1.210	0.363
Employees are given time to pursue further training	72	3.67	1.048	0.285
Employees view problems in their work as an opportunity to learn	72	3.60	.816	0.226
Employees are rewarded for further training	71	3.03	1.108	0.365
Valid N (listwise)	68			
Average Mean Score		3.55		
Dialogue and Inquiry				
Employees give open and honest feedback to each other	72	3.64	.909	0.249
Employees listen to others' views before speaking	69	3.42	.864	0.252
Employees are encouraged to ask 'why' regardless of rank/position	72	3.74	.993	0.265
Employees treat each other with respect	72	4.11	.723	0.175
Employees engage in dialogue because of trust they have in each other	71	3.73	.940	0.252
Valid N (listwise)	68			
Average Mean Score		3.73		
Team Learning				
Teams/groups learn by developing their goals within guidelines provided by management	72	3.83	.964	0.251
Members of teams/groups treat each other as equals regardless of rank/position	72	3.64	.983	0.270
Teams/groups revise their decisions as a result of group discussion or information collected	72	3.54	.804	0.227
Teams/groups are rewarded for their collective achievement	71	3.48	1.054	0.303
Members of teams/groups learn new skills and knowledge from each other	72	3.82	.954	0.250
Valid N (listwise)	71			
Average Mean Score		3.66		
Embedded Systems				
My organization encourages two-way communication	71	4.00	.986	0.247
Employees are able to get information they need for their work at the shortest time possible	72	3.83	1.021	0.267
My organization maintains up-to-date database relevant for decision making	72	4.00	.934	0.234

Table 4.10 Continued...

My organization gives employees feedback about their performance	72	3.99	1.144	0.287
My organization facilitates evaluation of training programs	72	3.78	1.129	0.299
Valid N (listwise)	71			
Average Mean Score		3.92		
Empowerment				
My organization recognizes employees for taking initiative	72	3.89	.881	0.226
My organization allows employees to use their own discretion in carrying out work assignments	72	3.49	1.021	0.293
My organization encourages participative decision making	72	3.71	.846	0.228
My organization gives employees control over resources they need to accomplish their work	72	3.61	.972	0.269
My organization supports employees who take calculated risks	71	3.42	.856	0.250
Valid N (listwise)	71			
Average Mean Score		3.62		
Systems Connectivity				
My organization helps employees balance work and family	72	3.54	.934	0.264
My organization encourages employees to think from a global perspective	71	3.73	.970	0.260
My organization encourages employees to bring customers views into the decision making process	72	3.85	.988	0.257
My organization considers the impact of management decisions on employee morale	71	3.83	.894	0.233
My organization works with outside community to meet their needs	72	3.49	1.007	0.289
Valid N (listwise)	70			
Average Mean Score		3.69		
Strategic leadership				
Organizational leaders generally support requests by employees for training	72	3.81	.944	0.247
Organizational leaders share information with employees about competitors, industry trends and strategic goals of the organization	72	3.92	1.031	0.248
Organizational leaders inspire employees to internalize the organization vision	72	4.03	.888	0.220
Organizational leaders mentor and coach their subordinates	72	3.82	.924	0.242
Organizational leaders ensure that the organization's actions are consistent with its values	72	4.10	.825	0.201
Valid N (listwise)	72			
Average Mean Score		3.94		

Source: Primary Data (2015)

Continuous learning represents an organization's efforts to create continuous learning opportunities for all its members (Yang et al., 2004). The construct comprises training opportunities, professional and educational activities as well as experience. Continuous learning was measured by asking employees to indicate the extent to which their organization supported their training and development. Employees initiative in identifying opportunities to learn new skills had the highest mean 3.77 (standard deviation = 0.89) implying that most of them are eager to learn new skills both within the organization and from external sources to increase their chances of employability. This finding corroborates with their intention not to look for work elsewhere which obtained a low score of 3.00 (standard deviation = 1.23). This means employees are always looking for better opportunities of employment hence length of service in the current organization is less than 5 years for majority of respondents. The high staff turnover could be an indication that the internal environment is not conducive to cultivate a culture of loyalty.

The respondents were asked to rate the degree to which the organization rewarded them for further training. The mean for this item was the lowest 3.03 (standard deviation = 1.11). The standard deviation indicates varied views presented by respondents. It is assumed pursuit of further training is an individual initiative which is not supported by the organization. The same statement had the highest variability (Coefficient of variation=0.365) indicating that respondents were in agreement that manufacturing firms do not reward them for further training. The overall mean score for continuous learning of 3.55 indicates that manufacturing firms moderately support employees training and development. These moderate results also imply that organizations are not keen on employee development given that reward for further training obtained the lowest mean 3.03. The statement with the lowest variability was employees view problems in their work as an opportunity to learn (coefficient of variation=0.226) implying that the respondents were in agreement problems experienced at work are viewed as opportunities to learn.

Dialogue and inquiry refers to an organization's efforts in creating a culture of questioning, feedback and experimentation (Yang et al, 2004). Respect among employees obtained the highest mean of 4.11 (standard deviation = 0.72) indicating that employees generally get along with each other. The standard deviation also indicates that the respondents generally agree on the level of respect for each other. On whether employees listen to others views before speaking, the item obtained a low mean score of 3.42 (standard deviation = 0.86). This implies that they have poor listening skills. The respondents generally agree on the idea of listening to each other before speaking. The overall mean score for dialogue and inquiry was 3.73 implying that the organization atmosphere is conducive for employees to question existing policies and procedures, to engage in dialogue with each other and provide open and honest feedback. The statement with the highest variability was employees are encouraged to ask 'why' regardless of rank or position (coefficient of variation=0.265) suggesting that there was disparity among respondents regarding the extent to which they are allowed to question existing policies. The statement with the lowest variability was employees treat each other with respect (coefficient of variation=0.175). This means the respondents were in agreement that employees respect each other.

Team learning emphasizes the use of groups to learn and work together. Watkins and Marsick (1996) suggest that team learning reflects the spirit of collaboration and collaborative skills that undergird effective use of teams. Respondents were asked to explain the extent to which work is designed to use groups in which learning and knowledge sharing is encouraged. Learning that focuses on teams developing goals within guidelines provided by management obtained the highest mean 3.83 (standard deviation = 0.96) implying teams/groups develop their goals and objectives from overall corporate goals. The standard deviation indicates general agreement among respondents concerning the process through which teams develop their goals. The respondents were asked to rate the degree to which teams are rewarded for their collective achievement. This item scored the lowest mean of 3.48 (standard deviation = 1.05). This implies that to some extent the organization rewards employees for collective achievement. The standard deviation indicates that most respondents were not in agreement on the rewards given for collective achievement.

Equally, the same statement had the highest variability (coefficient of variation=0.303) implying there was disparity among respondents on the extent to which teams are rewarded for collective achievement. The overall mean score of 3.66 for team learning indicates that large manufacturing firms generally support and encourage teamwork.

Embedded systems focus on technology systems created and integrated with work to provide access to information. Both two-way communication and maintenance of database for decision making had the highest mean score of 4.00. The standard deviation for two-way communication was 0.99 and 0.93 for maintenance of database for decision making. This means the respondents generally agree on the rating of the two scales. In addition access to information is largely available and communication between subordinates and superiors is highly encouraged. The results for two-way communication are consistent with dialogue and inquiry on two scales. Employees are encouraged to ask 'why' regardless of rank/position, obtained a high mean score of 3.74 (standard deviation = 0.99). Similarly, employees engage in dialogue because of trust they have in each other, obtained a high mean score of 3.73 (standard deviation = 0.94).

The lowest mean score of 3.78 (standard deviation = 1.13) on evaluation of training programs, indicates that the organization is not keen on training. The respondents provided varied views on this scale. The same statement had the highest variability (coefficient of variation= 0.299) implying the respondents were in agreement organizations do not facilitate evaluation of training programs. The statement with the lowest variability was my organization maintains up-to-date database relevant for decision making (coefficient of variation= 0.234) indicating that the respondents were in agreement about maintenance of database for decision making. The overall mean score of 3.92 for embedded systems indicates open and clear lines of communication, feedback is readily available and to a large extent employees have access to information to make informed decisions.

Empowerment refers to an organization process to create and share a collective vision and get feedback from its members about the gap between current status and the new vision (Yang et al., 2004). Employees' involvement in decision making is supposed to enhance their commitment to the goals and objectives of the organizations which contributes to improved performance. Recognition for employees who take initiative obtained the highest mean of 3.89 (standard deviation = 0.88). Given that most private manufacturing firms are geared towards profit maximization, these initiatives are recognized as long as they translate into increased profits. Use of discretion in carrying out work assignments was moderate 3.49 (standard deviation = 1.02). This implies that employees' freedom of choice is limited. The same statement had the highest variability (coefficient of variation=0.293) implying that there was disparity among respondents on the use of discretion in carrying out work assignments. My organization recognizes employees for taking initiative had the lowest variability (coefficient of variation= 0.226) indicating respondents were in agreement on recognition given for taking initiative.

Organization support for employees who take calculated risks obtained the lowest score of 3.42 (standard deviation = 0.86), implying that manufacturing firms are risk averse. This averseness to risk may be attributed to their special focus on profit maximization hence avoiding risks that might have negative consequences. The overall mean score for empowerment was moderately high 3.62 compared to a study by Idua (2014) in public universities revealed an overall mean score of 3.05 for employee empowerment. Employee empowerment is relatively high in manufacturing firms compared to public universities.

System connectivity emphasizes on employee contribution to the entire organization. Environmental analysis is done and information is used to improve work practices. The link between the organization and the community is given special attention. Employees contribution in terms of highlighting customers views in the decision making process had the highest score of 3.85 (standard deviation = 0.99). This implies that majority of manufacturing firms focus on customer satisfaction given the stiff competition from cheap imports into the country. Working with outside community to meet their needs had a low score of 3.49 (standard deviation = 1.01). This means manufacturing firms hardly engage in corporate social responsibility (CSR) since these activities are costly and may affect their profits.

Standard deviation 1> indicates the varied views of respondents on organization involvement in corporate social responsibility. Similarly, the scale obtained the highest variability (coefficient of variation= 0.289) implying that respondents were in agreement that their organizations do not work with outside community to meet their needs. My organization considers the impact of management decisions on employee morale had the lowest variability (coefficient of variation= 0.233) suggesting that respondents were in agreement on the impact of management decisions on their morale.

The results on ‘working with outside community to meet their needs’ were comparatively low in relation to a study by Kariuki (2014) on firms listed at the Nairobi Securities Exchange in which involvement in Corporate Social Responsibility (CSR) activities obtained a mean score of 3.65. On whether the organization supports employees to balance work and family, the item obtained a moderate score of 3.54 (standard deviation = 0.93). This implies that the respondents generally agree that the employer enables them to balance work and family. The overall mean score for system connectivity was 3.69. This implies employees’ contribution is highly encouraged. In addition, information obtained from environmental analysis is used to improve work practices.

Strategic leadership reflects the extent to which leaders think strategically about how to use learning to create change and to move the organization in new directions or markets. Leaders commitment to ensure that organization actions are consistent with its value had the highest means score of 4.10 (standard deviation = 0.83) implying that most respondents were of the opinion that organizational activities are aligned to the core values of the organization. This indicates that leaders champion/model actions that employees should emulate. The statement with the highest variability was organizational leaders share information with employees about competitors, industry trends and strategic goals of the organization (coefficient of variation= 0.248) implying that respondents had varied perception on the extent to which leaders share information with them. The overall mean score for strategic leadership was moderately high 3.94. This could be attributed to the age of the organization where well established policies and procedures encourage adherence to core values. Most of the manufacturing firms have been in operation for more than 25 years.

Overall, organizational leaders support employees' requests for training and are keen on their development through mentorship programs. This item obtained a mean score of 3.81 (standard deviation = 0.94). On organization leaders sharing information on competitors industry trends and strategic goals of the organization, the scale obtained a means score of 3.92 (standard deviation = 1.03). This varied agreement implies some leaders share information, others do not. Table 4.11 below presents a summary of mean scores for learning organization as revealed by the study.

Table 4.11: Mean Scores of Learning Organization

Item	Mean Score
Continuous Learning	3.11
Dialogue and Inquiry	3.73
Team Learning	3.66
Embedded Systems	3.92
Empowerment	3.62
Systems Connectivity	3.69
Strategic Leadership	3.94
Aggregate	3.67

Source: Primary Data (2015)

The results in table 4.11 show that the overall mean score of learning organization is 3.67. Strategic leadership had the highest mean score of 3.94 followed by embedded systems which obtained 3.92. Dialogue and inquiry obtained an overall mean score of 3.73. System connectivity obtained a mean score of 3.69 and team learning had a mean score of 3.66. The lowest overall mean score recorded was continuous learning with a mean of 3.11. The results are consistent with previous studies Basim et al. (2007) which concluded that DLOQ was an effective tool in measuring the learning organization concept.

4.4.10 Knowledge Management

Knowledge management was operationalized as knowledge acquisition, knowledge application and knowledge sharing. The measurement scale consisted of 13 items anchored on a five point Likert type scale. The three operational dimensions were adopted from Darroch and McNaughton (2002).

Knowledge acquisition focuses on acquiring knowledge from different sources to enhance an organization's ability to realize its goals. Knowledge application determines the organization's capability to use knowledge to solve organizational problems. Knowledge sharing is related to dissemination of knowledge between individuals, across departments and among business partners. The results of the three constructs of knowledge management are presented in Table 4.12.

Table 4.12: Means and Standard Deviations for Knowledge Management

Knowledge Acquisition	N	Mean	Standard Deviation	Coefficient of Variation
My organization acquires knowledge from external sources for developing new products	72	3.81	.898	0.236
My organization acquires market development skills from business partners	72	3.58	.946	0.264
My organization acquires new technologies from business partners	72	3.64	.983	0.270
My organization obtains information from its research and development activities	72	3.89	1.029	0.265
My organization collects information on consumer needs and preferences	72	4.10	.952	0.232
Valid N (listwise)				
Average Mean Score		3.80		
Knowledge Application				
My organization uses knowledge to solve new problems	72	4.19	.781	0.186
My organization uses knowledge to respond to consumer needs and preferences	72	4.15	.725	0.175
My organization utilizes different sources and types of knowledge for decision making	72	4.11	.832	0.202
My organization encourages employees to utilize knowledge to solve work related problems	72	4.15	.705	0.170
Valid N (listwise)	72			
Average Mean Score		4.15		
Knowledge Sharing				
In my organization supervisors share knowledge with subordinates	72	3.93	.861	0.219
In my organization employees share knowledge through learning by doing and learning by watching	72	4.03	.855	0.212
In my organization knowledge is shared across units/departments	72	3.90	.858	0.220
In my organization knowledge is shared among business partners	71	3.37	.930	0.276
Valid N (listwise)	71			
Average Mean Score		3.81		

Source: Primary Data (2015)

Knowledge acquisition is related to using existing knowledge or capturing new knowledge which enhances an organization's ability to realize its goals as well as increase organizational learning (Nonaka & Takeuchi, 1995). The respondents were asked to rate the level of knowledge acquisition in terms of knowledge acquired from external sources, market development skills, information obtained from research and development and information collected on consumer needs and preferences. Information on consumer needs and preferences obtained the highest mean of 4.10 (standard deviation = 0.95, coefficient of variation= 0.232). This indicates that manufacturing firms proactively seek information on consumer needs in order to improve their products and services. These results corroborate with the findings on customer retention which had a high mean score of 4.15 (standard deviation = 0.80). Acquisition of market development skills obtained a moderate mean score of 3.58 (standard deviation = 0.95). My organization acquires new technologies from business partners had the highest variability (coefficient of variation=0.270) indicating that there was disparity among respondents on acquisition of new technology from business partners. The overall mean score for knowledge acquisition was moderately high 3.80. This implies that manufacturing firms are keen on acquiring information from different sources for decision making.

Knowledge application refers to the use of current knowledge in order to solve existing problems (Alavi & Tiwana, 2002). The respondents were asked to rate the application of knowledge in their organizations in terms of use of knowledge to solve new problems, use of knowledge to respond to consumer needs and preferences, use of different types of knowledge for decision making and use of knowledge to solve work related problems. The use of knowledge to solve new problems had the highest mean score of 4.19 (standard deviation = 0.78) followed by use of knowledge to respond to consumer needs and preferences and utilization of knowledge to solve work related problems both of which obtained a mean score of 4.15. This implies that knowledge is an important input in the firms' pursuit to achieve competitive advantage. The firms operate in a competitive environment where customer satisfaction is critical hence the need to respond to customer needs and preferences. The overall mean score for knowledge application was 4.15, implying the effective use of knowledge to improve work practices.

The statement with the highest variability was my organization utilizes different sources and types of knowledge for decision making (coefficient of variation=0.202) suggesting disparity among respondents on the use of different types of knowledge. My organization encourages employees to utilize knowledge to solve work related problems had the lowest variability (coefficient of variation= 0.170) indicating that respondents were in agreement on the use of knowledge to solve work related problems.

Knowledge sharing is defined as a business process that requires collective knowledge, skills, expertise and dissemination of knowledge across organizational units (Chen & Huang 2009). Respondents were asked to rate the level of knowledge sharing in their organizations in terms of supervisors sharing knowledge with subordinates, employees sharing knowledge through learning by doing and learning by watching, knowledge sharing across departments and knowledge sharing among business partners. Employees sharing knowledge through learning by doing and learning by watching obtained the highest mean score was 4.03 (standard deviation = 0.86). This implies practical application of knowledge in carrying out work assignments is highly encouraged. The respondents rating on knowledge sharing among business partners obtained the lowest mean score of 3.37 (standard deviation = 0.93, coefficient of variation= 0.276) indicating that sharing of knowledge among business partners is limited. This implies stiff competition manufacturing firms face limits their ability to share knowledge which presents an advantage to their rivals. The overall result for knowledge sharing was moderately high 3.81. Table 4.13 below presents a summary of mean scores for knowledge management as revealed by the study.

Table 4.13: Mean Scores of Knowledge Management

Item	Mean Score
Knowledge Acquisition	3.80
Knowledge Application	4.15
Knowledge Sharing	3.81
Aggregate	3.92

Source: Primary Data (2015)

As indicated in Table 4.13, overall results for the three constructs: knowledge acquisition 3.80, knowledge application 4.15 and knowledge sharing 3.81 are moderately high, a clear indication that manufacturing firms have incorporated knowledge management practices into their processes and systems. This confirms the previous assertion in literature review that business enterprises are increasingly operating in knowledge – based economies where success is largely determined by timely and quality of information available. The findings are consistent with a study by Kagiri (2008) who found that most Commercial Book publishing firms engaged in knowledge acquisition and creation. The results also confirmed knowledge sharing across departmental boundaries and individuals was actively encouraged and rewarded.

4.4.11 Employee Outcomes

Employee outcomes consist of affective reactions towards aspects of work such as job satisfaction and organizational commitment. Armstrong (2006) asserts that employee outcomes such as job satisfaction and organizational commitment have far reaching impact on organizational performance. This study focused on two immediate outcomes of human resource management practices such as job satisfaction and organizational commitment.

Organizational commitment was measured using 10 items adapted from Meyer and Allen (1991). Job satisfaction was measured using 10 items adapted from Minnesota job satisfaction scale. A five point likert type scale was used to measure the constructs with 1 = not at all and 5 = very large extent. The objective was to measure employees' attitude towards their work. High scores (> 3.00) represented favourable response while low scores (< 3.00) denoted less favourable response. The results of findings are presented in Table 4.14.

Table 4.14: Means and Standard Deviations for Employee Outcomes

Organizational Commitment	N	Mean	Std. Deviation	Coefficient of Variation
Employees are willing to continue working in this organization	72	4.28	.791	0.185
Employees readily accept increasingly challenging performance standards	72	4.26	.822	0.193
Employees are willing to contribute much more to the organization than their formal contractual obligation	72	4.19	.929	0.222
Employees always look forward to coming to work	71	4.25	.731	0.172
Employees willingly accept any type of job assignment in order to keep working for this organization	72	3.36	1.179	0.351
Employees make no plans to work elsewhere	70	3.00	1.228	0.409
Employees positively respond to dynamic performance requirements	71	4.04	.783	0.194
Employees look for developmental opportunities that enhance their value to the organization	71	4.24	.819	0.193
Employees about this organization as a great organization to work for	72	4.11	.897	0.218
Employees are reluctant to change to another employer, even if the organization was not doing well	72	3.32	1.046	0.315
Valid N (listwise)	67			
Average Mean Score		3.91		
Employees are satisfied with opportunities for advancement	72	4.08	.868	0.213
Resources/equipment provided by the organization are adequate	72	3.93	.828	0.211
Employees are satisfied with the chance to do something that makes use of their abilities	72	4.07	.877	0.215
Employees are satisfied being able to keep busy all the time	72	4.03	.769	0.191
Employees are satisfied with the working conditions	72	3.79	.804	0.212
Employees perceive their jobs to be highly meaningful	71	4.01	.837	0.209
Employees are satisfied with pay compared to the amount of work they do	72	2.96	1.080	0.365
Methods used to resolve grievances are adequate	72	3.64	.924	0.254
Co-workers get along with each other	72	3.78	.809	0.214
Supervisor are competent in making decisions	72	3.81	.973	0.255
Valid N (listwise)	71			
Average Mean Score		3.81		

Source: Primary Data (2015)

Organizational commitment is the relative strength of an individual's identification and involvement in a particular organization (Mowday et al. 1979). Committed employees are deemed as those who share the common values and beliefs exposed by the organization. The results in Table 4.14 show that willingness to continue working in the current organization was an appropriate indicator of organizational commitment. It had the highest mean score of 4.28 (standard deviation = 0.79). These results are consistent with a study by Busienei (2013) in which the item obtained a mean score of 3.86 (standard deviation = 0.52). It is assumed employees are loyal to the organization given their limited chances of employability.

Employees' intention to work elsewhere had the lowest means score of 3.00 (standard deviation = 1.23), implying that to some extent employees look for work elsewhere. The same statement obtained the highest variability (coefficient of variation= 0.365) suggesting disparity among respondents regarding their intention to work elsewhere. The results are relatively low compared to Busienei (2013) in which the scale obtained a mean score of 3.85 (standard deviation = 0.49). The statement with the lowest variability was 'I always look forward to coming to work' (coefficient of variation=0.172) indicating that respondents were in agreement on the manner in which they attend to their daily duties.

The overall result for organizational commitment was moderately high 3.91 which implies that to a large extent employees are committed to their current organization. These results are moderately high compared to findings on organizational commitment in large private manufacturing firms by Busienei (2013) which had a mean score of 3.77 (standard deviation = 0.49). A study by Omari (2012) in Kenyan Public Corporations obtained an aggregate mean of 2.72 on organizational commitment indicating that respondents were uncertain about their level of commitment. Results of a study by Mulabe (2013) in Kenyan State Corporations indicate a mean score of 3.77 for organizational commitment. Findings from a study by Idua (2014) on organizational commitment in public universities had a mean score of 2.97 implying that to some extent employees are committed to their organizations.

Job satisfaction is an affective evaluation of various aspects of the job. Drawing from Herzberg's two factor theory, factors that contribute to job satisfaction are related to the job content and include: achievement, challenging work, growth in the job, responsibility, advancement and recognition. Employees evaluation of opportunities for advancement provided by the job obtained the highest rating of 4.08 (standard deviation = 0.86) implying general agreement on opportunities for advancement provided by the job. Satisfaction with pay compared to amount of work done had the lowest rating of 2.96 (standard deviation = 1.08) meaning most of the employees are dissatisfied with their pay. The same statement had the highest variability (coefficient of variation= 0.365) indicating disparity among respondents in regard to amount of pay received. This dissatisfaction could have a dampening effect on their future efforts. It is assumed large manufacturing firms' pursuit for profit maximization creates the need to minimize the cost of labour. The findings on pay compared to amount of work done are consistent with Omari (2012) results on the same scale which obtained a mean of 2.97 (standard deviation = 1.15) implying that employees are dissatisfied with their pay.

The respondents response on being able to keep busy all the time obtained a moderately high mean score of 4.03 (standard deviation = 0.77) implying that the respondents were satisfied with the way their job kept them busy. The same statement had the lowest variability (coefficient of variation= 0.191) implying general agreement among respondents on the way their jobs kept them busy. The results are consistent with Omari (2012) findings of the study of Kenyan public corporations in which this scale had a mean of 4.01 (standard deviation = 0.89). Satisfaction with working conditions obtained a mean score of 3.79 (standard deviation = 0.80). Drawing from Herzberg's two factor theory, working conditions are identified as one of the hygiene factors whose presence does not cause satisfaction but absence causes dissatisfaction.

The respondents satisfaction with opportunities to make use of their abilities had a mean score of 4.01 (standard deviation = 0.84) implying that generally employees are satisfied with opportunities to use their abilities in carrying out their work. This finding is consistent with Hackman and Oldham (1989) job characteristic model which focuses on skill variety, that is, the extent to which the job requires employees to use a number of skills and abilities.

Overall results for job satisfaction were quite high 3.81 which imply employees are generally satisfied with their job. Findings from a study by Omari (2012) in Kenyan Public corporations obtained an aggregate mean of 3.48 on job satisfaction, implying that respondents were moderately satisfied. Similarly, a study by Mulabe (2013) in Kenyan State corporations obtained a mean score of 3.40 on job satisfaction. A study by Idua (2014) on job satisfaction in public universities in Kenya had an aggregate mean of 2.97. This implies that respondents were moderately satisfied with their work. Table 4.15 below presents a summary of mean scores for employee outcomes as revealed by the study.

Table 4.15: Mean Scores of Employee Outcomes

Item	Mean Score
Organizational Commitment	3.91
Job Satisfaction	3.81
Aggregate	3.86

Source: Primary Data (2015)

The results in Table 4.15 show that organizational commitment obtained the highest mean score of 3.91. This suggests that employees are committed to their current employers given their limited options for better employment. Job satisfaction was moderately high with a mean score of 3.81 which indicates employees' satisfaction with their jobs.

4.4.12 Financial Performance

The study sought to determine the extent to which large manufacturing firms had achieved increased financial performance measured in terms of profit margin, organizational ability to meet its current debt, growth in sales and rate of return on shareholders' investment. The questionnaire consisted of 5 items measured on a five-point likert type scale where 1 = not at all while 5 = very large extent. The respondents were asked to indicate their perception of financial performance. The results are presented in Table 4.16.

Table 4.16: Means and Standard Deviations for Financial Performance

Financial Performance	N	Mean	Standard Deviation	Coefficient of Variation
My organization's net profit margin has increased over the past five years	70	3.59	.985	0.274
My organization's gross profit margin has increased over the past five years	70	3.61	.952	0.264
The ability of my organization to meet its current debt has improved over the past five years	70	3.66	.832	0.227
Growth in sales has increased over the past five years	70	3.63	.887	0.244
The rate of return on shareholders' investment has increased over the past five years	68	3.47	.855	0.246
Valid N (listwise)	68			
Average Mean Score		3.59		

Source: Primary Data (2015)

As shown in Table 4.16, the ability of the firms to meet their current debt obtained the highest mean score 3.66 (standard deviation = 0.83) which implies the firms are highly liquid. The rate of return on shareholders' investment had the lowest mean score 3.47 (standard deviation = 0.85) suggesting that owners of manufacturing firms do not realize a fair return on their investment. The statement 'my organization's net profit margin has increased over the past five years' had the highest variability (coefficient of variation= 0.274) suggesting inconsistency in profit margin obtained by the firms. The low profit margins could be attributed to high cost of production as well as stiff competition from cheap imports. The overall mean score for financial performance was 3.59 meaning that most respondents were in agreement that their organizations had achieved increased financial performance over the past five years.

These results are fairly low compared to findings from a study Kidombo (2007) that revealed an aggregate mean of 3.73 for perceptual measures of firm performance. Similarly, a study by Busienei obtained an aggregate mean of 3.77 for profitability as a measure of financial performance

4.4.13 Non-Financial Performance

Non-financial performance was measured using 12 items anchored on a five point likert type scale. Customer perspective was assessed through 4 items focusing on customer complaints, customer retention, attraction of new customers and provision of better service based on specific market segments. Four items were used to measure internal business process. The measures included level of creativity and innovation, ratio of good output, rate of waste in the production process and number of defective products. Learning and growth was assessed through 4 items representing time to market new products, number of new product launches, research and development and employee turnover. The results are presented in Table 4.17.

Table 4.17: Means and Standard Deviations for Non-Financial Performance

Customer Perspective	N	Mean	Standard Deviation	Coefficient of Variation
My organization has received few customer complaints over the past five years	72	3.32	1.005	0.303
My organization has retained most of its customers over the past five years	72	4.15	.799	0.193
My organization has attracted a large number of new customers over the past five years	72	3.93	.939	0.239
My organization focuses on specific market segments to provide better service than its competitors	72	3.97	.872	0.220
Valid N (listwise)	72			
Average Mean Score		3.84		
Internal Business Process				
Level of creativity and innovation of new products is high	72	4.03	.903	0.224
Ratio of good output to total output is high	72	4.07	.793	0.195
Rate of waste in the production process is low	72	3.72	.892	0.240
The number of defective products is low	71	3.90	.897	0.230
Valid N (listwise)	71			
Average Mean Score		3.93		

Table 4.17 Continued ...

Learning and Growth				
My organization has continually reduced time to market new products	70	3.14	1.094	0.348
The number of new product launches has increased over the past five years	71	3.44	1.052	0.306
My organization uses knowledge from research and development to develop new products	72	3.81	.929	0.244
Employees perform tasks that allow them to acquire new skills and knowledge	72	3.89	.742	0.190
Employee turnover has reduced over the past five years	72	3.22	1.091	0.339
Valid N (listwise)	70			
Average Mean Score		3.40		

Source: Primary Data (2015)

As shown in Table 4.17, the results on customer perspective indicate that customer retention obtained the highest mean score of 4.15 (standard deviation = 0.79). This implies that most respondents were in agreement large manufacturing firms had retained most of their customers over the past five years. Customer retention is a good indicator of firm performance. It is assumed that customers are satisfied with the products and services offered, hence prefer to stick to their company of choice. The lowest score was customer complaints 3.32 (standard deviation = 1.01, coefficient of variation=0.303) which shows respondents had varied views about the number of complaints received from customers. The statement ‘my organization has retained most of its customers over the past five years’ had the lowest variability (coefficient of variation= 0.193) suggesting agreement among respondents on retention of customers. The overall rating for customer perspective was 3.84. This indicates a general agreement among respondents on customer perspective.

The respondents were asked to rate internal business processes in terms of level of creativity and innovation of new products, ratio of good output to total output, rate of waste in the production process and number of defective products. The statement with highest variability was the rate of waste in the production process is low (coefficient of variation=0.240) indicating disparity among respondents on the rate of waste in the production process.

The ratio of good output to total output had the lowest variability (coefficient of variation=0.195) suggesting agreement among respondents regarding the ratio of good output. Equally, ratio of good output to total output was rated highly at 4.03 (standard deviation = 0.90). Level of creativity and innovation was rated highly at 4.07 (standard deviation = 0.79). These results are moderately high compared to a study by Kariuki (2014) on firms listed at the Nairobi Securities Exchange in which the scale obtained a mean score of 3.32 implying there are moderate levels of creativity which can be explained by formalized structures. Given that manufacturing firms operate in a highly competitive environment characterized by dumping of cheap imports, it is assumed that creativity and innovation is critical to attract and retain customers. In addition, the firms seem to focus on differentiation of products as a major strategy. The overall rating for internal business process was moderately high 3.93, compared to a study by Kariuki (2014) on firms listed at the Nairobi Securities Exchange in which the rating for internal business processes was relatively low at 3.10. This is explained by the companies' low appreciation of new products and service, creativity and innovation and research and development.

The results on learning and growth indicate that use of knowledge from research and development to develop new products had the highest mean 3.81 (standard deviation = 0.93) implying that research and development is highly appreciated in most companies. The respondents rating of time to market new products was the lowest at 3.14 (standard deviation = 1.09) implying that respondents had varied opinions on time to market new products. This was followed by employee turnover with a mean score of 3.22 (standard deviation = 1.09). This shows a slight agreement on the rate of employee turnover. From the discussion with a few human resource managers, layoffs are a common phenomenon in manufacturing firms given the desire of owners to cut down costs. The statement with the highest variability was 'My organization has continually reduced time to market new products' (coefficient of variation=0.348) suggesting that there was lack of agreement among respondents on the extent to which the organizations had reduced time to market new products.

The statement that had the lowest variability was ‘my organization uses knowledge from research and development to develop new products (coefficient of variation=0.244) implying that there was agreement among respondents on the use of knowledge from research and development to develop new products. The overall rating for learning and growth was 3.40 which indicate moderate appreciation for learning and growth. The results are slightly high compared to findings by Kariuki (2014) in which the aggregate mean for learning and growth was 3.29 on firms listed at the Nairobi Securities Exchange. Table 4.18 below presents a summary of mean scores for firm performance as revealed by the study.

Table 4.18: Mean Scores of Firm Performance

Item	Mean Score
Financial Performance	3.59
Customer Perspective	3.84
Internal Business Process	3.93
Learning and Growth	3.40
Aggregate	3.69

Source: Primary Data (2015)

The results in Table 4.18 show that the rating for internal business process is relatively high suggesting that the firms highly appreciate the level of creativity and innovation of new products. This is followed by customer perspective with a mean of 3.84 which indicates special attention given to customer needs and preferences. Perceptual measures of financial performance obtained a moderate score of 3.59. This can be explained by rising labour costs, unreliable and expensive energy and high costs of inputs as a result of poor infrastructure which contribute to high prices of locally manufactured goods limiting their competitiveness. This has adversely affected the financial performance of these firms. Learning and growth obtained a mean score of 3.40 which implies that to some extent large manufacturing firms are keen on improvement and introduction of new products.

4.5 Tests of Hypotheses

This section presents the findings of tests of hypotheses of the study. The hypotheses describe the relationship between variables of the study as conceptualized and presented in the conceptual model. The study focused on four objectives and four corresponding hypotheses. The hypotheses which were tested comprised the influence of learning organization (independent variable) on firm performance (dependent variable), the mediation of employee outcomes in the relationship between learning organization and firm performance, the moderating effect of knowledge management in the relationship between learning organization and firm performance and the joint effect of learning organization, knowledge management and employee outcomes on performance of Large Manufacturing Firms in Kenya.

A composite index for each of the study variables was computed as the sum of responses divided by the total number of measurement items. Learning organization was measured as a composite index of continuous learning, dialogue and inquiry, team learning, embedded systems, empowerment, system connectivity and strategic leadership. Employee outcomes was computed as a composite index of organizational commitment and job satisfaction.

Knowledge management was measured as a composite index of knowledge acquisition, knowledge application and knowledge sharing. Financial performance was computed as a composite index of perceptual measures comprising net profit margin, gross profit margin, growth in sales and return on shareholders' investment. Non-financial performance was measured as a composite index representing customer perspective, internal business process, learning and growth.

It was not possible to combine both financial and non-financial measures, hence the researcher divided the hypotheses under two categories, financial and non-financial. Separate statistical tests were performed for financial and non-financial measures of performance. Hypotheses were tested one at a time beginning with financial performance followed by non-financial performance.

4.5.1 Tests of Hypotheses with Financial Performance as Dependent Variable

This section presents the results of the tests of hypotheses as guided by the first objective of the study. The first objective was to establish the influence of learning organization on performance of Large Manufacturing Firms in Kenya. The following hypothesis was formulated for testing:

H₁: Learning organization influences performance of Large Manufacturing Firms in Kenya.

The first tests focused on financial measures of performance. The results of the tests of hypotheses with financial performance as the dependent variable are presented in the following sections.

4.5.2 Learning Organization and Financial Performance

The effect of learning organization on financial performance was tested using simple linear regression analysis. This was done by regressing financial performance on learning organization. A composite index for seven dimensions of learning organization constituted the measure for independent variable while a composite index for five indicators of financial performance constituted the measure for dependent variable. The regression results are presented in Table 4.19.

Table 4.19: Regression Results for the Effect of Learning Organization on Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.260 ^a	.067	.051	.15396		
ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.096	1	.096	4.050	.049
	Residual	1.327	56	.024		
	Total	1.423	57			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.468	.130		3.603	.001
	Learning Organization	1.712	.851	.260	2.012	.049
Predictors: (Constant), Learning Organization						
Dependent Variable: Financial Performance						

Source: Primary Data (2015)

The regression results in Table 4.19 indicate that 6.7 percent of variance in financial performance was explained by learning organization ($R^2=0.067$, $P<0.05$). The regression did not explain 93.3 percent of variation in financial performance which is due to other factors not included in the study. This implies that learning organization is a weak predictor of financial performance.

The overall model was statistically significant ($F=4.050$, $P<0.05$). The beta coefficients indicate that the influence of learning organization on financial performance was statistically significant ($\beta= 0.468$, $t= 2.012$, $p<0.05$). This suggests that one unit change in learning organization is associated with 0.468 change in financial performance. The results thus provide evidence that learning organization influences financial performance.

4.5.3 Learning Organization, Employee Outcomes and Financial Performance

The second objective was to determine the mediation of employee outcomes in the relationship between learning organization and firm performance. The following hypothesis was tested to establish the relationship.

H₂: The influence of learning organization on performance of large manufacturing firms is mediated by employee outcomes

Hypothesis 2 was tested using the Baron and Kenny (1986) mediation model. Testing for mediation involves four steps. First, the dependent variable (financial performance) is regressed on independent variable (learning organization) to determine the size and direction of the relationship. If this relationship is insignificant, there can be no mediation. In the second step, the mediating variable (employee outcomes) is regressed on the independent variable (learning organization) and the beta examined for its size, direction and significance. If this relationship is statistically insignificant, then employee outcomes cannot be a mediator. Step 3 involved regressing performance on employee outcomes. The beta was examined to determine the significance of the relationship. Step four involved testing the influence of learning organization (predictor variable) on financial performance (dependent variable) when controlling for the effect of employee outcomes (mediator).

To confirm mediation, steps 1, 2 and 3 must be significant. In step 4, the independent variable loses significance when controlling for the effect of mediating variable on dependent variable. The summarized regression results are presented in Table 4.20

Table 4.20: Regression Results for the Mediation of Employee Outcomes in the Relationship between Learning Organization and Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.260	.067	.051	.15396					
2	.565	.319	.306	.09166					
3	.136	.019	-.001	.15890	.019	.944	1	50	.336
4	.292	.085	.048	.15495	-.234	3.584	1	49	.064
ANOVA									
Model			Sum of Squares	df	Mean Square	F	Sig.		
1	Regression		.096	1	.096	4.050	.049		
	Residual		1.327	56	.024				
	Total		1.423	57					
2	Regression		.208	1	.208	24.794	.000		
	Residual		.445	53	.008				
	Total		.653	54					
3	Regression		.024	1	.024	.944	.336		
	Residual		1.262	50	.025				
	Total		1.286	51					
4	Regression		.110	2	.055	2.288	.112		
	Residual		1.176	49	.024				
	Total		1.286	51					
Coefficients									
Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
			B	Std. Error	Beta				
1	(Constant)		.468	.130		3.603	.001		
	Learning Organization		1.712	.851	.260	2.012			
2	(Constant)		.364	.085		4.258	.000		
	Learning Organization		2.745	.551	.565	4.979			
3	(Constant)		.572	.156		3.664	.001		
	Employee Outcomes		.192	.197	.136	.971			
4	(Constant)		.435	.168		2.580	.013		
	Employee Outcomes		-.058	.234	-.041	-.250			
	Learning Organization		2.183	1.153	.314	1.893			
Model 1 Predictors: (Constant) Learning Organization Model 2 Predictors: (Constant) Learning Organization Model 3 Predictors: (Constant) Employee Outcomes Model 4 Predictors: (Constant) Employee Outcomes, Learning Organization Dependent Variable Model 1, 3, 4: Financial Performance Model 2: Employee Outcomes									

Source: Primary Data (2015)

Step One: The influence of Learning Organization on Financial Performance

In step one, the dependent variable was regressed on the independent variable. This was to establish whether the independent variable (learning organization) is a significant predictor of dependent variable (financial performance). Results in Table 4.20 reveal that 6.7 percent of variance in financial performance was explained by learning organization ($R^2=0.067$, $P<0.05$). However, the model did not explain 93.3 percent of variation in financial performance, suggesting that there are other factors associated with financial performance which were not included in the study. The overall model was statistically significant ($F= 4.050$, $P<0.05$). The beta coefficient for learning organization was also significant ($\beta=1.712$, $t=2.012$, $P<0.05$) thus confirming step one in testing for mediation.

Step Two: The influence of Learning Organization on Employee Outcomes

The second step was meant to determine the influence of learning organization on employee outcomes. The results in step two show that learning organization explains 31.9 percent of variation in employee outcomes ($R^2=0.319$, $P<0.05$). R^2 changes from 0.067 in step one to 0.319 in step two (R^2 change=0.252). This implies that learning organization has a significant influence on employee outcomes. The F ratio ($F=24.794$, $P<0.05$) and the beta coefficients ($\beta= 2.745$, $t=4.979$, $P<0.05$) were statistically significant. The second step in testing for mediation was thus met.

Step Three: The influence of Employee Outcomes on Financial Performance

Testing for the influence of employee outcomes on financial performance yielded the results presented in step 3. The results indicate that only 1.9 percent of variance in financial performance was explained by employee outcomes ($R^2=0.019$, $P>0.05$). R^2 changes from 0.319 in step two to 0.019 in step three (R^2 change = -0.3). This implies that employee outcomes is a weak predictor of financial performance. The F ratio was not statistically significant ($F= 0.944$, $P>0.05$). The change in F value (F change =0.944) at $P<0.05$ was not significant. Equally, the beta coefficient was not significant ($\beta= 0.192$, $t=0.971$, $P>0.05$). The third condition in testing for mediation was not met.

Step Four: Learning Organization, Employee Outcomes and Financial Performance

In step four, when controlling for employee outcomes, the regression model was not statistically significant ($R^2 = 0.085$, $P > 0.05$). The overall model was not statistically significant ($F = 2.288$, $P > 0.05$). The change in F value ($F \text{ change} = 3.584$) at $P < 0.05$ was not significant. The beta coefficients for employee outcomes ($\beta = -0.058$, $t = -0.250$, $P > 0.05$) and learning organization ($\beta = 2.183$, $t = 1.893$, $P > 0.05$) were not significant. The results did not provide sufficient evidence to support the mediation of employee outcomes in the relationship between learning organization and financial performance. It was however clear, from the results that learning organization is a better predictor of employee outcomes than financial performance.

4.5.4 Learning Organization, Knowledge Management and Financial Performance

The third objective of the study was to establish the moderating effect of knowledge management on the relationship between learning organization and firm performance. The moderating effect is assessed in terms of how the effect of independent variable on dependent variable changes when a moderator is introduced. To establish the moderating effect, the following hypothesis was formulated for testing.

H₃: The influence of learning organization on performance of large manufacturing firms is moderated by knowledge management.

The moderating effect was evaluated using stepwise regression analysis proposed by Baron and Kenny (1986). The first step involved testing the influence of learning organization on financial performance. The second step involved testing the effect of predictor variables (learning organization and knowledge management) on criterion variable (financial performance). In the third step, an interaction term (computed as the product of standardized values for learning organization and knowledge management) was introduced and tested for its significance on financial performance. Moderation can be established if the effect of interaction in the third step is significant. Separate tests were carried out for financial and non-financial measures of performance. Regression results for financial performance are presented in Table 4.21.

Table 4.21: Regression Results for the Moderating Effect of Knowledge Management on the Influence of Learning Organization on Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.260	.067	.051	.15396					
2	.262	.069	.035	.15524	.069	2.031	2	55	.141
3	.263	.069	.017	.15664	.000	.021	1	54	.886
ANOVA									
Model		Sum of Squares	Df	Mean Square	F	Sig.			
1	Regression	.096	1	.096	4.050	.049			
	Residual	1.327	56	.024					
	Total	1.423	57						
2	Regression	.098	2	.049	2.031	.141			
	Residual	1.325	55	.024					
	Total	1.423	57						
3	Regression	.098	3	.033	1.337	.272			
	Residual	1.325	54	.025					
	Total	1.423	57						
Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
1	(Constant)	.468	.130		3.603	.001			
	Learning Organization	1.712	.851	.260	2.012	.049			
2	(Constant)	.452	.143		3.162	.003			
	Learning Organization	1.368	1.567	.208	.913	.365			
	Knowledge Management	.087	.310	.064	.280	.780			
3	(Constant)	.466	.173		2.687	.010			
	Learning Organization	1.308	1.567	.198	.835	.408			
	Knowledge Management	.083	.314	.061	.265	.792			
	Learning Organization * Knowledge Management	-.002	.017	-.022	-.144	.886			
Model 1 Predictors (Constant) Learning Organization Model 2 Predictors: (Constant) Learning Organization, Knowledge Management Model 3 Predictors: (Constant) Learning Organization, Knowledge Management, Learning Organization * Knowledge Management Dependent Variable: Financial Performance									

Source: Primary Data (2015)

Step One: The Influence of Learning Organization on Financial Performance

In step one, financial performance was regressed on learning organization. The results indicate that learning organization accounts for 6.7 percent of variance in financial performance ($R^2 = 0.067$, $P < 0.05$). The overall model was significant ($F = 4.050$, $P < 0.05$). Further, the beta coefficients were statistically significant ($\beta = 1.712$, $t = 2.012$, $P < 0.05$). This implies that that one unit change in learning organization is associated with 1.712 change in financial performance. The results in the first step were significant.

Step Two: The Influence of Learning Organization and knowledge Management on Financial Performance

The introduction of the moderator, knowledge management, significantly improves the influence of learning organization on financial performance. Learning organization and knowledge management explain 6.9 percent of variance in financial performance. The overall model was statistically insignificant ($F = 2.031$, $P > 0.05$). The change in F value (F change = 2.031) was not significant. Similarly, the beta coefficients were not statistically significant ($\beta = 0.087$, $t = 0.280$, $P > 0.05$). The results in the second step were not significant.

Step Three: The Influence of Learning Organization, Knowledge Management and Interaction Term on Financial Performance.

In step 3, the interaction term was introduced in the model. All the variables, learning organization, knowledge management and the interaction term were entered in the regression model. The results reveal that R^2 remained the same ($R^2 = 0.069$). The R^2 change was zero indicating that the interaction of learning organization* knowledge management did not have a significant influence on financial performance. The overall model indicates that the interaction was not statistically significant ($F = 1.337$, $P > 0.05$). Equally, the change in F value (F change = 0.021) was not significant. The beta coefficients revealed a decrease in financial performance ($\beta = -0.002$, $t = -0.144$, $P > 0.05$) when the interaction term was included in the regression model. The results did not provide evidence to support the moderation of knowledge management on the relationship between learning organization and financial performance.

4.5.5 Joint Effect of Learning Organization, Knowledge Management, Employee Outcomes on Financial Performance

The study sought to establish whether the joint effect of learning organization, knowledge management and employee outcomes is greater than the individual effect of each predictor variable on financial performance. The following hypothesis was formulated for testing:

H₄: The joint effect of learning organization, knowledge management and employee outcomes on firm performance is greater than the individual effect of each predictor variable

Hierarchical regression analysis was used to test the hypothesis. Hierarchical regression analysis was performed with study variables being entered into the analysis in a sequence of groups. In the first step, financial performance was regressed on learning organization. In step two, learning organization and employee outcomes were added into the equation. Finally, in step three, the predictor variables, learning organization, knowledge management and employee outcomes, were entered simultaneously to assess their joint effect on financial performance. The results are presented in Table 4.22

Table 4.22: Joint Effect of Learning Organization, Knowledge Management and Employee Outcomes on Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.290	.084	.066	.15349	.084	4.600	1	50	.037
2	.292	.085	.048	.15495	.001	.063	1	49	.804
3	.294	.087	.030	.15645	.001	.064	1	48	.801
ANOVA									
Model			Sum of Squares	df	Mean Square	F	Sig.		
1	Regression		.108	1	.108	4.600	.037		
	Residual		1.178	50	.024				
	Total		1.286	51					
2	Regression		.110	2	.055	2.288	.112		
	Residual		1.176	49	.024				
	Total		1.286	51					
3	Regression		.111	3	.037	1.518	.222		
	Residual		1.175	48	.024				
	Total		1.286	51					
Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
1	(Constant)	.414	.145		2.853	.006			
	learning organization	2.020	.942	.290	2.145	.037			
2	(Constant)	.435	.168		2.580	.013			
	Learning Organization	2.183	1.153	.314	1.893	.064			
	Employee Outcomes	-.058	.234	-.041	-.250	.804			
3	(Constant)	.440	.171		2.567	.013			
	Learning Organization	2.470	1.624	.355	1.521	.135			
	Employee Outcomes	-.028	.265	-.020	-.105	.917			
	Knowledge Management	-.093	.367	-.066	-.253	.801			
Model 1: Predictors: (Constant), Learning Organization									
Model 2: Predictors: (Constant), Learning Organization, Employee Outcomes									
Model 3: Predictors: (Constant), Learning Organization, Employee Outcomes, Knowledge Management									
Dependent Variable: Financial Performance									

Source: Primary Data (2015)

Model 1 reveals the results of the influence of learning organization on financial performance ($R^2 = 0.084$, Adjusted $R^2 = 0.066$, $P < 0.05$). The results reveal that 8.4 percent of variance in financial performance was explained by learning organization. This implies that 91.6 percent of variance in financial performance was due to other factors not captured in the model. The F value was statistically significant ($F = 4.600$, $P < 0.05$). Equally, the beta coefficients were statistically significant ($\beta = 2.020$, $t = 2.145$, $P < 0.05$) implying that one unit change in learning organization is associated with 2.020 change in financial performance.

In model 2, employee outcomes was introduced in the model ($R^2 = 0.085$, Adjusted $R^2 = 0.048$, $P > 0.05$). The results indicate that 8.5 percent of variation in financial performance was explained by learning organization and employee outcomes. 91.5 percent of variation in financial performance was not explained by the model due to other factors not included in the regression model. R^2 changes from 0.084 in step one to 0.085 in step two ($R^2 = 0.001$). This suggests that employee outcomes had a marginal effect on financial performance. The overall model was not statistically significant ($F = 2.288$, $P > 0.05$). The change in F ratio ($F \text{ change} = 0.063$) at $P < 0.05$ was not significant. This implies that the interaction of learning organization and employee outcomes did not have a significant influence on financial performance. The beta coefficients were negative ($\beta = -0.058$, $t = -0.250$, $P > 0.05$) implying that one unit change in employee outcomes is associated with -0.058 change in financial performance.

In Model 3, all the three variables (learning organization, knowledge management and employee outcomes) were simultaneously entered into the regression model to predict financial performance ($R^2 = 0.087$, Adjusted $R^2 = 0.030$, $P > 0.05$). These results indicate that 8.7 percent of variance in financial performance was explained by the predictor variables. However, 91.3 percent of variance in financial performance was due to other factors not included in the study. The overall model was not statistically significant ($F = 1.518$, $P > 0.05$). The change in F ratio ($F \text{ change} = 0.064$) was not significant. This implies that the combined effect of learning organization, knowledge management and employee outcomes did not have a significant influence on financial performance.

The fourth hypothesis on the joint effect of learning organization, knowledge management and employee outcomes on financial performance was not supported. It was not possible for the researcher to explain this outcome. The results could probably be attributed to the context of the study.

Results in Table 4.22 indicate a notable decrease in F value from $F = 4.600$ at $P < 0.05$ in Model 1 to $F = 1.518$ at $P > 0.05$ in Model 3. The results reveal that the regression models were not statistically significant and therefore not suitable for prediction. Similarly, the results suggest that the joint effect of learning organization, knowledge management and employee outcomes is not greater than the individual effect of each predictor variable on financial performance.

It was evident from the regression models that 8.7 percent of variance in financial performance was explained by the three variables learning organization, knowledge management and employee outcomes ($R^2 = 0.087$). The introduction of employee outcomes in the second step results in a change in R^2 (R^2 change = 0.001) which was not significant (F change = 0.804). Equally, the introduction of knowledge management in the third step results in a change R^2 (R^2 change = 0.002) which was not significant (F change = 0.801). However, the beta coefficients indicate that learning organization ($\beta = 2.470$, $t = 1.521$, $P < 0.05$) had the largest contribution to financial performance compared to the other predictor variables. The influence of knowledge management was negative ($\beta = -0.093$, $t = -0.066$, $P > 0.05$). Employee outcomes had the lowest contribution ($\beta = -0.028$, $t = -0.105$, $P > 0.05$).

4.6 Tests of Hypotheses with Non-Financial Performance as Dependent Variable

This section presents the results of tests of hypotheses as guided by first objective of the study. The first objective was to establish the influence of learning organization on performance of large manufacturing firms in Kenya. The following hypothesis was formulated for testing.

H_1 : Learning organization influences performance of Large Manufacturing firms in Kenya.

The results of tests of hypotheses with non-financial performance as the dependent variable are presented in the following sections.

4.6.1 Learning Organization and Non-financial Performance

Non-financial measures of performance were regressed on learning organization. Non-financial performance was measured as a composite index representing customer perspective, internal business process, learning and growth obtained from responses in the questionnaire. The regression results are presented in Table 4.23.

Table 4.23: Regression Results for the Effect Learning Organization on Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.627	.394	.383	.01474		
ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.008	1	.008	37.010	.000
	Residual	.012	57	.000		
	Total	.020	58			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.073	.013		5.671	.000
	Learning Organization	.509	.084	.627	6.084	.000
a. Predictors: (Constant) Learning Organization						
b. Dependent Variable: Non- Financial Performance						

Source: Primary Data (2015)

Results in Table 4.28 indicate that 39.4 percent of variation in non-financial performance was explained by learning organization ($R^2=0.394$, $P<0.05$). This implies that 60.6 percent of variation in non-financial performance is due other factors not included in the study. The F ratio was statistically significant ($F=37.010$, $P<0.05$). This implies that the influence of learning organization on non-financial performance is statistically significant. In addition, the beta coefficients of the model were statistically significant ($\beta=0.509$, $t=6.084$, $P<0.05$). The β value indicates that one unit change in learning organization corresponds to 0.509 change in non-financial performance. From these results, the hypothesized relationship between learning organization and non-financial performance was supported.

4.6.2 Learning Organization, Employee Outcomes and Non-Financial Performance

The study also sought to establish the mediation of employee outcomes in the relationship between learning organization and non-performance. Non-financial performance was computed as a composite index of customer perspective, internal business process and learning and growth. The following hypothesis was formulated for testing:

H₂: The influence of learning organization on performance is mediated by employee outcomes.

The hypothesis was tested using stepwise regression model proposed by Baron and Kenny (1986). To test for mediation, four regression analyses were performed and the significance of coefficients examined at each step. Step 1 involved testing the relationship between independent variable (learning organization) and dependent variable (non-financial performance). Step 2 focused on testing the effect of independent variable (learning organization) on mediating variable (employee outcomes). Step 3 involved testing the relationship between employee outcomes and non-financial performance. Step 4 focused on testing the influence of independent variable (learning organization) on dependent variable (non-financial performance) when controlling for the effect of the mediator (employee outcomes).

To establish mediation, steps 1, 2 and 3 must be significant. In step 4, the independent variable becomes insignificant when the mediator is included in the model. Four regression analyses were conducted following steps specified by Baron and Kenny (1986). Simple regression analysis was used in step 1 to 3, while in step 4, multiple regression analysis was performed. Regression results are presented in Table 4.24.

Table 4.24: Regression Results for the Mediation of Employee Outcomes in the Relationship between Learning Organization and Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Change statistics				
					R Square Change	F Change	Df 1	Df 2	Sig. F Change
Step 1	.627	.394	.383	.01474					
Step 2	.565	.319	.306	.09166					
Step 3	.427	.182	.166	.01762	.182	11.363	1	51	.001
Step 4	.686	.471	.450	.01431	.289	27.299	1	50	.000

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.008	1	.008	37.010	.000
	Residual	.012	57	.000		
	Total	.020	58			
2	Regression	.208	1	.208	24.794	.000
	Residual	.445	53	.008		
	Total	.653	54			
3	Regression	.004	1	.004	11.363	.001
	Residual	.016	51	.000		
	Total	.020	52			
4	Regression	.009	2	.005	22.261	.000
	Residual	.010	50	.000		
	Total	.019	52			

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.073	.013		5.671	.000
	Learning Organization	.509	.084	.627	6.084	.000
2	(Constant)	.364	.085		4.258	.000
	Learning Organization	2.745	.551	.565	4.979	.000
3	(Constant)	.088	.019		4.708	.000
	Employee Outcomes	.079	.024	.427	3.371	.001
4	(Constant)	.049	.017		2.860	.006
	Employee Outcomes	.021	.022	.115	.967	.338
	Learning Organization	.553	.106	.621	5.225	.000

Model 1 Predictors: Learning Organization
 Model 2 Predictors: Learning Organization
 Model 3 Predictors: Employee Outcomes
 Model 4 Predictors: Learning Organization, Employee Outcomes

Dependent Variable
 Model 1,3,4: Non-Financial Performance
 Model 2: Employee Outcomes

Source: Primary Data (2015)

Step One: The Influence of Learning Organization on Non-Financial performance

In this step, the dependent variable was regressed on the independent variable. This was to determine whether the independent variable (learning organization) is a significant predictor of dependent variable (non-financial performance). The results in model 1, indicate that 39.4 percent of variance in non-financial performance was explained by learning organization ($R^2 = 0.394$, $P < 0.05$). This implies that 60.6 percent of variation in non-financial performance was not explained due to other factors not captured in the model. The overall model was statistically significant ($F = 37.010$, $P < 0.05$). Further, the beta coefficients were statistically significant ($\beta = 0.509$, $t = 6.084$, $P < 0.05$). Specifically, one unit change in learning organization is associated with 0.509 change in non-financial performance.

Step Two: The Influence of Learning Organization on Employee Outcomes

The second step was meant to determine the influence of learning organization on employee outcomes. The results in step two indicate that 31.9 percent of variation in employee outcomes is explained by learning organization ($R^2 = 0.319$, $P < 0.05$). However, the model did not explain 68.1 percent of variation in employee outcomes, suggesting that there are other factors which affect employee outcomes which were not captured in the model. R^2 changes from 0.394 in step one to 0.319 in step two (R^2 change = -0.075). The F ratio was statistically significant ($F = 24.794$, $P < 0.05$). Equally, the beta coefficients for learning organization were statistically significant ($\beta = 2.745$, $t = 4.979$, $P < 0.05$). This implies that one unit change in learning organization is associated with 2.745 change in employee outcomes. The second step in testing for mediation was met.

Step Three: The Influence of Employee Outcomes on Non-financial Performance

In step 3, the influence of employee outcomes on non-financial performance was tested. The results indicate that 18.2 percent of variance in non-financial performance was explained by employee outcomes ($R^2 = 0.182$, $P < 0.05$). R^2 changes from 0.319 in step two to 0.182 in step three, suggesting that employee outcomes is a weak predictor of non-financial performance. The overall model was statistically significant ($F = 11.363$, $P < 0.05$). The change in F ratio (F change = 11.363) at $P < 0.05$ was statistically significant. The results were further confirmed by the beta coefficients ($\beta = 0.079$, $t = 3.371$, $P < 0.05$) which were statistically significant. Condition three in testing for mediation was thus met.

Step Four: The Influence of Learning Organization and Employee Outcomes on Non-financial Performance

In step four, multiple regression analysis was performed to determine whether the influence of learning organization on non-financial performance was direct or through employee outcomes. The results reveal 47.1 percent of variation in non-financial performance was explained by learning organization and employee outcomes ($R^2=0.471$). Equally, the F ratio was statistically significant ($F=22.261$, $P<0.05$). The change in F ratio (F change= 27.299) at $P<0.05$ was statistically significant. When controlling for mediation, the beta coefficients for employee outcomes ($\beta=0.021$, $t=.967$, $P>0.05$) were not statistically significant while learning organization ($\beta=0.553$, $t=5.225$, $P<0.05$) remained statistically significant.

Mediation is supported if the effect of independent variable (learning organization) is no longer significant when controlling for the effect of the mediator (employee outcomes) on dependent variable (non-financial performance). In this study, the effect of employee outcomes was insignificant while learning organization was significant hence mediation was not supported.

4.6.3 Learning Organization, Knowledge Management and Non-financial Performance

To establish the moderating effect of knowledge management on the influence of learning organization on non-financial performance, stepwise regression analysis was used. The first step involved testing the influence of learning organization on non-financial performance. The second step involved testing the influence of learning organization and knowledge management on non-financial performance. The third step focused on creating an interaction term (learning organization* knowledge management) which was included in the model to test for variation in non-financial performance. Moderation is assumed to take place if the effect of the interaction term in step 3 is significant. Regression results are presented in Table 4.25.

Table 4.25 Regression Results for the Moderating Effect of Knowledge Management on the Influence of Learning Organization on Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R ² change	F change	Df 1	Df 2	Sig. F Change
1	.627 ^a	.394	.383	.01474					
2	.642 ^b	.412	.391	.01465	.412	19.582	2	56	.000
3	.646 ^c	.417	.386	.01471	.006	.558	1	55	.458
ANOVA									
Model		Sum of Squares	Df	Mean Square	F				Sig.
1	Regression	.008	1	.008	37.010				.000
	Residual	.012	57	.000					
	Total	.020	58						
2	Regression	.008	2	.004	19.582				.000
	Residual	.012	56	.000					
	Total	.020	58						
3	Regression	.009	3	.003	13.138				.000
	Residual	.012	55	.000					
	Total	.021	58						
Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
1	(Constant)	.073	.013		5.671	.000			
	Learning Organization	.509	.084	.627	6.084	.000			
2	(Constant)	.065	.014		4.536	.000			
	Learning Organization	.373	.133	.460	2.806	.007			
	Knowledge Management	.037	.028	.214	1.304	.198			
3	(Constant)	.059	.017		3.546	.001			
	Learning Organization	.406	.141	.501	2.888	.006			
	Knowledge Management	.037	.028	.216	1.313	.195			
	Learning Organization * Knowledge Management	.001	.002	.088	1.747	.458			
Model 1 Predictors (Constant) Learning Organization									
Model 2 Predictors: (Constant) Learning Organization, Knowledge Management									
Model 3 Predictors: (Constant) Learning Organization, Knowledge Management, Learning Organization * Knowledge Management									
Dependent Variable: Non-Financial Performance									

Source: Primary Data (2015)

Step One: The Influence of Learning Organization on Non-Financial Performance

In step one, non-financial performance was regressed on learning organization. The results are presented in model one. The results reveal that 39.4 percent of variance in non-financial performance was explained by learning organization ($R^2 = 0.394$, $P < 0.05$). This implies that 60.6 percent of variation in non-financial performance was not explained due to other factors not captured in the model. The overall model was statistically significant ($F = 37.010$, $P < 0.05$). Further, the beta coefficients of the model were statistically significant ($\beta = 0.509$, $t = 6.084$, $P < 0.05$). Specifically, one unit change in learning organization is associated with 0.509 change in non-financial performance

Step Two: The Influence of Learning Organization and Knowledge Management on Non-Financial Performance

In step two, the introduction of the moderator, knowledge management, significantly improves the influence of learning organization on non-financial performance. Learning organization and knowledge management explained 41.2 percent of variance in non-financial performance ($R^2 = 0.412$, $P < 0.05$). R^2 changes from 0.394 in step one to 0.412 in step two (R^2 change = 0.018) suggesting that learning organization and knowledge management have a marginal effect on non-financial performance. The regression model was statistically significant ($F = 19.582$, $P < 0.05$). The change in F ratio (F change = 19.582) at $p < 0.05$ was statistically significant. The beta coefficients indicate that learning organization ($\beta = 0.373$, $t = 2.806$, $P < 0.007$) had a significant contribution while knowledge management was not significant ($\beta = 0.037$, $t = 1.304$, $P > 0.05$).

Step Three: The Influence of Learning Organization, Knowledge Management and Interaction Term on Non-Financial Performance

In step 3, the interaction term was introduced in the model. All the variables, learning organization, knowledge management and the interaction term were entered in the regression model. Results indicate that the interaction term accounts for 41.7 percent of variance in non-financial performance ($R^2 = 0.417$, $P < 0.05$). R^2 changes from 0.412 in step two to 0.417 in step three (R^2 change = 0.005). The overall model remained statistically significant ($F = 13.138$, $P < 0.05$).

The change in F ratio (F change = 0.558) at $P < 0.05$ was not statistically significant. The interaction of learning organization and knowledge management on non-financial performance was not statistically significant ($\beta = 0.001$, $t = 0.747$, $P > 0.05$). The third condition in testing for moderation was not met hence hypothesis 3 was not supported.

4.6.4 Joint Effect of Learning Organization, Knowledge Management and Employee Outcomes on Non-Financial Performance

The study sought to determine whether the joint effect of learning organization, knowledge management and employee outcomes on non-financial performance was greater than the individual effect of each predictor variable. The effect was determined by testing the following hypothesis:

H₄: The joint effect of learning organization, knowledge management and employee outcomes is greater than the individual effect of each predictor variable

Hierarchical regression analysis was used to measure the combined effect of learning organization, knowledge management and employee outcomes on non-financial performance. The composite index was computed for each variable. Hierarchical analysis was performed with study variables being entered into the analysis in a sequence of groups. In the first step, non-financial performance was regressed on learning organization. In step two, learning organization and employee outcomes were added into the equation. Finally, in step three, the predictor variables, learning organization, knowledge management and employee outcomes were entered simultaneously to assess their joint effect on non-financial performance. The results are presented in Table 4.26.

Table 4.26: Joint Effect of Learning Organization, Knowledge Management and Employee Outcomes on Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.679	.461	.451	.01430	.461	43.641	1	51	.000
2	.686	.471	.450	.01431	.010	.936	1	50	.338
3	.697	.486	.455	.01425	.015	1.456	1	49	.233
ANOVA									
Model			Sum of Squares	df	Mean Square	F	Sig.		
1	Regression		.009	1	.009	43.641	.000 ^a		
	Residual		.010	51	.000				
	Total		.019	52					
2	Regression		.009	2	.005	22.261	.000 ^b		
	Residual		.010	50	.000				
	Total		.019	52					
3	Regression		.009	3	.003	15.461	.000 ^c		
	Residual		.010	49	.000				
	Total		.019	52					
Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
1	(Constant)	.058	.014		4.039	.000			
	learning organization	.604	.091	.679	6.606	.000			
2	(Constant)	.049	.017		2.860	.006			
	Learning Organization	.553	.106	.621	5.225	.000			
	Employee Outcomes	.021	.022	.115	.967	.338			
3	(Constant)	.045	.017		2.641	.011			
	Learning Organization	.443	.139	.498	3.182	.003			
	Employee Outcomes	.009	.024	.047	.361	.720			
	Knowledge Management	.038	.032	.209	1.207	.233			
Model 1: Predictors: (Constant), Learning Organization									
Model 2: Predictors: (Constant), Learning Organization, Employee Outcomes									
Model 3: Predictors: (Constant), Learning Organization, Employee Outcomes, Knowledge Management									
Dependent Variable: Non-Financial Performance									

Source: Primary Data (2015)

Model 1 shows the results of analysis when only learning organization is entered in the model ($R^2 = 0.461$, Adjusted $R = 0.451$, $P < 0.05$). These results indicate that 46.1 percent of variance in non-financial performance was explained by learning organization, while 53.9 percent of variance in non-financial performance was not explained due to other factors not captured in the model. The overall model was statistically significant ($F = 43.641$, $P < 0.05$). The beta coefficient revealed a positive relationship between learning organization and non-financial performance ($\beta = 0.604$, $t = 6.606$, $P < 0.05$). This implies that one unit change in learning organization is associated with 0.604 change in non-financial performance.

Model 2 indicates the results of regression analysis when employee outcomes was introduced in the model ($R^2 = 0.471$, Adjusted $R = 0.686$, $P > 0.05$). The results reveal that 47.1 percent of variation in non-financial performance was explained by learning organization and employee outcomes. 52.9 percent of variation in non-financial performance was not explained due to other factors not included in the regression model. R^2 changes from 0.461 in step one to 0.471 in step two (R^2 change=0.01). The R^2 change of 0.01 when employee outcomes was entered into the model implies that employee outcomes account for 1 percent variance in non-financial performance. The overall model was statistically significant ($F = 22.261$, $P < 0.05$). The beta coefficient was not statistically significant ($\beta = 0.021$, $t = 0.967$, $P > 0.05$) implying that one unit change in employee outcomes is associated with 0.021 change in the relationship between learning organization and non-financial performance.

In Model 3 all the three variables (learning organization, knowledge management and employee outcomes) were simultaneously entered into the regression model to predict non-financial performance ($R^2 = 0.486$, Adjusted $R^2 = 0.697$, $P > 0.05$). The results indicate that 48.6 percent of change in non-financial performance was explained by the predictor variables. However, 51.4 percent of change in non-financial performance was not explained due to other factors not included in the model. R^2 changes from 0.471 in step two to 0.486 in step three (R^2 change=0.015).

The R^2 change of 0.015 when knowledge management was entered into the model implies that knowledge management accounts for 1.5 percent of variance in non-financial performance. The overall model was statistically significant ($F=15.461$, $P<0.05$). The beta coefficient was not significant for employee outcomes ($\beta=0.009$, $t=0.361$, $P>0.05$) and knowledge management ($\beta=0.038$, $t=1.207$, $P>0.05$) while it was significant for learning organization ($\beta=0.443$, $t=3.182$, $P<0.05$)

Table 4.26 indicates that the F ratio ranged from $F= 43.641$ at $P<0.05$ in Model 1 to $F= 15.461$ at $P<0.05$ in Model 3. These results reveal that the regression models were statistically significant and therefore fit for prediction. The results show that the joint effect of learning organization, knowledge management and employee outcomes was greater than the individual effect of each predictor variable on non-financial performance. Thus, hypothesis four was supported.

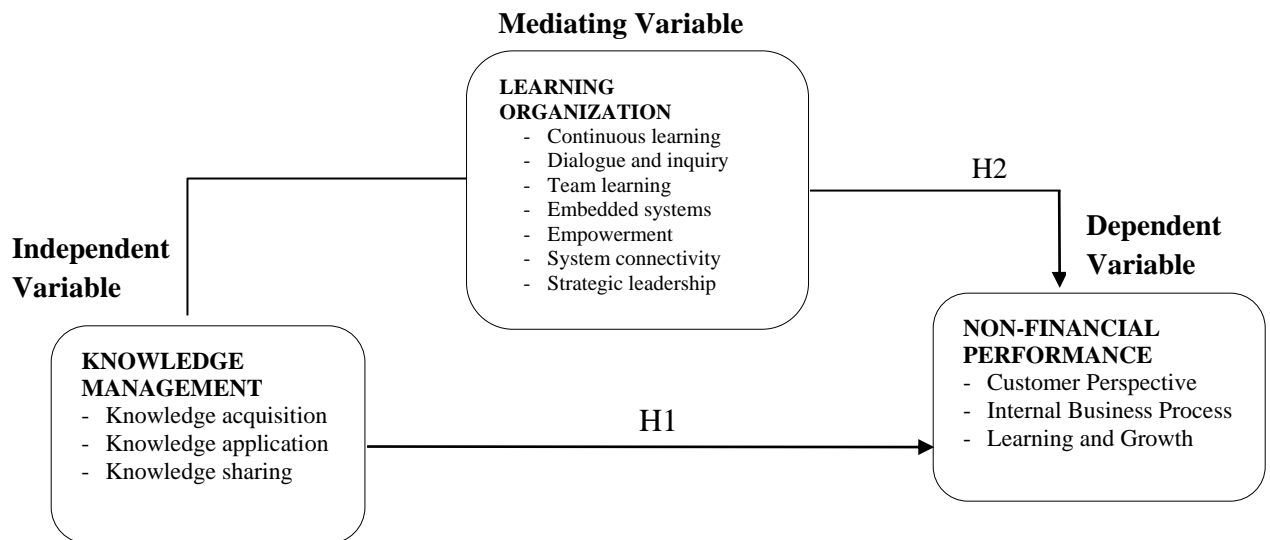
It is evident from Table 4.26 that 48.6 percent ($R^2 =0.486$) of change in non-financial performance is due to the three variables, learning organization, knowledge management and employee outcomes. The introduction of employee outcomes results in R^2 change of 0.01 which was not significant (F change = 0.338). Equally, the introduction of knowledge management results in R^2 of 0.015 which was not significant (F change = 0.233). The regression coefficients reveal that learning organization had the largest contribution to non-financial performance ($\beta= 0.443$, $t=3.182$, $P<0.05$). The contribution of knowledge management was not significant ($\beta=0.038$, $t=1.207$, $P>0.05$). Employee outcomes had the lowest contribution ($\beta=0.009$, $t=0.361$, $P>0.05$).

From the results of the joint effect, it would appear that the effect knowledge management ($\beta=0.038$) and employee outcomes ($\beta= 0.009$) on non-financial performance declined significantly in the presence of learning organization ($\beta= 0.443$). This implies that learning organization mediates the relationship between knowledge management and non-financial performance as well as the relationship between employee outcomes and non-financial performance and not vice versa as originally conceptualized. Further testing was done to confirm this relationship.

4.7 Reconfigured Model I

The choice of mediation was informed by the fact that the presence of learning organization in the regression model rendered the influence of both employee outcomes and knowledge management insignificant. The study predicted that learning organization mediates the relationship between knowledge management and non-financial performance. Further reconfiguration of the conceptual model was necessary and two hypotheses formulated for testing. The reconfigured model is presented in Figure 4.1.

Figure 4.1: Reconfigured Model I



Source: Current Researcher (2015)

The model proposed that knowledge management influences non-financial performance. This influence is not direct but through learning organization. The model further proposed that learning organization mediates the relationship between knowledge management and non-financial performance.

4.7.1 Conceptual Hypotheses

From the relationships in the conceptual model presented in Figure 4.1, the following hypotheses were formulated

H₁: Knowledge management influences non-financial performance of Large Manufacturing Firms in Kenya

H₂: The influence of knowledge management on non-financial performance is mediated by learning organization

4.7.2 Knowledge Management and Non-Financial Performance

Hypothesis one (H₁) focused on establishing the influence of knowledge management on non-financial performance. Simple linear regression analysis was performed to test for this influence. This was done by regressing non-financial performance on knowledge management. The regression results are presented in Table 4.27.

Table 4.27 Regression Results for the Effect of Knowledge Management on Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.614	.377	.368	.01590		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.010	1	.010	39.936	.000
	Residual	.017	66	.000		
	Total	.027	67			
Coefficients						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.067	.013		5.134	.000
	Knowledge Management	.104	.016	.614	6.319	.000
Predictors: (Constant), Knowledge Management						
Dependent Variable: Non- Financial Performance						

Source: Primary Data (2015)

The results in Table 4.27 show that 37.7 percent of variance in non-financial performance was explained by knowledge management ($R^2 = 0.377$, $P < 0.05$). However, the regression did not explain 62.3 percent of variation in non-financial performance due to other factors not included in the study. The overall model was statistically significant ($F = 39.936$, $P < 0.05$). Equally, the beta coefficient was statistically significant ($\beta = 0.104$, $t = 6.319$, $P < 0.05$) suggesting that one unit change in knowledge management is associated with 0.104 change in non-financial performance.

4.7.3 Knowledge Management, Learning Organization and Non-Financial Performance

The study proposed that learning organization mediates the relationship between knowledge management and non-financial performance. Composite indices of knowledge management, learning organization and non-financial performance were computed and stepwise regression analysis performed. Learning organization consisted of seven dimensions: continuous learning, dialogue and inquiry, team learning, embedded systems, empowerment, system connectivity, and strategic leadership. Knowledge management comprised: knowledge acquisition, knowledge application and knowledge sharing. The indicators of non-financial performance included: customer perspective, internal business process, learning and growth.

A four step model was used to test for mediation. Step 1 involved testing the relationship between knowledge management and non-financial performance. Step 2 focused on the influence of knowledge management on learning organization. Step 3, testing the influence of learning organization on non-financial performance. Step 4 involved testing the influence of knowledge management on non-financial performance while controlling for mediation (learning organization). Regression results are presented in Table 4.28

Table 4.28: Regression Results for the Mediation of Learning Organization in the Relationship between Knowledge Management and Non-Financial performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.614	.377	.368	.01590					
2	.800	.640	.634	.01441					
3	.627	.394	.383	.01474	.394	37.010	1	57	.000
4	.642	.412	.391	.01465	.018	1.700	1	56	.198
ANOVA									
Model		Sum of Squares	Df	Mean Square	F	Sig.			
1	Regression	.010	1	.010	39.936	.000			
	Residual	.017	66	.000					
	Total	.027	67						
2	Regression	.022	1	.022	104.717	.000			
	Residual	.012	59	.000					
	Total	.034	60						
3	Regression	.008	1	.008	37.010	.000			
	Residual	.012	57	.000					
	Total	.020	58						
4	Regression	.008	2	.004	19.582	.000			
	Residual	.012	56	.000					
	Total	.020	58						
Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
1 (Constant)		.067	.013		5.134	.000			
	Knowledge Management	.104	.016	.614	6.319	.000			
2 (Constant)		.021	.013		1.617	.111			
	Knowledge Management	.167	.016	.800	10.233	.000			
3 (Constant)		.073	.013		5.671	.000			
	Learning Organization	.509	.084	.627	6.084	.000			
4 (Constant)		.065	.014		4.536	.000			
	Learning Organization	.373	.133	.460	2.806	.007			
	Knowledge Management	.037	.028	.214	1.304	.198			
Model 1 Predictors: Knowledge Management Model 2 Predictors: Knowledge Management Model 3 Predictors: Learning Organization Model 4 Predictors: Learning Organization, Knowledge Management Dependent Variable Model 1,3,4: Non- Financial Performance Model 2: Learning Organization									

Source: Primary Data (2015)

Step One: The Influence of Knowledge Management on Non-Financial Performance

In this step, the dependent variable (non-financial performance) was regressed on the independent variable (knowledge management). The results in model 1 indicate that 37.7 percent of variation in non-financial performance was explained by knowledge management ($R^2=0.377$, $P<0.05$). The influence of knowledge management on non-financial performance was statistically significant ($F=39.936$, $P<0.05$). Equally, the beta coefficients were statistically significant ($\beta=0.104$, $t=6.319$, $P<0.05$). This implies that one unit change in knowledge management is associated with 0.104 change in non-financial performance. The first step in testing for mediation was met.

Step Two: The Influence of Knowledge Management on Learning Organization

Results in model two, indicate that knowledge management accounts for 64 percent variation in learning organization ($R^2=0.640$, $P<0.05$). R^2 changes from 0.377 in step 1 to 0.640 in step 2 (R^2 change =0.263). The overall model reveals that knowledge management had a significant contribution to learning organization ($F= 104.717$, $P<0.05$). Further, the beta coefficients were statistically significant ($\beta=0.167$, $t=10.233$, $P<0.05$). This suggests that one unit change in knowledge management is associated with 0.167 change in learning organization. The second step in testing for mediation was met.

Step Three: The Influence of Learning Organization on Non-Financial Performance

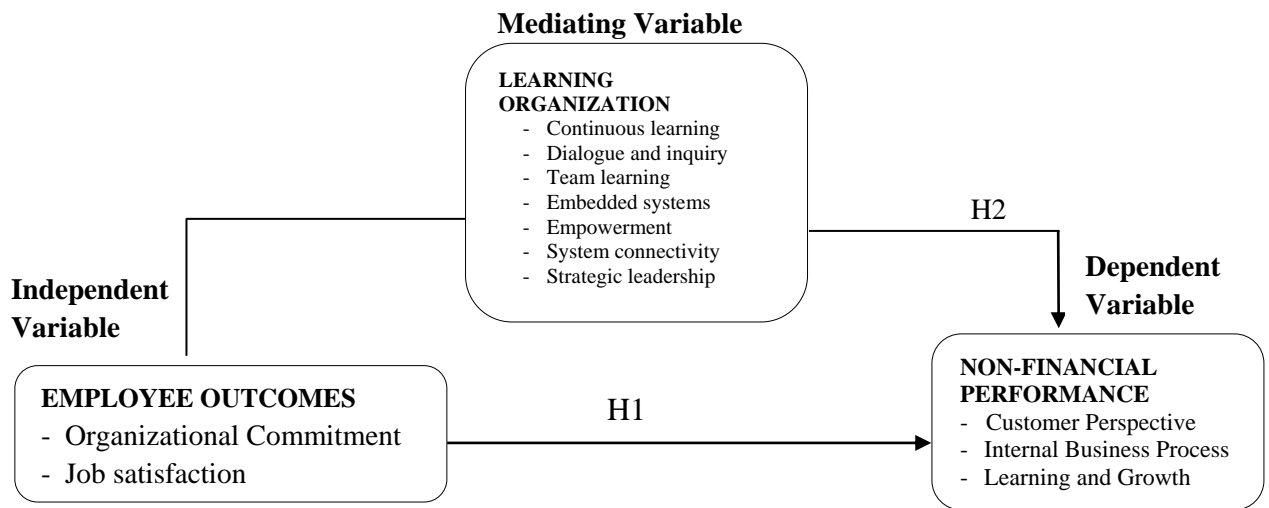
In model 3, 39.4 percent of variance in non-financial performance is explained by learning organization ($R^2=0.394$, $P<0.05$). R^2 changes from 0.640 in step 2 to 0.394 in step 3 (R^2 change = 0.246). The overall model was statistically significant ($F=37.010$, $P<0.05$). The change in F ratio (F change= 37.010) at $P<0.05$ was statistically significant. The results were further confirmed by the beta coefficients ($\beta=0.509$, $t=6.084$, $P<0.05$) thus confirming the third step in testing for mediation.

Step Four: The Influence of Knowledge Management and Learning Organization on Non-Financial Performance

The results in step four indicate that knowledge management and learning organization accounted for 41.2 percent of variation in non-financial performance ($R^2=0.412$, $P<0.05$). R^2 changes from 0.394 in step 3 to 0.412 in step 4 (R^2 change =0.018). The overall model was statistically significant ($F=19.582$, $P<0.05$). Notably, the influence of knowledge management as independent variable ($\beta=0.037$, $t=1.304$, $P>0.05$) in the presence of learning organization (mediator) was insignificant. The results thus provided sufficient evidence to support the full mediation of learning organization in the relationship between knowledge management and non- financial performance.

The study further predicted that the influence of employee outcomes on non-financial performance was not direct but through learning organization. Additional tests were performed to determine the influence of employee outcomes on non-financial performance and to establish the mediation of learning organization in the relationship between employee outcomes and non-financial performance. The following model was developed and two hypotheses formulated for testing.

4.8 Reconfigured Model II
Figure 4.2: Reconfigured Model II



Source: Current Researcher (2015)

The model proposed that employee outcomes influences non-financial performance. This influence is not direct but through learning organization. The model further proposed that learning organization mediates the relationship between employee outcomes and non-financial performance.

4.8.1 Conceptual Hypotheses

From the relationships in the conceptual model presented in Figure 4.1, the following hypotheses were formulated

H₁: Employee outcomes influences non-financial performance of Large Manufacturing Firms in Kenya

H₂: The influence of employee outcomes on non-financial performance is mediated by learning organization

4.8.2 Employee Outcomes and Non-Financial Performance

The effect of employee outcomes on non-financial performance was tested using simple regression analysis. This was done by regressing non-financial performance on employee outcomes. The regression results are presented in Table 4.29

Table 4.29 Regression Results for the Effect of Employee Outcomes on Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.543	.295	.284	.01725		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.008	1	.008	25.561	.000
	Residual	.018	61	.000		
	Total	.026	62			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.074	.015		4.924	.000
	Employee utcomes	.096	.019	.543	5.056	.000
a. Predictors: (Constant), Employee Outcomes						
b. Dependent Variable: Non- Financial Performance						

Results in Table 4.30 reveal that 29.5 percent of variance in non-financial performance is explained by employee outcomes ($R^2 = 0.295$, $P < 0.05$). The overall model was statistically significant ($F = 25.561$, $P < 0.05$). The results were confirmed by the beta coefficient which was also significant ($\beta = 0.096$, $t = 5.056$, $P < 0.05$) implying that one unit change in employee outcomes is associated with 0.096 change in non-financial performance.

4.8.3 Employee Outcomes, Learning Organization and Non-Financial Performance

The study sought to determine the mediating effect of learning organization in the relationship between employee outcomes and non-financial performance. The Baron and Kenny (1986) method was used to test for mediation.

Testing for mediation involved a four step model. In step one, non-financial performance was regressed on knowledge management and the beta coefficient examined to determine the size and direction of the relationship. In step two, learning organization was regressed on knowledge management. The beta coefficient was examined to determine the size and direction. Step three involved regressing non-financial performance on learning organization and the beta examined to confirm whether it was significant. Step four involved testing the influence of knowledge management (predictor variable) on non-financial performance (dependent variable) when controlling for the effect of learning organization (mediating variable) on the dependent variable. For mediation to be confirmed, the influence of knowledge management becomes insignificant when controlling for mediation. Summarized results of regression analyses are presented in Table 4.30

Table 4.30: Regression Results for Mediation of Learning Organization in the Relationship between Employee Outcomes and Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.543	.295	.284	.01725						
2	.565	.319	.306	.01885						
3	.679	.461	.451	.01430	.461	43.641	1	51	.000	
4	.686	.471	.450	.01431	.010	.936	1	50	.338	
ANOVA										
Model			Sum of Squares	df	Mean Square	F	Sig.			
1	Regression		.008	1	.008	25.561	.000			
	Residual		.018	61	.000					
	Total		.026	62						
2	Regression		.009	1	.009	24.794	.000			
	Residual		.019	53	.000					
	Total		.028	54						
3	Regression		.009	1	.009	43.641	.000			
	Residual		.010	51	.000					
	Total		.019	52						
4	Regression		.009	2	.005	22.261	.000			
	Residual		.010	50	.000					
	Total		.019	52						
Coefficients										
Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
			B	Std. Error	Beta					
1 (Constant)			.074	.015		4.924	.000			
	Employee Outcomes		.096	.019	.543					5.056
2 (Constant)			.062	.018		3.269	.001			
	Employee Outcomes		.116	.023	.565					4.979
3 (Constant)			.058	.014		4.039	.000			
	Learning Organization		.604	.091	.679					6.606
4 (Constant)			.049	.017		2.860	.006			
	Learning Organization		.553	.106	.621					5.225
	Employee Outcomes		.021	.022	.115					
Model 1 Predictors: Employee Outcomes Model 2 Predictors: Employee Outcomes Model 3 Predictors: Learning Organization Model 4 Predictors: Learning Organization, Employee Outcomes Dependent Variable Model 1,3,4: Non-Financial Performance Model 2: Learning Organization										

Source: Primary Data (2015)

Step One: The Influence of Employee Outcomes on Non-Financial Performance

Results in model one indicate that employee outcomes accounted for 29.5 percent of variance in non-financial performance ($R^2 = 0.295$, $P < 0.05$). However, the model did not explain 70.5 percent of variation in non-financial performance due to other factors not included in the study. The overall model was statistically significant ($F = 25.561$, $P < 0.05$). The results were further confirmed by the beta coefficients ($\beta = 0.096$, $t = 5.056$, $P < 0.05$). Specifically, one unit change in employee outcomes is associated with 0.096 change in non-financial performance. The first step in testing for mediation was met.

Step Two: The Influence of Employee Outcomes on Learning Organization

Results in model two reveal that 31.9 percent of variation in learning organization was explained by employee outcomes ($R^2 = 0.319$, $P < 0.05$). The overall model was statistically significant ($F = 24.794$, $P < 0.05$). The beta coefficients were also significant ($\beta = 0.116$, $t = 4.979$, $P < 0.05$). This implies that one unit change in employee outcomes is associated with 0.116 change in learning organization. The second step in testing for mediation was also met.

Step Three: The Influence of Learning Organization on Non-Financial Performance

Results in model three reveal that 46.1 percent of variation in non-financial performance was explained by learning organization ($R^2 = 0.461$, $P < 0.05$). The relationship between learning organization and non-financial performance was statistically significant ($F = 43.361$, $P < 0.05$). The beta coefficients for learning organization were also significant ($\beta = 0.604$, $t = 6.606$, $P < 0.05$). This suggests that one unit change in learning organization is associated with 0.604 change in non-financial performance. Step three in testing for mediation was supported.

Step Four: The Influence of Employee Outcomes and Learning Organization on Non-Financial Performance

In model four, the results reveal that employee outcomes accounted for 47.1 percent of variance in non-financial performance ($R^2 = 0.471$, $P < 0.05$). The overall model was statistically significant ($F = 22.261$, $P < 0.05$). The change in F ratio (F change = 0.936) at $P < 0.05$ was not significant.

Equally, when controlling for the effect of learning organization, employee outcomes became statistically insignificant ($\beta=0.021$, $t=0.967$, $P>0.05$). The beta coefficient reduces from $\beta=0.096$ in step 1 to $\beta=0.021$ in step 4 (β change =0.075). Thus, the reduced value of regression coefficient of employee outcomes when learning organization was entered into the equation indicates that learning organization mediates the relationship between employee outcomes and non-financial performance.

4.9 Discussion of the Findings

This section discusses the findings of the current study in line with the objectives and conceptual hypotheses. The discussion is based on four hypotheses derived from extensive literature review and the conceptual model. Studies that support or differ from the results are presented and possible explanations given. The hypotheses were empirically tested leading to their confirmation or rejection.

4.9.1 Learning Organization and Firm Performance

The first objective of the study was to determine the influence of learning organization on performance of large manufacturing firms in Kenya. The study predicted that learning organization has a significant influence on firm performance. Simple regression analysis was performed to determine this relationship. The study utilized the balanced score card (BSC) which suggests the use of multiple performance indicators that supplement traditional financial measures with qualitative measures such as customer perspective, internal business process, learning and growth. Separate analyses were performed for financial and non-financial measures of performance.

Findings on financial measures indicate that learning organization accounted for 6.7 percent of variance in financial performance ($R^2=0.067$). The overall model was statistically significant ($F= 4.050$, $P < 0.05$) and the influence of learning organization on financial performance was also statistically significant ($\beta=0.468$, $t= 2.012$, $P < 0.05$). The β value suggests that one unit change in learning organization is associated with 0.468 change in financial performance.

The results thus provide evidence to support the influence of learning organization on financial performance. The results of the study are in line with findings by Ellinger et al. (2002) that indicated a positive relationship between learning organization and financial performance of US manufacturing firms. The study by Ellinger et al. (2002) focused on the relationship between learning organization and both perceptual and objective measures of financial performance. The dimensions of learning organization questionnaire (DLOQ) proposed by Watkins and Marsick (1993) was used to measure the learning organization concept. Similarly, the current study used the DLOQ to assess the relationship between learning organization and perceptual measures of financial performance of Large Manufacturing Firms in Kenya.

Further analysis on the influence of learning organization on non-financial performance revealed a significant relationship. 39.4 percent of variation in non-financial performance was explained by learning organization ($R^2=0.394$, $P<0.05$). The overall model ($F=37.010$, $P<0.05$) and the beta coefficients ($\beta=0.509$, $t=6.084$, $P<0.05$) were statistically significant. The β value indicates that one unit change in learning organization is associated with 0.509 change in non-financial performance. Thus, the hypothesized relationship between learning organization and non-financial performance was supported

The results of the study are consistent with previous studies. Prieto and Revilla (2006) examined the link between learning capability and business performance in Spanish firms measured in both financial and non-financial terms. The researchers confirmed that the influence of learning capability on non-financial performance was positive and significant. The current study found a positive relationship between learning organization and financial performance, while Prieto and Revilla (2006) indicate the relationship between learning capability and financial performance was negative and non-significant.

The inconsistency in Prieto and Revilla (2006) study can be attributed to the conceptualization of the study. Learning capability indirectly influences financial performance through its significant effect on non-financial performance. The mediating role of non-financial performance precedes the firm's financial success.

Learning orientation is seen as a basis of organizational capabilities required to efficiently accomplish the company's processes, products and service. Thus, this approach determines the organizational potential to create value for stakeholders better and faster as a precondition of financial achievement.

The study revealed that learning organization had a strong and positive relationship with firm performance measured in both financial and non-financial terms. Findings of the study lend support to prior empirical research. A study by Khadra and Rawabdeh (2006) on manufacturing firms in Jordan revealed that learning organization practices had a significant influence on organizational performance. Similarly, Bontis et al. (2002) examined the relationship between organizational learning and financial performance and confirmed a positive relationship. Li and Lu (2007) examined the applicability of learning organization concept and its influence on firm performance in China and established a positive relationship. Garrido and Camerero (2010) confirmed that learning orientation significantly influenced both innovation and performance of British, French and Spanish museums. These studies were limited to learning organization and performance. The current study interrogated the mediation of employee outcomes and mediating effect of knowledge management.

Contrary to the findings discussed above, critics of learning orientation, Robey et al. (2001) argue that learning may not always be reflected in enhanced performance given that some organizations learn erroneously or apply knowledge incorrectly in dealing with organizational problems. Further, a study by Nzuve and Omolo (2012) on the practice of learning organization and its relationship to performance among Kenyan commercial banks presents contradictory evidence. Findings of the study indicate that there is a decrease in organizational performance despite the development of learning organization practices. The scholars suggest that there are other factors that should be considered to determine and explain this discrepancy, hence the need for further study.

A notable distinction between the said study and the current study is that the scholars focused on a different set of learning organization dimensions such as development of information systems designed to inform and empower, formative accounting control, learning approach to strategy development, participative policy making, reward flexibility and supportive leadership. The current study focused on learning organization practices based on the work of Yang et al. (2004). The validity of the scale has been proved through evidence of results obtained which suggest that this tool could be used in future research requiring the measurement of learning capability (Basim et al. 2007). In addition, the dimensions of learning organization questionnaire (DLOQ) has been scientifically validated and revised in different cultural contexts.

The current study takes into consideration other factors that are likely to influence the relationship such as employee outcomes and knowledge management. Findings of this study on the influence of learning organization on firm performance are important for various reasons. The results confirm the recent arguments by HRM scholars concerning the importance of learning organization in achieving competitive advantage (Demers, 2009; Jamali et al. 2009). Further, Dekoulou and Trivellas (2015) opine that the principles of learning organization aim at ensuring improved organizational performance through individuals within the organization.

The findings on the significant influence of learning organization on firm performance support the basic assumption of RBV that HR practices combined into an overall HR system can be valuable, unique and difficult to imitate thus constituting a resource which meets the requirements for superior performance. This study focused on learning organization as a system of HR practices and its influence on firm performance. Drawing on Barney (1991) proposition internal firm resources which are valuable can provide sources of competitive advantage. Learning organization comprises of characteristics, principles and systems of an organization that learns collectively which leads to increased firm performance.

Results of the study revealed that 18.2 percent of variance in non-financial performance was explained by employee outcomes. The significant influence of employee outcomes on non-financial performance complements arguments advanced by human capital theorists who suggested that organizations develop resources internally only when employee skills are justifiable in terms of future productivity (Tsang, Rumberger & Levine, 1991). Thus, increased productivity derived from human capital investment depends on the contribution of employees to the firm (Youndt et al. 1996). In addition, the scholars observe that the value of human capital is evident in modern manufacturing organizations that have invested heavily in production innovation such as advanced manufacturing technology, statistical process control and computer numerically controlled machines. Such initiatives tend to depend on employee skills and commitment as key components in the value creation process (Snell & Dean, 1992).

4.9.2 Learning Organization, Employee Outcomes and Firm Performance

The second objective was to establish the mediation of employee outcomes in the relationship between learning organization and performance of manufacturing firms in Kenya. Stepwise regression analysis was used to test for mediation measured in both financial and non-financial terms. A four step model was used to test for mediation. Results in step one reveal that 6.7 percent of variation in financial performance was explained by learning organization ($R^2 = 0.067$, $P < 0.05$). The overall model ($F = 4.050$, $P < 0.05$) and the beta coefficients ($\beta = 1.712$, $t = 2.012$, $P < 0.05$) were statistically significant. Results in the second step indicate that 31.9 percent of variance in employee outcomes was explained by learning organization ($R^2 = 0.319$, $P < 0.05$). The overall model ($F = 24.794$, $P < 0.05$) and the beta coefficients ($\beta = 2.745$, $t = 4.979$, $P < 0.05$) were statistically significant. Results of regression analysis in step three revealed that 1.9 percent variance in financial performance was explained by employee outcomes ($R^2 = 0.019$, $P > 0.05$). The overall model ($F = 0.944$, $P > 0.05$) and the beta coefficients ($\beta = 0.192$, $t = 0.971$, $P > 0.05$) were not statistically significant. The third condition in testing for mediation was not met hence mediation was not supported. This implies that the relationship between learning organization and financial performance is direct and not through employee outcomes.

The mediation of employee outcomes in the relationship between learning organization and non-financial performance was not supported. The results in the first step revealed that 39.4 percent of variance in non-financial performance was explained by learning ($R^2=0.394$, $P<0.05$). The overall model ($F=37.010$, $P<0.05$) and the beta coefficients ($\beta=0.509$, $t=6.084$, $P<0.05$) were statistically significant. The results of the influence of learning organization on employee outcomes are explained in step two above. In step three, results indicate that 18.2 percent of variance in non-financial performance was explained by employee outcomes ($R^2=0.182$, $P<0.05$). The overall model ($F=11.363$, $P<0.05$) and the beta coefficients ($\beta=0.079$, $t=3.371$, $P<0.05$) were statistically significant.

Finally, in step four, 47.1 percent of variance in non-financial performance was explained by learning organization and employee outcomes. However, when controlling for the effect of employee outcomes (mediator) on non-financial performance (dependent variable), learning organization (independent variable) remained significant ($\beta=0.553$, $t=5.225$, $P<0.05$). The fourth step in testing for mediation was not met, hence the second hypothesis was not supported. Lack of sufficient evidence to support mediation could be due to conceptual difficulties, methodological and measurement issues prevalent in social sciences.

Although mediation was not supported, the second step in testing for mediation on financial performance was statistically significant. The results in step two established a significant relationship between learning organization and employee outcomes. In testing for mediation of employee outcomes in the relationship between learning organization and non-financial performance, results in step three indicate that employee outcomes had a significant influence on non-financial performance.

Findings on the significant influence of learning organization on employee outcomes are consistent with previous empirical studies. Huselid (1995) study on 968 firms in US established that high performance work practices (HPWP) have an economically and statistically significant impact on both intermediate employee outcomes (turnover and productivity) and measures of corporate performance.

A study by Sagwa (2014) of firms listed at the Nairobi Securities Exchange revealed that HRM practices had a strong effect on employee outcomes. Ibuta (2014) study of Public Universities in Kenya indicated a significant relationship between empowerment and job-related attitudes. Thus, evidence from empirical research confirms the influence of HR strategies on employee outcomes. Dekoulou and Trivellas (2015) opine that individuals employed in companies that have adopted a learning organization approach are strongly motivated and tend to experience positive psychological outcomes such as commitment and job satisfaction. Similarly, the current study established that learning organization practices as an HR system had significant influence on employee outcomes.

Results of the study also lend support to a study by Aghaei, Ziaee and Shahrbanian (2012) on the relationship between learning organization and organizational commitment among employees of Sport and Youth Head Office of Western Province of Iran. The said study revealed a high and significant correlation between learning organization and organizational commitment. This relationship can be attributed to employees understanding of the organization's position in comparison to rivals, emphasis on empowerment as well as programs for enhancing the level of human power capabilities. This implies that learning organization has a significant influence on organizational commitment, a key indicator of employee outcomes.

Rodriguez and Ventura (2003) found that internal system of human resource management practices are associated with organizational commitment, a strong positive state of psychological and emotional attitude which develop as employees interact with one another. In a study of Large Private Manufacturing Firms in Kenya, Kidombo (2007) found that HR strategic orientation accounted for 60 percent variance in organizational commitment. The results suggest a strong and positive relationship between human resource practices and organizational commitment. Bhatnagar (2007) confirmed that the implementation of learning organization model enriches individual knowledge and boosts employee commitment, hence increasing their productivity and performance. Mulabe (2013) established that soft-oriented HR practices had a significant effect on organizational commitment.

The strong and positive relationship between learning organization and employee outcomes established in the current study provides additional support to prior research that confirmed learning organization exerts a strong positive impact on job satisfaction. Dekoulou and Trivellas (2015) confirmed the mediating effect of job satisfaction in the relationship between learning organization and job performance. 63.3 percent of variance in job satisfaction was explained by learning organization. Three learning organization dimensions proved to have a statistically significant impact on job satisfaction (strategic leadership, dialogue and inquiry, empowerment). Similarly, Leslie, Aring and Brand (1998); Mulraney and Turner (2001) revealed that among the seven components of learning organization: strategic leadership, empowerment, dialogue and inquiry emerged as the most significant dimensions directly associated with job satisfaction.

Findings of the study also support previous empirical studies which revealed that organizational learning behavior was a critical predictor of job satisfaction (Mirkamali, Thani & Alami, 2011; Erdem, Ilgan & Ucar, 2014). Egan, Yang and Bartlett (2004) revealed that 46 percent of variance in job satisfaction was explained by organizational learning culture. Findings from a study by Chiva and Alegre (2009) conducted in the Spanish Ceramic Tile industry confirmed a positive association between organizational learning capability and job satisfaction. Chang and Lee (2007) found a positive significant relationship between learning organization and employee job satisfaction. In addition, Eylon and Bamberger (2000) observe that regular provision of learning opportunities combined with systems thinking and empowerment enhance both internal and external job satisfaction. Moreover, Huang and Chi (2005) also provided empirical evidence of the positive effects of job satisfaction on organizational performance.

Contradictory findings are presented in a study by Carmeli (2003) on the relationship between emotional intelligence and work attitude, behavior and outcomes in Israel. The hypothesized relationship between emotional intelligence and continuance commitment was not confirmed. Similarly, emotional intelligence was statistically unrelated to job involvement. The scholars observe that involvement of managers is more complex and may have been affected by other factors not examined in the study. Kim and Brymer (2011) established that middle managers job satisfaction was positively related to organizational commitment but job satisfaction did not necessarily lead to their willingness to exert extra effort.

The overall mean score for organizational commitment was 3.91 and job satisfaction was 3.81. Organizational commitment may be attributed to the process of exchange relationship between the employer and employee and the extent to which employee perceive that the employer meets their expectations. Organizational commitment can be explained in terms of tenure and costs of leaving the organization. Employees who have worked for long periods under permanent and pensionable terms normally have accumulated retirement benefits and other side benefits that are organization specific. The benefits include pension and seniority that are contingent upon continued employment in that organization. Such employees are normally committed to their current employers to safeguard these benefits.

4.9.3 Learning Organization, Knowledge Management and Firm Performance

The third objective of the study was to establish the moderating effect of knowledge management on the relationship between learning organization and firm performance. As discussed earlier, stepwise regression analysis was used to test for moderation. Results of the study indicate that 6.9 percent of variance in financial performance was explained by learning organization and knowledge management. The overall model ($F=2.031$, $P>0.05$) was not significant. The beta coefficients for learning organization ($\beta=1.368$, $t=0.913$, $P>0.05$) and knowledge management ($\beta=0.087$, $t=0.280$, $P>0.05$) were not statistically significant. Further, the interaction of learning organization and knowledge management on financial performance ($\beta= -0.022$, $t=-0.144$, $P>0.05$) was not significant. The findings did not support the moderating effect of knowledge management on the relationship between learning organization and financial performance

The findings of the study revealed that 39.4 percent of variance in non-financial performance was explained by learning organization. The overall model ($F=37.010$, $P<0.05$) and the beta coefficient ($\beta=0.509$, $t=6.084$, $P<0.05$) were statistically significant. In step two, the introduction of the moderator, knowledge management, significantly improved the influence of learning organization on non-financial performance. 41.2 percent of variance in non-financial performance was explained by learning organization and knowledge management. The beta coefficients indicate that learning organization ($\beta=0.373$, $t=2.806$, $P<0.05$) had a significant contribution while knowledge management was not significant ($\beta=0.037$, $t=1.304$, $P>0.05$). In the third step, the interaction of learning organization and knowledge management on non-financial performance was not significant ($\beta=0.001$, $t=0.747$, $P>0.05$).

The third condition in testing for moderation was not met hence hypothesis 3 was not supported. Lack of support for moderation implies that manufacturing firms are not keen on institutionalizing knowledge management practices given the high levels of competition they face.

The study established that 41.2 percent of variance in non-financial performance was explained by learning organization and knowledge management. These results are consistent with findings of a study by Kagiri (2008) on Kenya's Commercial Book Publishing industry which revealed a strong and significant relationship between knowledge management strategy, organization competence and firm competitiveness. Li-An Ho (2008) examined the link between learning and knowledge management and their impact on 21 Technological Companies in Taiwan. The results of the said study indicate that learning and knowledge management capability have a direct and significant influence on organizational performance. A similar study by Kuo (2011) among employees in Electronic Industrial Listed and over the counter Listed Technological companies in Taiwan revealed that HRM strategies lead to better organizational learning, organizational innovation and knowledge management capability which contribute to improved organizational performance.

Although literature relating to the moderating effect of knowledge management on the relationship between learning organization and performance is limited, it has been argued that knowledge management reinforces the influence of learning organization practices. Heraty and Morley (2008) observe that the contribution of knowledge towards an organization's competitiveness arises from the organization's ability to learn faster than rivals, create and disseminate knowledge throughout the organization. Watkins and Marsick (1996) suggest that to improve performance, organizations need to focus on continuous learning and use of knowledge which can serve as critical factors in facilitating individual, team and organizational learning leading to continuous improvement in business operations. Brown and Woodland (1999) argue that it is impossible for an organization to sustain competitive advantage without constantly learning and developing new knowledge.

The results of the study did not provide sufficient evidence to support the moderating effect of knowledge management in the relationship between learning organization and performance measured in both financial and non-financial terms. Results of this study support existing body of literature on the influence of learning and knowledge management on performance. Li-An Ho (2008) submits that improper strategic planning, insufficient organizational infrastructure and inappropriate diffusion processes have decreased the value of learning and knowledge management. Wickramasinghe (2007) argues that establishing a systematic organizational structure and fostering an organizational culture which promotes active information sharing are critical issues that should be the focus of all modern organizations. In addition, Whee, Ngah and Seng (2012) observe that establishing a learning organization through knowledge creation and sharing is not easy and requires an evaluation of the existing situation and identifying areas where learning is needed.

Minbaeva, Pedersen, Bjorkman and Park (2003) study of 169 multinational corporations operating in USA, Russia and Finland revealed that HR practices exerted significant influence on knowledge acquisition, development and transmission within an organization through changes in human capital characteristics. Further, Lee and Lee (2007) confirm there is empirical relationship between knowledge management capabilities and organizational performance. Knowledge management is critical to learning organization as it creates an environment of trust and commitment. This continuous change fosters a learning environment through knowledge management (Maqsood, Walker & Finegan 2007). June (2005) proposes knowledge management aims at getting people to innovate, collaborate and make correct decisions efficiently.

Further, findings of the study support theoretical and empirical evidence on the link between learning organization and knowledge management and their influence on firm performance. One major contribution of this study is that both learning organization and knowledge management account for 41.2 percent of variance in non-financial performance. The two variables are better predictors of non-financial performance compared to financial performance.

4.9.4 Joint Effect of Learning Organization, Knowledge Management and Employee Outcomes on Firm Performance

The fourth objective of the study was to establish the joint effect of learning organization, knowledge management and employee outcomes on performance. The study hypothesized that the joint effect of learning organization, knowledge management and employee outcomes was greater than the individual effect of each predictor variable on performance. Hierarchical regression analysis was performed to determine the joint effect of the predictor variables on both financial and non-financial measures of performance.

The results revealed that the joint effect of learning organization, knowledge management and employee outcomes on financial performance was not statistically significant.

The results in the first model indicate that 8.4 percent of variance in financial performance was explained by learning organization ($R^2 = 0.084$, $P > 0.05$). The overall model ($F = 4.600$, $P < 0.05$) and the beta coefficient ($\beta = 2.020$, $t = 2.145$, $P < 0.05$) were statistically significant. In the second model, 8.5 percent of variation in financial performance was explained by learning organization and employee outcomes. The beta coefficients for learning organization ($\beta = 2.183$, $t = 1.893$, $P > 0.05$) and employee outcomes ($\beta = -0.058$, $t = -0.250$, $P > 0.05$) were not statistically significant. Results in the third model reveal that 8.7 percent of variance in financial performance was explained by the predictor variables ($R^2 = 0.087$). The overall model was not statistically significant ($F = 1.518$, $P > 0.05$). The results indicate that learning organization had the largest contribution to financial performance ($\beta = 2.470$, $t = 1.521$, $P < 0.05$) compared to the other predictor variables. The influence of knowledge management was negative ($\beta = -0.093$, $t = -0.066$, $P > 0.05$). Employee outcomes had the lowest contribution ($\beta = -0.028$, $t = -0.105$, $P > 0.05$).

Findings of the study revealed that the joint effect of learning organization, knowledge management and employee outcomes on non-financial performance was greater than the individual effect of each predictor variable. The results in the first model reveal that 46.1 percent of variance in non-financial performance was explained by learning organization. The overall model ($F = 43.641$, $P < 0.05$) and the beta coefficient ($\beta = 0.604$, $t = 6.606$, $P < 0.05$) were statistically significant.

The results in model two indicate that 47.1 percent of variance in non-financial performance was explained by learning organization and employee outcomes ($R^2=0.471$, $P<0.05$). The overall model ($F=22.261$, $P<0.05$) was statistically significant. The beta coefficients revealed that learning organization ($\beta=0.553$, $t=5.225$, $P<0.05$) was significant while employee outcomes ($\beta=0.021$, $t=0.967$, $P>0.05$) was not significant. In the third model, 48.6 percent of variance in non-financial performance was explained by the combined effect of learning organization, knowledge management and employee outcomes. Learning organization ($\beta= 0.443$, $t=3.182$, $P<0.05$) had the largest explanatory power compared to the other predictor variables. The contribution of knowledge management ($\beta=0.038$, $t=1.207$, $P>0.05$) and employee ($\beta=0.009$, $t=0.361$, $P>0.05$) was weak and insignificant.

The study established the joint effect of learning organization, knowledge management and employee outcomes on non-financial performance was greater than the individual effect of predictor variables. These results support views presented by different scholars. Andreu et al. (2008) observe that competitive advantages based on physical, financial and even technological assets are less and less sustainable since these assets are easier to access through worldwide markets. The scholars suggest that firms need to concentrate on the development of distinctive, difficult to imitate capabilities that go beyond mere application of physical or financial assets progressively commoditized. Such capabilities relate to employees of the firm who develop and apply knowledge and skills in organized, coordinated and distinctive ways.

The attainment of this fourth objective makes a significant contribution to theory and practice of SHRM. The study demonstrated a unique opportunity for expanding theoretical and empirical development on RBV, KBV and DCT to explain the process through which learning leads to improved performance. Drawing from RBV, the study confirmed that HR practices combined into an overall system can be valuable, unique and difficult to imitate thus constituting a resource which meets the conditions for sustained competitive advantage. As discussed earlier, the joint effect of learning organization, knowledge management and employee outcomes on non-financial performance was greater than the independent effect of the predictor variables.

Similarly, KBV focuses on the ability of the organization to create and apply knowledge as the main determinants of performance difference. Results of the current study indicated that knowledge management had a significant influence on non-financial performance. 37.7 percent variance in non-financial performance was explained by knowledge management. DCT suggests that firm processes can be used to integrate, reconfigure, gain and release resources to match or even create market change (Eisenhardt & Martin, 2000). However, changes of this magnitude are difficult to achieve without the support of human resources. As suggested by Wright and Snell (1998) the firm may require different skill sets and behavior from employees which are often driven by an HR system.

The current study predicted that learning organization as an HR strategy could lead to unique outcomes from employees which contribute to improved performance. The results revealed a significant relationship between learning organization and employee outcomes with 31.9 percent variance in employee outcomes being explained by learning organization. Further, employee outcomes accounted for 18.2 percent of variation in non-financial performance, thus supporting the basic proposition that people possess skills, knowledge and abilities which provide economic value to the firm (Youndt et al., 1996).

From extant literature, no known study to the researcher has addressed the combined effect of learning organization, employee outcomes and knowledge management on performance. The results of the joint effect provide a unique contribution to the existing body of knowledge in human resource management. Similarly, the findings of this study support empirical studies in the field of strategic human resource management. In addition, the study contributes to existing body of knowledge by focusing on the Kenyan context rather than organizations in developed countries as compared to previous studies. Table 4.31 presents a summary of objectives, hypotheses, results and interpretation.

Table 4.31: Summary of Hypotheses Testing

Objective	Hypothesis	Performance Measure	Results	Remark
Objective 1 Determine the influence of learning organization on firm performance	H ₁ : Learning organization influences firm performance	Financial Performance	R ² =0.067 F=4.050, P<0.05 β=1.712 t=2.012, P<0.05	Supported
		Non-Financial Performance	R ² =0.394 F=37.010P<0.05 β=0.509 t=6.084, P<0.05	Supported
Objective 2 Assess the mediation of employee outcomes in the relationship between learning organization and performance	H ₂ : The influence of learning organization on firm performance is mediated by employee outcomes	Financial Performance	R ² =0.019 F=37.010, P<0.05 β=0.192 t=0.971, P<0.05	Not Supported
		Non-Financial Performance	R ² =0.471 F=22.261, P<0.05 β=0.553 t=5.225, P<0.05	Not Supported
Objective 3 Examine the moderating effect of knowledge management on the influence of learning organization	H ₃ : The influence of learning organization on firm performance is moderated by knowledge management	Financial Performance	R ² =0.069 F=1.337, P>0.05 β=-0.002 t=-0.144, P>0.05	Not Supported
		Non-Financial Performance	R ² =0.417 F=13.138, P<0.05 β=0.001 t=1.747, P<0.05	Not Supported
Objective 4 Establish whether the joint effect of learning organization, knowledge management and employee outcomes on firm performance is greater than the individual effect of each variable	H ₄ : The joint effect of learning organization, knowledge management and employee outcomes is greater than the individual effect of each variable	Financial Performance	R ² =0.087 F=1.518, P>0.05 LO (β=2.470, t=1.521) EO (β=-0.028, t=-0.105) KM (β=-0.093, t=-0.253)	Not Supported
		Non-Financial Performance	R ² =0.486 F=15.461, P<0.05 LO (β=0.443, t=3.182) EO (β=0.009, t=0.361) KM (β=0.038, t=1.207)	Supported

Source: Primary Data (2015)

Table 4.31 shows that the study had four objectives and four hypotheses. Separate tests were performed for financial and non-financial measures. Two out of four hypotheses tested were supported while two others were not supported.

4.10 Results of Further Analysis

Based on the results of the joint effect of learning organization, knowledge management and employee outcomes on non-financial performance, it was clear that the effect of knowledge management ($\beta=0.038$) and employee outcomes ($\beta = 0.009$) on non-financial performance declines significantly in the presence of learning organization ($\beta=0.443$). This implies that learning organization mediates the relationship between knowledge management and non-financial performance as well as between employee outcomes and non-financial performance and not as originally conceptualized. This led to the reconfigured models in figure 4.1 and 4.2.

4.10.1 Knowledge Management and Non-Financial Performance

The first hypothesis was to establish the influence of knowledge management on non-financial performance. The study proposed that knowledge management has a significant influence on non-financial performance. Simple regression analysis was performed to determine this relationship.

A composite index of non-financial performance was computed comprising of customer perspective, internal business process, learning and growth. Knowledge management consisted of three dimensions: knowledge acquisition, knowledge application and knowledge sharing.

The regression results indicated that 37.7 percent of variance in non-financial performance was explained by knowledge management ($R^2=0.377$, $P<0.05$). The overall model was statistically significant ($F=39.936$, $P<0.05$). The beta coefficients were statistically significant ($\beta=0.104$, $t=6.319$, $P<0.05$) suggesting that one unit change in knowledge management is associated with 0.104 change in non-financial performance. The results are consistent with findings by Kagiri (2008) which showed a strong and significant relationship between knowledge management strategy and firm competitiveness.

Similarly, a study by (Daud & Yusoff, 2010) revealed that knowledge management processes had a significant influence on firm performance. The significant influence of knowledge management on non-financial performance lends support to arguments by knowledge management scholars. Salina and Wan Fadzilah (2010) opine that knowledge management processes have a significant relationship with firm performance. Davernport and Prusak (1998) suggest that knowledge management processes contribute to firm performance by improving job performance, leveraging core business competencies, accelerating the time to market products, reducing cycle times and enhancing product quality. Malhorta (2001) asserts that every additional unit of knowledge used effectively results in marginal increase in performance.

4.10.2 Knowledge Management, Learning Organization and Non-Financial Performance

The second hypothesis focused on testing the mediation of learning organization in the relationship between knowledge management and non-financial performance. A composite score of knowledge management, learning organization and non-financial performance was computed. A four step model was performed using stepwise regression analysis. The results in the first step revealed that 37.7 percent of variance in non-financial performance was explained by knowledge management ($R^2=0.377$, $P<0.05$). The overall model ($F=39.936$, $P<0.05$) and the beta coefficient ($\beta=0.104$, $t=6.319$, $P<0.05$) were statistically significant. In the second step, 64 percent of variation in learning organization was explained by knowledge management ($R^2=0.640$, $P<0.05$). The overall model ($F=104.717$, $P<0.05$) and the beta coefficients ($\beta=0.167$, $t=10.233$, $P<0.05$) were statistically significant.

Results of the third step indicate that 39.4 percent of variance in non-financial performance was explained by learning organization ($R^2= 0.394$, $P<0.05$). The overall model ($F=37.010$, $P<0.05$) and the beta coefficients ($\beta=0.509$, $t=6.084$, $P<0.05$) were statistically significant. In the fourth step, knowledge management and learning organization accounted for 41.2 percent variation in non-financial performance. Notably, the influence of knowledge management ($\beta=0.037$, $t=1.304$, $P>0.05$) in the presence of learning organization was not significant. The results provided sufficient evidence to support full mediation of learning organization in the relationship between knowledge management and non-financial performance.

The findings support results of the study by Li-An Ho (2008) on the link between learning and knowledge management and their impact on technological companies in Taiwan. The results of the study revealed that learning and knowledge management capability have a direct and significant influence on organizational performance. Kuo (2011) found that HRM strategies lead to better organizational learning, organizational innovation and knowledge management capability which contribute to improved organizational performance. Other empirical researchers have argued that knowledge management reinforces the influence of learning organization practices. Heraty and Morley (2008) observe that the contribution of knowledge towards superior performance arises from the organization's ability to learn faster than rivals, create and disseminate knowledge throughout the organization.

4.11 Employee Outcomes and Non-Financial Performance

The study also sought to establish the influence of employee outcomes on non-financial performance. Simple regression analysis was used to test this influence. The regression results revealed that 29.5 percent of variance in non-financial performance was explained by employee outcomes ($R^2=0.295$, $P<0.05$). The overall model ($F=25.561$, $P<0.05$) and the beta coefficient ($\beta=0.096$, $t=5.056$, $P<0.05$) were statistically significant.

These findings support results by Huselid (1995) on the impact of HRM practices on turnover, productivity and corporate financial performance which show a significant relationship between employee outcomes and corporate financial performance. A study by Mulabe (2013) on human resource strategic orientation, employee outcomes, organizational factors and performance of state corporations in Kenya revealed a strong and positive relationship between employee outcomes and corporate performance. Similarly, Idua (2014) established a significant relationship between job-related attitudes and non-financial performance of Public Universities in Kenya. However, the findings of this test contradict the study by Sagwa (2014) who found that there was no relationship between employee outcomes and performance of firms listed at the Nairobi Securities Exchange.

4.11.1 Employee Outcomes, Learning Organization and Non-Financial Performance

The mediation of learning organization in the relationship between employee outcomes and non-financial performance was tested using stepwise regression analysis. Results of the first step revealed that that 29.5 percent of variance in non-financial performance was explained by employee outcomes ($R^2=0.295$, $P<0.05$). In the second step, 31.9 percent of variance in learning organization was explained by employee outcomes. The overall model ($F=24.794$, $P<0.05$) and the beta coefficient ($\beta=0.116$, $t=4.979$, $P<0.05$) were statistically significant. In the third step, 46.1 percent of variance in non-financial performance was explained by learning organization. The overall model ($F=43.641$, $P<0.05$) and the beta coefficients ($\beta=0.604$, $t=6.606$, $P<0.05$) were statistically significant. Finally, in the fourth step, learning organization and employee outcomes accounted for 47.1 percent of variance in non-financial performance. When controlling for the effect of learning organization (mediating variable) employee outcomes (independent variable) became statistically insignificant ($\beta=0.021$, $t=0.967$, $P>0.05$). The results thus provided sufficient evidence to support full mediation of learning organization in the relationship between employee outcomes and non-financial performance.

These findings are consistent with prior empirical studies. A study by Laschinger, Finegan and Shamian (2001) on workplace empowerment, organizational commitment and job satisfaction confirmed there was a positive relationship between job-related attitudes and firm performance. Zimmerman and Todd (2009) found that job satisfaction was a significant predictor of individual performance. Similarly, Lee et al (2010) observe that employees who derive increased mental and physical pleasure from their job are strongly motivated to intensify their efforts to achieve superior individual performance and maximum contribution to accomplish organizational objectives. Bhatnagar (2007) confirmed that the implementation of learning organization model enriches individual knowledge and boosts employee commitment, hence increasing their productivity and performance.

4.12 Chapter Summary

This chapter presented findings regarding statistical assumptions and demographic characteristics of respondents and firms that participated in the study. It also presented descriptive statistics of study variables based on frequencies, percentages, mean scores and standard deviation. The overall results for learning organization was 3.67, knowledge management 3.92, employee outcomes 3.86, financial performance 3.59 and non-financial performance 3.69 respectively. This implies that the respondents were in agreement concerning the implementation of study variables in their organizations.

The results of tests of hypotheses and discussion of findings are also presented. Results indicate that learning organization has a significant influence on financial performance though the strength of the relationship is weak ($R^2 = 0.067$). The influence of learning organization on non-financial performance is statistically significant, the strength of the relationship is moderate ($R^2 = 0.394$). The study did not provide sufficient evidence to support the mediating effect of employee outcomes on the relationship between learning organization and both financial and non-financial performance. Similarly, the moderating effect of knowledge management on the relationship between learning organization and both financial and non-financial performance was not supported. The study confirmed the joint effect of learning organization, knowledge management and employee outcomes on non-financial performance. The next chapter presents the summary, conclusions and recommendations.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of major findings of the study, conclusion and recommendations. It also presents theoretical implications, implications on policy as well as implications for practice. Contribution to knowledge and limitations are discussed and suggestions for future research given.

5.2 Summary

The main purpose of this study was to determine the role of knowledge management and employee outcomes in the relationship between learning organization and performance of Large Manufacturing Firms in Kenya. Specific objectives included: to determine the influence of learning organization on firm performance, to assess the mediation of employee outcomes in the relationship between learning organization and firm performance, to examine the moderating effect of knowledge management in the relationship between learning organization and firm performance and to establish whether the joint effect of learning organization, knowledge management and employee outcomes on performance was greater than the individual effect of each predictor variable. Four hypotheses were formulated and tested using inferential statistics such as simple regression analysis, stepwise regression analysis and hierarchical regression analysis.

Drawing from theoretical and empirical studies reviewed, a conceptual model was developed. The model depicted the relationships between variables of the study. Learning organization was linked to firm performance. The mediation of employee outcomes in the relationship between learning organization and firm performance was examined. In addition, the moderating effect of knowledge management on the influence of learning organization on performance was also tested. A summary of the findings based on the four objectives is presented in the following section.

5.2.1 Learning Organization and Firm Performance

The first objective was to determine the influence of learning organization on performance of Large Manufacturing Firms in Kenya. Simple regression analysis was used to test this relationship. Both financial and non-financial measures of performance were used. Regression results revealed a positive relationship with 6.7 percent variation in financial performance being explained by learning organization ($R^2= 0.067$) and 39.4 percent variation in non-financial performance accounted for by learning organization ($R^2=0.394$). From the findings, hypothesis one was confirmed. There was a notable distinction between financial and non-financial performance. Learning organization was a better predictor for non-financial performance measured in terms of customer perspective, internal business process, learning and growth than financial performance. The overall model was statistically significant ($F= 37.010$, $P<0.05$) and the beta coefficients ($\beta= 0.509$, $t= 6.084$, $P<0.05$) were also significant. This implies that learning organization has a significant contribution to non-financial performance.

The results provide sufficient evidence that learning organization influences firm performance. These findings are consistent with previous empirical studies. Studies by Ellinger et al. (2002), Prieto and Revilla (2006); Khadra and Rawabdeh (2006) revealed a statistically significant relationship between learning organization and firm performance. However, 93.3 percent of variation in financial performance was unaccounted for and 60.6 percent of variance in non-financial performance was not explained. This implies the strength of this relationship could be enhanced by other variables. The study predicted that the mediating effect of employee outcomes and moderating effect of knowledge management could enhance the influence of learning organization on firm performance.

5.2.2 Learning Organization, Employee outcomes and Firm Performance

The second objective was to determine the mediating effect of employee outcomes on the influence of learning organization on firm performance. The results revealed that employee outcomes do not mediate the relationship between learning organization and firm performance measured in both financial and non-financial terms. The influence of employee outcomes on financial performance was not significant ($\beta=1.92$, $t= 0.971$, $P>0.05$).

The second analysis focused on non-financial performance. When controlling for mediation, learning organization remained significant ($\beta=0.553$, $t=5.225$, $P<0.05$). Mediation was not confirmed. However, learning organization had a significant influence on employee outcomes with 31.9 percent variance in employee outcomes being explained by learning organization.

The findings of this study lend support to previous studies. Sagwa (2014) found that the effect of human resource management practices (HRMP) on performance of firms listed at the Nairobi Securities Exchange was not mediated by employee outcomes. The researcher observes that this insignificant relationship can be attributed to inability of systems of HR policies, practices, programmes and processes to attend to performance needs of employees. Ibia (2014) established that job-related attitudes do not mediate the relationship between empowerment and organizational performance of Public Universities in Kenya. The insignificant relationship between employee outcomes and firm performance in this study could be attributed to challenges facing manufacturing firms in Kenya.

According to Manufacturing Survey (2012) firms in this sector face a myriad of challenges ranging from lack of competitiveness, unpredictable policies, corruption, high levels of crime, lack of confidence in the judicial system to the manner in which the government levies taxes which affects investment decisions. This implies the firms are preoccupied with addressing these challenges which in turn affects their ability to meet employee expectations, hence decreased firm performance.

5.2.3 Learning Organization, Knowledge Management and Firm Performance

The third objective was to establish the moderating effect of knowledge management on the influence of learning organization on firm performance. Knowledge management was measured along three dimensions: knowledge acquisition, knowledge application and knowledge sharing. Based on this objective, it was hypothesized that the influence of learning organization on firm performance is moderated by knowledge management. Findings of the study did not support moderation effect.

The standardized values of learning organization and knowledge management had no effect on financial performance. The overall model was statistically insignificant ($F=1.337$, $P>0.05$) and the results of coefficients ($\beta= -0.002$, $t=-0.144$, $P>0.05$) were also statistically insignificant. The moderating effect of knowledge management on the influence of learning organization on financial performance was not confirmed. Similarly, the interaction of learning organization and knowledge management on non-financial performance was insignificant ($\beta= 0.001$, $t= 0.747$, $P>0.05$). The third condition in testing for moderation was not met hence hypothesis 3 was not supported. However, knowledge management accounted for 37.7 percent variation in non-financial performance.

The findings of the study support previous empirical research. Kagiri (2008) revealed a strong and significant relationship between knowledge management strategy, organization competence and firm competitiveness. Li-An Ho (2008) examined the link between learning and knowledge management and established that the two variables had a significant influence on organizational performance. A similar study by Kuo (2011) revealed that HRM strategies lead to better organizational learning, innovation and knowledge management capability which contribute to improved organizational performance.

5.2.4 Learning Organization, Employee Outcomes, Knowledge Management and Firm performance

The fourth objective was to establish whether the joint effect of learning organization, employee outcomes, knowledge management on firm performance was greater than the individual effect of each predictor variable. Hierarchical regression analysis was performed to test the fourth hypothesis. The results revealed a statistically insignificant relationship between the predictor variables (learning organization, employee outcomes and knowledge management) and financial performance. Only 8.7 percent variance in financial performance was explained by the predictor variables. The overall model ($F= 1.518$, $P>0.05$) and the beta coefficients ($\beta= -0.093$, $t= -0.253$, $P>0.05$) were not statistically significant.

However, the results confirmed that the joint effect of learning organization, employee outcomes, knowledge management explained 48.6 percent variation in non-financial performance. The model was statistically significant ($F=15.461$, $P<0.05$). The explained variation for the joint influence was greater than the individual predictors: learning organization (39.4 percent), employee outcomes (18.2 percent) and knowledge management (37.7 percent). Hypothesis 4 was thus confirmed.

The results of joint effect are important for two reasons. First, from extant literature, no systematic study has been undertaken of the joint effect of learning organization, employee outcomes and knowledge management on firm performance measured in both financial and non-financial terms. This study therefore provides new insights in HRM indicating that superior performance can be achieved through the alignment of learning organization practices, employee outcomes and knowledge management. Secondly, the results confirmed the basic assumption of RBV that combined effect of HR practices can be valuable, unique and difficult to imitate thus contributing to sustained competitive advantage.

5.2.5 Knowledge Management, Learning Organization and Non-Financial Performance

Further analysis was carried out to determine the mediation of learning organization in the relationship between knowledge management and non-financial performance. Results of stepwise regression analysis confirmed the mediation of learning organization in the relationship between knowledge management and non-financial performance. 41.2 percent of variance in non-financial performance was explained by knowledge management and learning organization. The overall model was statistically significant ($F=19.582$, $P<0.05$). When controlling for the effect of learning organization on non-financial performance, knowledge management was no longer significant ($\beta=0.037$, $t=1.304$, $P>0.05$). The results provided sufficient evidence to support full mediation of learning organization in the relationship between knowledge management and non-financial performance.

The findings support results of the study by Li-An Ho (2008) on the link between learning and knowledge management and their impact on technological companies in Taiwan. The results of the study revealed that learning and knowledge management capability have a direct and significant influence on organizational performance. Kuo (2011) found that HRM strategies lead to better organizational learning, organizational innovation and knowledge management capability which contribute to improved organizational performance.

5.2.6 Employee Outcomes, Learning Organization and Non-Financial Performance

The study established that learning organization mediates the relationship between employee outcomes and non-financial performance. Results of stepwise regression analysis revealed that 47.1 percent of variation in non-financial performance is explained by employee outcomes and learning organization. The overall model was statistically significant ($F=22.261$, $P<0.05$). When controlling for the effect of learning organization on non-financial performance, employee outcomes became insignificant ($\beta=0.021$, $t=0.967$, $P>0.05$). The results thus provided evidence to support full mediation of learning organization in the relationship between employee outcomes and non-financial performance.

These findings are consistent with prior empirical studies. Huang and Chi (2005) provided empirical evidence on the positive effects of job satisfaction on organizational performance. Bhatnagar (2007) confirmed that the implementation of learning organization model enriches individual knowledge and boosts employee commitment, hence increasing their productivity and performance. In addition, Zimmerman and Todd (2009) found that job satisfaction was a significant predictor of individual performance. This implies that employee outcomes have a significant influence on non-financial performance. The results lend support to theoretical literature which suggests that the behavior of employees within firms has important implications for firm performance (Huselid, 1995).

5.3 Conclusion

The main purpose of this study was to determine the role of knowledge management and employee outcomes in the relationship between learning organization and performance of Large Manufacturing Firms in Kenya. The study sought to determine the mediation of employee outcomes in the relationship between learning organization and firm performance as well as the moderating effect of knowledge management in this relationship. The study also sought to establish whether the joint effect of learning organization, knowledge management and employee outcomes on firm performance was greater than the individual effect of each predictor variable. To achieve these objectives, a conceptual model was developed based on extensive literature review and four hypotheses formulated for testing. Simple linear regression analysis was used to determine the influence of learning organization on firm performance. Stepwise regression analysis was performed to assess the mediation of employee outcomes and moderating effect of knowledge management. Finally, hierarchical regression analysis was conducted to establish the joint effect of learning organization, knowledge management and employee outcomes on performance. Separate tests were performed for financial and non-financial measures of performance.

First, the relationship between the study variables was tested with financial performance as the dependent variable. The results revealed a statistically significant relationship between learning organization and financial performance. The mediation of employee outcomes in the relationship between learning organization and financial performance was not supported. However, learning organization had a significant influence on employee outcomes. The moderating effect of knowledge management on the relationship between learning organization and financial performance was not supported. The interaction of learning organization and knowledge management did not have a significant influence on financial performance. Further, the joint effect of learning organization, knowledge management and employee outcomes on financial performance was not supported. It was not possible to explain this outcome. The results could probably be attributed to conceptual difficulties, methodological and measurement issues prevalent in social sciences.

The second tests of hypotheses involved the relationship between the study variables and non-financial performance. The study established a strong and positive relationship between learning organization and non-financial performance. The mediation of employee outcomes in the relationship between learning organization and non-financial performance was not supported. However, employee outcomes had a significant influence on non-financial performance. Equally, the moderating effect of knowledge management on the relationship between learning organization and non-financial performance was not supported. Notably, learning organization and knowledge management had a strong explanatory power on non-financial performance. Finally, the joint effect of learning organization, knowledge management and employee outcomes was greater than the individual effect of the predictor variables. These results support the basic proposition of RBV that the combined effect of firm specific resources leads to superior performance because this combination cannot be easily imitated by competitors. The results further suggest that manufacturing firms can achieve competitive advantage through the alignment of learning organization, knowledge management and employee outcomes.

From the results on the joint effect of predictor variables on non-financial performance, it was clear that learning organization had a strong and significant influence on non-financial performance while the effect of knowledge management and employee outcomes was weak and insignificant. The effect of knowledge management and employee outcomes on non-financial performance declined significantly in the presence of learning organization. This indicated that learning organization had an influence on the predictors prompting further testing to determine this relationship. The choice of mediation was informed by the fact that the presence of learning organization in the regression model rendered the influence of both employee outcomes and knowledge management insignificant.

The results of further analysis revealed that learning organization mediates the relationship between knowledge management and non-financial performance. Similarly, the mediation of learning organization in the relationship between employee outcomes and non-financial performance was supported. These results suggest that manufacturing firms should be proactive in developing learning organization practices in order to enhance the influence of knowledge management and employee outcomes on firm performance.

5.4 Implications of the Study

The main purpose of this study was to establish the role of knowledge management and employee outcomes in the relationship between learning organization and performance of manufacturing firms in Kenya. The results of the study confirmed a statistically significant relationship between learning organization and firm performance measured in both financial and non-financial terms. The study did not provide sufficient evidence to support the mediation of employee outcomes in the relationship between learning organization and firm performance. However, the results revealed a significant influence of learning organization on employee outcomes. Similarly, the study established that knowledge management had no moderating effect in the relationship between learning organization and both financial and non-financial performance. The results of this study therefore provide a number of theoretical, policy and practical implications for manufacturing firms in Kenya

5.4.1 Theoretical Implications

This study makes a significant contribution to the theory underpinning SHRM. The study provided a unique opportunity for expanding theoretical and empirical development on resource based view (RBV) and dynamic capabilities theory (DCT) to explain the process through which learning leads to improved performance. Drawing from RBV proposition, competitors would have difficulty in duplicating competitive advantage based on combination of firm specific resources because the combination arises from organizational process that is causally ambiguous, path dependent and socially complex.

The current study confirmed that the joint effect of learning organization, employee outcomes and knowledge management on non-Financial performance was greater than the individual effect of the predictor variables. Consistent with Wright et al. (2001) argument, synergistic effect rather than a set of independent practices leads to competitive advantage.

DCT suggests that, firm processes can be used to integrate, reconfigure, gain and release resources to match or even create market change (Eisenhardt and Martin, 2000). However changes of this magnitude are difficult to achieve without the support of human resources. As suggested by Wright and Snell (1998) the firm may require different skill sets and behaviors from employees which are often driven by an HR System. Learning organization as a system of HR practices combined with employee outcomes had a significant influence on non-financial performance. The results of the study revealed that 47.1 percent of variance in non-financial performance was explained by learning organization and employee outcomes.

5.4.2 Implications for Practice

The relationship between learning organization and firm performance has not been adequately addressed in the management literature. The relative absence of research does not encourage leaders, managers and employees to adopt learning organization practices. Accordingly, there is a compelling need to effectively establish the linkage between learning organization practices and firm performance. The results of the study reveal that learning organization has a significant influence on employee outcomes, such as organizational commitment and job satisfaction. Top Management in manufacturing sector can apply the findings of this study to develop internal capacity in key areas of human resource management (HRM) in order to deliver sustained competitive advantage. The study confirmed that learning organization has a significant influence on firm performance measured in both financial and non-financial terms. HR practitioners can use findings of this study to support the need for implementation of learning organization initiatives.

Despite relatively high mean scores obtained for organizational commitment (3.91) and job satisfaction (3.81) there was no significant influence on financial performance. This implies that employee commitment and job satisfaction does not necessarily lead to their willingness to exert extra effort. Similarly, manufacturing firms face a number of challenges ranging from cheap imports, increased levels of crime, poor infrastructure, increased cost of production and increased taxation that affect levels of profitability. In this regard, the firms are preoccupied with addressing these issues which limits the attention given to HRM practices. One way of dealing with these challenges is institutionalizing learning organization practices which will enhance employee commitment and job satisfaction. Higher feelings of satisfaction could translate to improved performance and low turnover.

5.4.3 Implications for policy

Policy makers can apply findings of study to reinforce several areas of HRM policy and practice. A needs assessment can be done and programs designed that effectively address any performance gaps. Key areas to be addressed include learning organization practices such as continuous learning, team learning, empowerment and systems connectivity. In addition, policy makers can use the findings of this study to evaluate how well the manufacturing sector can be leveraged through learning organization and knowledge management practices in order to contribute to increased economic growth.

Policy makers recognize the importance of the sector for long-term economic development. For instance, Economic Survey (2014) reports that the sector accounted for 8.9 percent in GDP and provided 12.4 percent of employment in the formal sector in 2013. The second Medium Term plan (MTP II) of vision 2030 pays special attention to the sector with the aim of increasing its contribution to GDP and foreign exchange earnings. The results of the study will assist policy makers in making informed decisions to adopt learning organization practices for sustained superior performance.

Knowledge management accounted for 37.7 percent variance in non-financial performance though it had no moderating effect in the relationship between learning organization and firm performance. This implies that managers of manufacturing firms should continuously improve their knowledge management practices in order to achieve superior performance. Manufacturing firms need to focus on knowledge management as a key driver of performance in the industry.

5.5 Contribution to Knowledge

The most significant contribution this study has made to the existing body of knowledge in human resource management is the joint effect of learning organization, employee outcomes and knowledge management on non-financial performance. Previous empirical studies focus on direct relationship between learning organization and firm performance. The current study contributes to knowledge by empirically demonstrating that the combined effect of learning organization, knowledge management and employee outcomes is greater than the individual effect of the predictor variables. These findings suggest that organizations that combine these variables are likely to achieve superior performance. Thus, no single resource can be a source of competitive advantage.

The study provided empirical evidence on the extent to which the study variables influence performance. Results indicate that learning organization has a significant influence on both financial and non-financial performance. Similarly, knowledge management and employee outcomes had a strong and positive relationship with non-financial performance. This contributes to knowledge in human resource management by confirming the relationships among the study variables.

The results of further analysis revealed that learning organization mediates the relationship between knowledge management and non-financial performance. This finding provides empirical evidence on the importance of learning organization as an avenue through which knowledge management influences non-financial performance.

This implies that the influence of knowledge management is not direct but through learning organization. The study also confirmed that learning organization mediates the relationship between employee outcomes and non-financial performance. This suggests that the influence of employee outcomes is not direct but through learning organization. Given that most empirical studies on learning organization, knowledge management and employee outcomes have been done in developed countries, the study makes a significant contribution to the body of knowledge in a developing country context. The context of the study was large manufacturing firms in Kenya.

5.6 Limitations of the study

Despite the significant relationship between learning organization, knowledge management, employee outcomes and firm performance, the study had a number of limitations with respect to methodological issues that need to be considered when interpreting results. This section presents challenges faced in the process of carrying out the study.

The ratings of the study variables was done by different managers. The HR manager responded to questions on learning organization, knowledge management and employee outcomes, the finance manager on financial performance and production manager on non-financial performance. Though the respondents are thought to give objective responses, they could have their own perceptions which could lead to misleading responses. It therefore becomes difficult to tell whether the perceptions reflect the organization or personal views.

The study variables were measured on a five-point likert scale ranging from 1= not at all to 5= very large extent. One of the major limitations of this scale is its inability to measure true attitudes of respondents. Respondents tend to portray themselves in a more socially favourable light rather than being honest, hence may avoid extreme response categories. Similarly, respondents answers may be influenced by previous questions or may heavily concentrate on one side response (for instance, not at all or very large extent).

The study utilized a cross sectional survey design. Cross sectional studies do not measure causal effects on the observed relationships between study variables and therefore may not give actual relationships that exist between learning organization, knowledge management, employee outcomes and performance of manufacturing firms in Kenya.

Another limitation was the use of self-administered questionnaires. Self-administered questionnaires present a challenge to the business researcher because respondents may not understand the questions and therefore give incorrect responses. The results may not estimate the true relationship between study variables.

Finally, the study relied on perceptual measures of financial performance since it was difficult to obtain objective measures. Lack of secondary data fails to provide a true picture of firm performance. The perceptual measures may bias the estimated relationship between learning organization and firm performance

Despite the limitations discussed above, the quality of the study was not compromised. The study was designed in a highly scientific manner based on extensive literature review. A conceptual model was developed and hypotheses tested using statistical techniques. These limitations, therefore, do not have adverse effects on the findings of the study. Overall, the results have made a significant contribution to the existing body of knowledge in human resource management.

5.7 Suggestions for Future Research

The study focused on the mediating effect of employee outcomes and moderating effect of knowledge management on the relationship between learning organization and firm performance. The influence of learning organization on performance could be affected by other factors. Future research could consider: strategy, structure, innovation, technology, environment and leadership as possible influencers in the relationship. The study serves as a reference point for those who wish to study the relationship between learning organization and performance. The researchers could use any of these factors as mediators or moderators to determine if they can obtain similar results.

This study used cross-sectional survey design. Cross sectional studies do not determine the causal relationships between variables. Future studies could use longitudinal study to provide a better understanding of the influence of learning organization on firm performance. A longitudinal survey is likely to provide causal effects of variables.

Though the study used a cross-sectional survey design, a critical evaluation of study variables revealed that a qualitative approach would have been more appropriate. Future research could focus on in-depth case study and document analysis to generate more information. Primary sources of information that should be considered include: files of minutes, government policy papers, sessional papers, taskforce reports, UNIDO reports and speeches by the cabinet secretary for industrialization.

The results of this study were self-reporting. This assumed that the responses were objective and were actually given by the target group. However, it was difficult to tell whether the respondents presented their own views or those of the organization. Future studies should multiple sources of data such as employees, management, customers, distributors and primary sources discussed earlier.

5.8 Chapter Summary

The chapter presented the summary of findings based on the objectives of the study. A summary of hypothesis testing is also provided. The first hypothesis on the direct influence of learning organization on performance was confirmed. The second hypothesis on the mediating effect of employee outcomes was not confirmed. Similarly, the moderating effect of knowledge management was not supported. The joint effect of learning organization, knowledge management and employee outcomes on non-financial performance was confirmed.

The chapter also presented a discussion on contribution to knowledge and practice in human resource management. Implications of the study, limitations and suggestions for future research were also discussed.

REFERENCES

- Aghaei N., Ziaee, A. & Shahrbanian, S. (2012). Relationship between learning organization and organizational commitment among employees of sport and youth head office of western provinces of Iran. *European Journal of Sports and Exercise Science*. 1(3), 59-69.
- Ahmad, F., Mohamad, O. & Ibrahim, H. I. (2013). Knowledge acquisition among engineers in MNCS. *Independent Journal of Management and Production*, 4(1), 19-35.
- Ahmed, P., Lim, K. & Zairi, M. (1999). Measurement practice for knowledge management. *Journal of Workplace Learning: Employee Counselling Today*, 11(8), 304-11.
- Alavi, M. & Tiwana, A. (2002). Knowledge integration in virtual teams: The potential role of KMS. *Journal of the American Society for Information Science and Technology*, 53(12), 1029-1037.
- Alavi, M. & Leidner, D. (2001). Review: Knowledge management and KM systems: conceptual foundation and research issues. *MIS Quarterly* 25 (1), 107-36.
- Amin, A. & Cohendet, P. (2004). *Architectures of Knowledge, Firms, Capabilities and Communities*. Oxford: Oxford University press.
- Amit, R. & Shoemaker, P. J. H. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14(1), 33-46.
- Andreu, R., Baiget, J. & Canale, A. (2008). Firm specific knowledge and competitive advantage: evidence and knowledge management practices. *Knowledge and Process Management*, 15 (2), 97-106.
- Anh, P. T., Baughn, C. C., Hang, N. T., & Neupert, K. E. (2006). Knowledge acquisition from foreign parents in international joint ventures: an empirical study in Vietnam. *International Business Review*, 15(5), 463-487.

- Argyris, C. & Schon, D. (1978). *Organizational learning: A theory of action perspective*, Reading: Addison Wesley.
- Armstrong, M. (2006). *A handbook of human resource management practice*. 9th Ed. London: Kogan Page Limited.
- Awino, Z. B. (2007). *The Effect of Selected Strategy Variables in Corporate Performance: A Survey of Supply Chain Management in Large Private Manufacturing Firms in Kenya*. (Unpublished Ph.D Thesis). School of Business, University of Nairobi.
- Baker, W. E. & Sinkula, J. M. (1999). The synergistic effect of market orientation and learning orientation on organization performance. *Journal of the Academy of Marketing Science*, 27(4) 411-427.
- Baldwin, T. & Danielson, C. (2002). Invited reaction: Linking learning with financial performance. *Human Resource Development Quarterly*, 13, 23-29.
- Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17 (1), 99-120.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediation variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Barron, D. (1996). Learning to become a learning organization. *Digital Dissertations* ATT 9809583, available at [www:lib.com](http://www.lib.com).
- Basim, H. N., Sesen, H. & Korkmazyurek, H. (2007). A turkish translation, validity and reliability study of the dimensions of the learning organization questionnaire. *World Applied Sciences Journal*, 2(4), 368-374.
- Becker, H. S. (1960). Notes on the concept of commitment. *American Journal of Sociology*, 66(1), 32-40.

- Becker, H. S. (1964). *Human Capital*. New York: Columbia University Press.
- Bernal, J. G., Castrel, A. G., Navarro, M. M., & Torres, P. R. (2005). job satisfaction: empirical evidence of gender differences. *Women in Management Review*, 20(4), 279-288.
- Bernstein, D. A. & Nash, P. W. (2008). *Essentials of Psychology*. 4th Edition. Boston: Cengage Learning
- Bhatnagar, J. (2007) Predictors of organizational commitment in India: Strategic HR roles, organizational learning capability and psychological empowerment. *The International Journal of Human Resource Management*, 18(10), 1782-1811.
- Boisot, M. (1998). *The Information Space, Knowledge Assets: Securing Competitive Advantage in the Information Economy*. New York: Oxford University Press.
- Bontis, N., Crossan, M. & Hulland, J. (2002). Managing an organization learning system by aligning stocks and flows. *Journal of Management Studies*, 39(4), 437-70.
- Bowen, G. L., Rose, R. A., Ware, W. B. & Powers, J. D. (2007). Assessing the functioning of schools as learning organizations. *Children & Schools*, 29(4), 199-208
- Brettel, M., & Rottenberger, J.D. (2013). Examining the link between entrepreneurial orientation and learning processes in small and medium-sized enterprises. *Journal of Small Business Management*, 51(4), 471-490.
- Brown, R. B. & Woodland, M. J. (1999). Managing knowledge wisely: A case of organizational behaviour. *Journal of Applied Management Studies*
- Busienei, J. R. (2013). *Business strategy, organizational structure, hr strategic orientation and performance of large private manufacturing firms in Kenya*. (Unpublished Ph.D Thesis). School of Business, University of Nairobi.

- Carmeli, A. (2003). The relationship between emotional intelligence and work attitudes, behaviour and outcomes. *Journal of Managerial Psychology*, 18(8), 788-813.
- Carmeli, A. & Tishler, A. (2004). Relationship between intangible organizational elements and organizational performance. *Strategic Management Journal*, 25,1257-1278.
- Cappelli, P. & Singh, H. (1992). Integrating strategic human resources and strategic management. *Research Frontiers in Industrial Relations and Human Resources*, 65-92
- Castro, G. M., Lopez, J. E., Lopez-Saez, P. & Alamar-Salazar, E. (2006). Organization capital as competitive advantage of the firm. *Journal of Intellectual Capital*, 7 (3), 324-337.
- Chang, S. C. & Lee, M. S. (2007). A Study on the relationship among leadership, organizational culture, the operation of learning organization and employees' job satisfaction. *The Learning Organization*, 14(2), 155-185.
- Chen, C. J., & Huang, J. W. (2009). Strategic human resource practices and innovation performance: the moderating role of knowledge management capacity. *Journal of Business Research*, 62(1), 104-114.
- Cheruiyot, C. K., Jagongo, A. & Owino, E. O. (2012). Institutionalization of knowledge management in manufacturing enterprises in Kenya: A case of selected enterprises. *International Journal of Business and Social Science*, 3(10), 127-138.
- Chinowsky, P. & Carillo, P. (2007). Knowledge management to learning organization connection. *Journal of Management Engineering*, 122-130.
- Chiva, R. & Alegre J. (2009). Organizational learning capability and job satisfaction an empirical assessment in the ceramic tile industry. *British Journal of Management*. 20, 323-340.

- Chuang, S. (2004). Resource-based perspective on knowledge management capability and competitive advantage: An empirical investigation. *Expert Systems with Applications*, 27 (3), 459-65.
- Cohen, W. M. & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and organization. *Administrative Science Quarterly*, 35(1),128–152.
- Cohen, M. D. & Sproul, L. E. (1991) Issue on organisational learning. *Organization Science*, 2(1), 1-3.
- Collin, K. (2009). Work-related identity in individual and social learning at work. *Journal of Workplace Learning* 21(1) 23-35.
- Cooper, D. R. & Schindler, P. S. (2006). *Business research methods*. New Delhi: McGraw Hill.
- Coppieters, P. (2005). Turning schools into learning organizations. *European Journal of Teacher Education*, 28(2), 129-139.
- Curado, C. (2008). Perceptions of knowledge management and intellectual capital in the banking industry. *Journal of Knowledge Management*, 12(3), 141-155.
- Darroch, J. & McNaughton, R. (2002). Examining the link between knowledge management practices and types of innovation. *Journal of Intellectual Capital*, 3(3), 210-222.
- Davenport, T. H., De Long, D. W. & Beers, M. C. (1998). Successful knowledge management projects. *Sloan Management Review*, 43-57.
- Davenport, T. H. & Prusak, L. (1998) Working knowledge: How organizations manage what they know. *Harvard Business Review*, 1-7
- Day, G. S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58, 37–52.

- Decaloris, D. M. & Deeds, D. L. (1999). The impact of stock and flows of organizational knowledge on firm performance: An empirical investigation of the biotechnology industry. *Strategic Management Journal*, 20(7), 953-968
- Dekoulou, P. & Trivellas, P. (2015). Measuring the impact of learning organization on job satisfaction and individual performance in Greek advertising sector. *Social and Behavioral Sciences*. 173, 367-375.
- Demsetz, H. (1988). The Theory of the firm revisited. *Journal of Law, Economics and Organization*, 4(1), 141-161.
- Demers, D. (2009). The Relationship between perceptions of learning organizations, characteristics and firm performance. *Human Resource Development International*, 11(1), 51-66.
- Dess, G. & Robinson, R. (1984). measuring organizational performance in the absence of objective measures. *Strategic Management Research*, 3(5), 265-73.
- Dierickx, I. & Cool, K. (1989). Assets, stock accumulation and sustainability of competitive advantage. *Management Science*, 35(9),1504-11
- Dirani, K. M. (2009). Measuring the learning organization culture, organizational commitment and job satisfaction in the lebanese banking sector. *Human Resource Development International*, 12, 189-208.
- Dodgson, M. (1993). Organizational learning: A review of some literature. *organization studies* 14(3) 375-394.
- Drejer, A. (2000). Organizational learning and competence development. *The Learning Organization*, 7(4), 206-220.
- Drucker, P. (1993). *Post Capitalist Society*. New York: Harper Business.
- Drucker, P. (1998). The coming of the new organization. *Harvard Business Review on Knowledge Management*, 5.

- Dyer, L., & Reeves, T. (1995). Human resource strategies and firm performance: what do we know and where do we need to go? *International Journal of Human Resource Management*, 6, 656-670.
- Dyer, J. H. & Singh, H. (1998). The relational view: corporate strategy and source of organizational competitive advantage. *Academy of Management Review*, 23(4), 660-679
- Easterby-Smith, M. & Araujo, L. (1999). Organizational learning: Current debates and opportunities. *Development in Theory and Practice*. 1-21
- Edvinson, L. & Malone, M. (1997). *Intellectual capital: Realizing your company's true value by finding its hidden brain power*. New York: Harper Business Press
- Egan, T. M., Yang, B. & Bartlett K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. *Human Resource Development Quarterly*. 15(3), 279-301
- Eisenhardt, K. M. & Martin, J. K. (2000). Dynamic capabilities: What are they?" *Strategic Management Journal*, 21 (6), 1105-21
- Ellinger, A., Yang, B. & Houston, S. (2002). The relationship between the learning organization concept and firms financial performance: An empirical assessment. *Human Resource Development Quarterly*, 13, 5-21.
- Emami, R., Moradi, E., Idrus, D. & Almutairi, D.O. (2012). Investigating the relationship between organizational learning culture, job satisfaction and turnover intention in IT SMEs. *International Journal of Innovative Ideas*, 12 (1), 8-13.
- Erdem, M., Ilgan, A. & Ucar, H. I. (2014). Relationship between learning organization and job satisfaction of primary school teachers, *International Online Journal of Educational Sciences*. 6, 8-20.
- Eylon, D. & Bamberger, P. (2000). Empowerment cognitions and empowerment acts: recognizing the importance of gender. *Group and Organization Management*, 25, 354-373.

- Fang, S. C. & Wang, J. F. (2006). Effects of organizational culture and learning on manufacturing strategy selection: An empirical study. *International Journal of Management*, 23, 503-514.
- Fiol, C. M., & Lyles, M. A. (1985). Organizational learning. *Academy of Management Review*, 19, 803–813.
- Fox, R. J., Crask, M.R., & Kim, J. (1988). Mail survey response rate: A meta-analysis of selected techniques for inducing response. *Public Opinion Quarterly*, 52, 467-491.
- Friedman, V. J., Liphstiz, R. & Popper, M. (2005). The mystification of organizational learning. *Journal of Management Inquiry*, 14(1), 19-30.
- Gaertner, S. (2000). Structural determinants of job satisfaction and organizational commitment in turnover models. *Human Resource Management Review*, 9, 479-493
- Gardiner, P. & Leat, M. (2001). Learning in organizations: HR implications and considerations. *Human Resource Development International*, 4(3), 391-405.
- Garavan, T. N. & McCarthy, A. (2008). Collective learning process and human resource development. *Advances in Developing Human Resources*, 10 (4), 451-471.
- Garratt, B. (1999) The learning organization 15 years on: Some personal reflections. *The Learning Organization*, 6(5), 202-206.
- Garvin, D. A. (2000). *Learning in Action: A Guide to Putting the learning Organization to Work*, Boston, Mass: Harvard Business School.
- Garvin, D. A (1993). Building a learning organization. *Harvard Business Review*. 7. 78-91.

- Garrido, M. J., & Camerero, C. (2010). Assessing the impact of organizational learning and innovation on performance in cultural organizations. *International Journal of Non-Profit and Voluntary Sector Marketing*, 15(3), 215-242.
- Grant, R. M. (1996). Prospering in dynamically competitive environment: organization capability as knowledge integration. *Organization Science*, 7 (4), 375-87.
- Grant, R. M. (1996). Towards a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109–122
- Guest, D. (1987). Human resource management and industrial relations. *Journal of Management Studies*, 24, 503-521.
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organisational Behaviour and Human Performance*, 16 (4), 250-279.
- Harper, W.M. (2000).
- Hamel, G. & Prahalad, C. K. (1994). *Competing for the Future*. Boston, MA: Harvard Business School Press.
- Hansen, M. T., Nohria, N. & Tierney, T. (1999). What's your strategy for managing knowledge. *Harvard Business Review*. 77(2), 106-116.
- Hair, J., Anderson, R., Tatham, R. & Black, W. (1998). *Multivariate Data Analysis*. 5th Edition. Upper Saddle River, NJ: Prentice Hall.
- Heraty, N., Morley, J. M. and Cleveland, N. J. (2008). Complexities and challenges in the working family interface. *Journal of Managerial Psychology*, Vol. 23, 209- 214.
- Herzberg, F. (1966). *Work and the nature of man*. Cleveland: World.
- Heilman, M. E. (2001), Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues*, 57,657-674.

- Hitt, W. (1996). The learning organization: Some reflections on organizational renewal. *Leadership and Organization Development Journal*, 16(8), 17-25.
- Hitt, M. A., Bierman, L., Shimizu, K. & Kochhar, R. (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: A Resource-based perspective. *Academy of Management Journal*, 44(1), 14-28.
- Hirst, G., Knippenberg, D.V. & Zhou, J. (2009). A cross-level perspective on employee creativity: goal orientation, team learning behaviour and individual creativity. *Academy of Management Journal*, 52(2), 280-293.
- Hogel, M., Parboteeah, K. P. and Munson, C. L. (2003). Team-level Antecedents of Individuals' Knowledge Networks. *Decision Sciences*, 34(4), 741-70.
- Hoskisson, R. E., Eden L., Chung M. L. & Wright, M. (2000). Strategy in emerging economies. *The Academy of Management Journal*, 43(3):249-267.
- Huang, J. W. & Li, Y. H. (2009). The mediating effect of knowledge management on social interaction and innovation performance. *International Journal of Manpower*, 30(5), 285-301.
- Huang, Y. M. & Chi, S. L. (2005). The Role of social capital in the relationship between human capital and career mobility: Moderator or mediator? *Journal of Intellectual Capital*, Vol.6, Issue 2.
- Huber, G. P. (1991). Organizational learning: The contributing processes and literatures. *Organization Science*, 2(1), 88-115.
- Huselid, M. A. (1995). The Impact of HRM practices on turnover, productivity and corporate financial performance. *Academy of Management Journal*, 38, 635-672.

- Ibua, M. P. (2014). *The influence of institutional factors and job related attitudes on the relationship between employee empowerment and performance of public universities in Kenya*. (Unpublished Ph. D Thesis). School of Business, University of Nairobi.
- Ikeno, H., Nishioka, T., Hachida, T., Kanzaki, R., Seki, Y., Ohzawa, I. & Usui, S. (2007). development and application of CMS-Based database modules for neuroinformatics. *Neurocomputing*, 70, 2122-8.
- Iles, P. (1994). Developing a learning environment: Challenges for theory, research and practice. *Journal of European Training*, 18(3), 3-9.
- Ittner, C. D., Larcker, D. F. & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting, Organization and Society*, 28, 715-741.
- Ives, W., Torrey, B. & Gordon, C. (1998). Knowledge management is an emerging area with a long history. Andersen Consulting.
- Jacobs, R. (1995). Impressions about the learning organization: Looking to see what is behind the curtain. *Human Resource Development Quarterly*, 6(2), 119-122.
- Jackson, S. & Schuler, R. S. (2000). *Managing Human Resources: A Partnership Perspective*. 7th Edition. Ohio: Thompson Learning.
- Jamali, D., Sidani, Y. & Zouein, C. (2009). The learning organization: tracking progress in a developing country: A comparative analysis using the DLOQ. *The learning organization*, 16(2), 103 – 121.
- Jansen, O. & Van Yperen, N.W. (2004). Employees goal orientation, the quality of leader-member exchange and outcomes of job performance and job satisfaction. *Academy of Management Journal*, 47, 368-384.
- Jantunen, A. (2005) Knowledge-processing capabilities and innovative performance: An empirical study. *European Journal of Innovation Management*, 8, 336-49.

- Jones, A. M. & Hendry, C. (1992). The learning organization: A review of the literature and practice. *The Human Resource Development Partnership*.
- June, (2005). Drivers of knowledge management in the cooperate environment. *International Journal of Information Management*. 25(3), 193-202.
- Kagiri, R. M. (2008). *Knowledge Management Strategy, Organizational Competence and Competitiveness in Kenya's Commercial Book Publishing Industry*. (Unpublished Ph.D Thesis).School of Business, University of Nairobi.
- Kaiser, S. M. & Holton, E. F. (1998). The learning organization as a performance improvement strategy. In Torraco, R. (Ed.). Proceedings of the 1998 Annual Academy of Human Resource Development Conference. Oak Brook, IL.
- Kaplan, R. & Norton, D. P. (1992). The balanced scorecard- measures that drive performance. *Harvard Business Review*, 70(1), 71-79.
- Kariuki, A. (2014). *Intellectual Capital, Corporate Reputation, Corporate Culture and Performance of Firms Listed at the Nairobi Securities Exchange*. (Unpublished Ph. D Thesis). School of Business, University of Nairobi.
- Karash, R. (2002). Learning organization dialog on learning organizations. Available at: <http://world.std.com/>.
- Khadra, M. F. A. & Rawabdeh, I. A. (2006). An assessment of development of the learning organization concept in Jordanian industrial companies. *The Learning Organization*, 13 (5), 455-474.
- Khatri, N. (2000). Managing human resources for competitive advantage: A study of companies in Singapore. *International Journal of Human Resource Management*, 11(2), 336-365.
- Kenya association of manufacturers (KAM) (2014) *Business Directory*.

- Kenya association of manufacturers (KAM) (2012) Manufacturing survey: A survey of Kenya's manufacturing sector.
- Kenya national bureau of statistics (2014). *Economic Survey*. The Government Printer, Nairobi- Kenya
- Kenya industrial research and development institute (KIRDI) (1997). *Directory of Manufacturing Industries*, 4th Edition.
- Kerber, K. W. & Campbell, J. P. (1987). Job satisfaction: Identifying the important parts among computer sales and service personnel. *Journal of Business and Psychology*, 1(4), 337-352.
- Kidombo, H. J., K'Obonyo, P. & Gakuu, C. M. (2012). Human resource strategic orientation and organizational commitment in Kenyan manufacturing firms. *International Journal of Arts and Commerce*, 7, 7-22.
- Kidombo, H. J. (2007). *Human resource strategic orientation, organizational commitment and firm performance in large private manufacturing firms in Kenya*. (Unpublished Ph.D Thesis). School of Business, University of Nairobi.
- Kilika, J. M. (2012). *Institutional context, collaboration, human resource development infrastructure and performance of universities in Kenya*. (Unpublished Ph. D Thesis). School of Business, University of Nairobi.
- Kim, D. H. (1998). The link between individual and organizational learning. *The Strategic Management of Intellectual Capital*. 41-62.
- Kim, W. G. & Brymer, R. A. (2011). The effects of ethical leadership on manager job satisfaction, commitment, behavior outcomes and firm performance. *International Journal of Hospitality Management*. 30(4), 1020-1026.
- Kofman, F. & Senge, P. M. (1993). Communities of commitment: The heart of learning organizations, in Chawla and Renesch's (ed) *Learning Organizatons :Developing Cultures for Tomorrows Workplace*. American Management Association.

- Kothari, C. R. (2006). *Quantitative techniques*. Vikas Publishing House Ltd.
- Kuo, T. (2011). How to improve organizational performance through learning and knowledge. *International Journal of Manpower*, 32, 581-603.
- Lado, A. A. & Wilson, M. C. (1994). Human resource systems and sustained competitive advantage: A competency based perspective. *Academy of Management Review*, 19 (4), 699-727.
- Laschinger, S. H. K., Finegan, J. & Shamian, J. (2001) Promoting nurses health: Effect of empowerment on job strain and work satisfaction. *Nursing Economics*, 19(2), 42-52.
- Lee, O. F., Tan, J. A., & Javalgi R. (2010). Goal orientation and organizational commitment: individual difference predictors of job performance. *International Journal Of Organizational Analysis*, 18, 129- 150.
- Lee, S. & O'Keefe, R. M. (1996). The effect of knowledge representation schemes on maintainability of knowledge-based systems. *IEEE Transactions on Knowledge and Data Engineering*, 8(1), 173–178
- Lee, Y. C. & Lee, S. K. (2007). Capability, processes and performance of knowledge management: A structural approach. *Human Factors and Ergonomics in Manufacturing*, 17(1), 21-41.
- Leitch, C., Harrison, R., Burgoyne, J. & Blantern, C. (1996) Learning Organizations: The measurement of company performance. *Journal of European Industrial Training*, 20(1), 31-44.
- Lemon, M. & Sahota, P. S. (2004). Organizational culture as a knowledge repository for increased innovative capacity. *Technovation*, 24, 483-98.
- Lepak, D. P. & Snell, S. A. (1998). The human resource architecture: towards a theory of human capital allocation and development. *Academy of Management Review*, 24(1), 31-48.

- Leslie, B., Aring, M. & Brand, B. (1998). Informal learning: The new frontier of employee and organizational development. *Economic Development Review*, 15, 12-18.
- Lewis, D. (2002). Five years on the organization culture saga revisited. *Leadership and Organizational Development Journal* 23,280-287.
- Li-An Ho, (2008). What affects organizational performance? The linking of learning and knowledge management. *Industrial Management and Data Systems*, 108(9),1234-1254.
- Li, M. & Lu, X. (2007). The construct validation of learning organization and its influence upon firm performance in mainland China.
- Lin, H. (2007). Knowledge sharing and firm innovation capability: An empirical study. *International Journal of Manpower*, 28(4), 315-332.
- Loermans, J. (2002). Synergizing the learning organization and knowledge management. *Journal of Knowledge Management*. 6(3), 285-294.
- Locke, E. A. (1976). Job Satisfaction and Job Performance: A theoretical analysis. *Organizational Behaviour and Human Performance*, 5(2), 321-338.
- Lopez, S. P., Peon, J. M. M. & Ordas, C. J. V. (2006). Organization learning as a determining factor in business performance. *The Learning Organization*, 12 (3), 227-45.
- Luthans, F. (2011). *Organizational behavior: An evidence-based approach*. 12th Edition. Boston, McGraw-Hill
- Madhavan, R., & Grover, R. (1998). From embedded knowledge to embodied knowledge: New product development as knowledge management. *Journal of Marketing*, 62(4), 1–12.

- Magutu, P. O. (2013). *Supply chain strategies, technology and performance of large-scale manufacturing firms in Kenya*. (Unpublished Ph. D Thesis). School of Business, University of Nairobi.
- Maqsood, T., Walker, D. & Finegan, A. (2007). Extending the knowledge advantage: Creating learning chains. *The Learning Organization*, 14(2) 123-141.
- Marshall, C., Prusak, L. & Shpilberg, D. (1996) Financial risk and the need for superior knowledge management. *California Management Review*, 38, 77-101.
- Matlay, H. (1997) *Learning organization in context: A literature review*. London: Edexcel
- Maurer, T. J. & Lippstreu, M. (2008). Who will be committed to an organization that provides support for employee development? *Journal of Management Development*, 27 (3), 328-347.
- Maurer, T. J., Weiss, M. and Barbeite, F. (2003). A model of involvement in work-related learning and development activity: The effects of individual, situational, motivational and age variables. *Journal of Applied Psychology*, 8(4).
- Meyer, J. P. & Allen, N. J. (1991). A three component of conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61-89.
- Minbaeva, D., Pedersen, J. Bjorkman, I., Fey, C. & Park, H. (2003) MNC knowledge transfer, subsidiary absorptive capacity and knowledge transfer. *Journal of International Business Studies*, 34, 586-99.
- Mirkamali, S. M., Thani, F.N. & Alami, F. (2011). Examining the role of transformational leadership and job satisfaction in the original learning of an automotive manufacturing company. *Social Behavioral Sciences*. 29, 138-148.
- Morgan, G. (1988). *Riding the waves of change: Developing managerial competencies for a turbulent world*. San Francisco: Jossey-Bass.

- Mohanty, R. P. & Deshmukh, S.G. (1999). Evaluating manufacturing strategy for a learning organization: A case. *International Journal of Operations and Production Management*, 19(3), 308-328.
- Moilanen, R. (2005). Diagnosing and measuring learning organizations. *The Learning Organization*, 12(1), 71-89.
- Mowday, R.T., Porter, L.W. & Steers, R.M. (1979). The measurement of organizational commitment. *Journal of Vocational Behaviour*, 14, 224-247.
- Mulabe, J. K. (2013). *Human resource strategic orientation, employee outcomes, organizational factors and performance of state corporations in Kenya*. (Unpublished Ph.D Thesis). School of Business, University of Nairobi.
- Mulraney, J. & Turner, P. (2001) Learning from small enterprise structured work placement. Proceedings of the 4th Annual Conference of the Australian Vocational and Training Research Association (AVETRA). Adelaide, 107-130.
- Murgor, P. K. (2014). *External environment, firm capabilities, strategic responses and performance of large scale manufacturing firms in Kenya*. (Unpublished Ph. D Thesis). School of Business, University of Nairobi.
- Nachmias, C. F. & Nachmias, D. (2004). *Research methods in the social sciences*. 5th Edition. India: Replica Press.
- Nair, K. U. (2001). Adaptation to creation: Progress of organizational learning and increasing complexity of learning systems. *Systems Research and Behavioural Sciences*, 18(6), 505-21.
- Nervis, E. C., Dibella, A. J. & Gould, J. M. (1995) Understanding learning organizations. *Sloan Management Review*, 36(2), 73-85.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science* 5(1), 14–37.

- Nonaka, I. & Takeuchi, H. (1995). The knowledge creating company. *Harvard Business Review*, 69, 96-104.
- Northouse, P. G. (2007). *Leadership theory and practice*. 4th Edition. New Delhi: Sage Publications
- Nunnally, J. (1978). *Psychometric Theory*. 2nd Edition. New York, McGraw Hill.
- Nzuve, S. N. M. & Omolo, E. A. (2012). A study of the practice of the learning organization and its relationship to performance among Kenyan commercial banks. *Problems of Management in the 21st Century*, 4, 45-56.
- O'Brien, R.M. (2007). A caution regarding rules of thumb for VIF. *Quality and Quantity*, 41(5), 673-80.
- Oltra, V. & Vivas-Lopez, S. (2013). Boosting organizational learning through team-based talent management: What is the evidence from large Spanish firms. *International Journal of Human Resource Management*, 24, 1853-1871.
- Omari, S. M. (2012). *The influence of contextual and cognitive factors on the relationship between employee characteristics and employee outcomes in Kenyan public corporations*. (Unpublished Ph.D Thesis). School of Business, University of Nairobi.
- Ombaka, B. E. (2014). *Resources, external environment, innovation and performance of insurance companies in Kenya*. (Unpublished Ph.D Thesis). School of Business, University of Nairobi.
- Ortenblad, A. (2002). A typology of the ideas of learning organization. *Management Learning*, 33(2), 213-230.
- Ortenblad, A. (2004). The learning organization: Towards an integrated model. *The Learning Organization*, 11 (2), 129-144.

- Osborne, J. & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research & Evaluation*, 8(2).
- Pearn, M., Roderick, C. & Mulrooney, C. (1995). *Learning organizations in practice*. Maidenhead: McGrawhill.
- Pedler, M., Burgoyne, J. & Boydell, T. (1991). *The learning company: A strategy for sustainable development*, London: McGraw-Hill.
- Penrose, E.T. (1959). *The theory of the growth of the firm*. New York, Wiley.
- Peters, T. & Waterman, R. (1982). *In search of excellence: Lessons from America's best run companies*. London, Harper & Row,
- Pool, S. & Pool, B. (2007). A management model: Measuring organizational commitment and its impact on job satisfaction among executive in a learning organization. *Journal of Management Development*, 26(4), 353-369.
- Porter, M. (1985). *Competitive advantage: Creating and sustaining superior performance*. New York: Free Press.
- Porter, M. E. (1998). *Competitive strategy: Techniques for analyzing industries and competition*. New York: Free Press.
- Poulis, E., Poulis, K. & Jackson, P. (2013). Dynamic capabilities: Theoretical approaches and practical applications. Paper presented at the 13th EURAM Conference on Democratizing Management, Istanbul, Turkey.
- Preskill, H. & Torres, R.T. (1999). Building capacity of organizational learning through evaluative inquiry. *Evaluation*, 5(1), 42-60.
- Prieto, I. M. & Revilla, E. (2006). Learning capability and business performance: A non-financial and financial assessment. *The Learning Organization*, 13 (2), 166-185.

- Priem, R. L. & Butler, J. E. (2001). Is the resource based view a useful perspective for strategic management research? *Academy of Management Review*, 26(1), 22-40.
- Probst, G. & Buchel, B. (1997). *Organizational learning: The competitive advantage of the future*. London: Prentice Hall.
- Quinn, F. J. (1997). What's the buzz? *Logistics Management*, 36(2), 43-46.
- Rezgui, Y. (2007). Knowledge systems and value creation: An action research investigation. *Industrial Management and Data Systems*, 107, 166-82.
- Revens, R. (1982). *The origins and growth of action learning*. Bromley: Chartwell Bratt.
- Robey, D., Kho, H. & Powers, C. (2001). Situated learning in cross-functional virtual teams. *IEEE Transactions on Professional Communications*, 43(1), 51-66.
- Rodriguez, J. M. & Ventura, J. (2003). Human resource management system and organizational performance: An analysis of the Spanish manufacturing industry. *International Journal of Human Resource Management*, 14(7), 1206-1226.
- Rowden R.W. & Conine C. T. J, (2005). The impact of workplace learning on job satisfaction in small U.S commercial banks. *Journal of Workplace Learning*, 17, 215-230.
- Rowden, R.W. (2001). The learning organization and change. *Advanced Management Journal*, 66 (3), 11-20
- Sagwa, E. V. (2014). *Human resource management practices and performance of firms listed at the Nairobi securities exchange*. (Unpublished Ph. D Thesis). School of Business, University of Nairobi.
- Salina, D. & Wan Fadzilah, W. Y. (2010). Knowledge management and firm performance in SMEs: The role of social capital as a mediating variable. *Asian Academy of Management Journal*, 15(2), 135-155.

- Sanchez, R. (2001). *Knowledge management and organization competence*. New York: Oxford University Press.
- Sanderlands, E. (1999). Learning organizations: A review of the literature relating to strategies, building blocks and barriers. *Management Literature in Review*
- Saunders, M. Lewis, P. & Thornhill, A. (2007). *Research methods for business students*. India: Pearson Education.
- Scarborough, H., Swan, J. & Preston, C. (1999). *Knowledge management: A review of the literature*. London, Institute of Personnel and Development.
- Scarborough, H. & Swan, J. (2005). Discourses of knowledge management and the learning organization: their production and consumption. In Easterby-Smith, M. and Lyles, M. (Eds) *Handbook of Organizational Learning and Knowledge Management*. Oxford: Blackwell, 495-512.
- Schein, E. H. (1997). *Organizational learning: What is new? Society for Organizational Learning*. Cambridge: MIT Sloan School of Management
- Sarin, S. & McDermott, C. (2003). The effect of team leadership characteristics on learning, knowledge application and performance of cross-functional new product development teams. *Decision Sciences*, 34(4), 707-739.
- Schrag, F. (1992). In defence of positivist research paradigms. *American Educational Research Association*. 21(5) 5-8.
- Senge, P. M. (1990). *The fifth discipline: The art and practice of learning organization*. New York: Doubleday Currency.
- Slater, S. F. & Narver, J. C. (1995). Market orientation and the learning organization. *Journal of Marketing*, 59, 63-74.
- Smith, P. A. C. & Tosey, P. (1995). Assessing the learning organization: Part 1-theoretical foundations. *The Learning Organization*, 5(4), 193-201.

- Snell, S. A. & Dean, J. W. Jr. (1992). Integrated manufacturing and human resource management. human capital perspective. *Academy of Management Journal*, 35, 467-544.
- Song, M., Bij, H. V. D. & Weggeman, M. (2005). Determinants of the level of knowledge application: A knowledge-based and information-processing perspective. *Journal of Product Innovation Management*, 22,430-440.
- Spender, J. C. & Grant, R. M. (1996). Knowledge and the firm: Overview. *Strategic Management Journal*, 17, 5–9.
- Storberg-Walker, J. & Gubbins, C. (2007). Understanding and doing HRD: Social capital and social networks perspectives. *Advances in Developing Human Resources*, 9(3).
- Svetlik, I. & Stavron-Costea, E. (2007). Connecting human resource management and knowledge management. *International Journal of Manpower*, 28(3), 197-206.
- Tan, J. (1996). Regulatory environment and strategic orientations in a transitional economy: A study of Chinese private enterprises. *Entrepreneurship Theory and Practice*, 21, 31-46.
- Teece, D., Pisano, G., & Shuen, A. (1997). Dynamics, capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-534.
- Tippins, M. J. & Sohi, R. S. (2003). IT competency and firm performance: is organizational learning a missing link? *Strategic Management Journal*. 24(8). 745-61.
- Tiwana, A. (2002). The knowledge management toolkit: Practical techniques for building knowledge management. NJ: Prentice Hall, Upper Saddle River.
- Torrington, D., Hall, L. & Taylor, S. (2008). *Human resource management*. England: Pearson Education Ltd.

- Tsang, M. C., Rumberger, R. W. & Levine, H. M. (1991). The impact of surplus schooling on worker productivity. *Industrial Relations*, 30, 209-228.
- Ulrich, D. & Lake, D. (1991). Organizational capability: Creating competitive advantage. *Academy of Management Executive*. 7(1), 77-92.
- Vandewalle, D. (1997). Development and validation of a work domain goal orientation instrument. *Educational and Psychological Measurement*. 8, 995-1015.
- Venkattraman, N. & Ramannujam, V. (1986). Measurement of business performance in strategy research. *Academy of Management Review*. 11, 801-814.
- Verkasalo, M. & Lappalainen, P. (1998). A method of measuring the efficiency of the knowledge utilization process. *IEEE Transactions on Engineering Management*, 45(4), 414-423.
- Wang, C. L. & Ahmed, P. K. (2002). A review of the concept of organizational learning. *Management Research Centre*, 1-19.
- Watkins, K. E. & Marsick, V. J. (1993). *Sculpting the learning organization: Lessons in the art and science of systemic change*. San Francisco: Jossey- Bass
- Watkins, K. E. & Marsick V. J. (1996). *In action: Creating the learning organization*. Alexandria, VA: American Society for Training and Development.
- Wenerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*. 5. 171-180.
- Wetherington, J. M. & Daniels, M.K. (2013). The relationship between learning organization dimensions and performance in the non-profit sector. *Journal for Non-Profit Management*, 90-104.
- Whee, T.T.G., Ngah, R. & Seng, Y. C. (2012). The relationship between knowledge management capabilities, learning organization and organizational performance. *Knowledge Management International Conference*. Johor, Bahur and Malaysia.

- Wickramasinghe, N. (2007). Fostering knowledge assets in healthcare with knowledge management model. *International Journal of Management and Enterprise Development*, 4(1), 52-65.
- Wiklund, J. & Shepherd, D. (2003). Knowledge- based resources, entrepreneurial orientation and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(9), 1307-14.
- Wong, K.Y. & Aspinwall, E. (2004). Characterizing knowledge management in the small business environment. *Journal of Knowledge Management*, 8(3), 44-61.
- Wright, P. M. & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management*, 18, 295-320.
- Wright, D. L. (1997). The Effects of organizational and individual learning on job satisfaction and organizational commitment. *Dissertations Abstracts International*, 58(10), 3993-4192.
- Wright, P. M. & Snell, S. A. (1998). Toward a unifying framework for exploring fit and flexibility in strategic human resource management. *Academy of Management Review*, 1(3), 203-224.
- Wright, P. M., Dunford, B. B. & Snell, S. A. (2001). Human resources and resource-based view of the firm. *Journal of Management*, 27(6), 701-721.
- Wright, P. M. & Kehoe, R. R. (2013). The impact of high performance human resource practices on employee attitudes and behaviours. *Journal of Management*, 39(2), 366-391.
- Yang, B., Watkins, K. & Marsick, V. (2004). The construct of the learning organization: dimensions, measurement and validation. *Human Resource Development Quarterly*, 15(1), 31-55.
- Yang, C. & Chen, L. (2009). On using organizational knowledge capabilities to assist organizational learning. *Springer Science Business Media*, 303- 306

- Youndt, M. A., Snell, S. A., Dean, J. W. Jr. & Lepak, D. P. (1996). Human resource management, manufacturing strategy and firm performance. *Academy of Management Journal*, 39, 836-866.
- Zack, M. H. (1999). Managing codified knowledge. *Sloan Management Review*, 40(4), 45- 58.
- Zahra, S. A., & George, G. (2002). Absorptive Capacity: A Review, reconceptualization, and extension. *Academy of Management Review*, 17, (2), 185-203.
- Zhao, Y., Li, Y., Lee, S. H. & Chen, L. B. (2011). entrepreneurial orientation, organizational learning and performance: Evidence from China. *Entrepreneurship Theory and Practice*. 35(2), 293-317.
- Zikmund, W. G. (2003). *Business research methods* (7th ed.). Indiana, United States of America: Thomson Publishers.
- Zikmund, W. G., Babin, B.J., Carr, J. C. & Griffin, M. (2010). *Business research methods*. 8th Edition. Australia: South-Western, Cengage Learning.
- Zimmerman, R. & Todd, D. (2009). The Impact of job performance on employee turnover intentions and the voluntary turnover process a meta-analysis and path model. *Personnel Review*, 38, 142- 158.

APPENDICES

Appendix 1: Letter of Introduction from University of Nairobi



UNIVERSITY OF NAIROBI
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
SCHOOL OF BUSINESS
DOCTORAL STUDIES PROGRAMME

Telephone: 2059163/4 Ext. 213
Email: dsp@uonbi.ac.ke

P.O. Box 30197
Nairobi, Kenya

26th March, 2015

TO WHOM IT MAY CONCERN

RE: ROSE AMBULA: D80/80201/2009


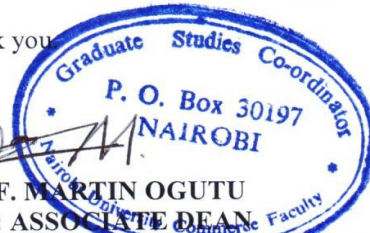
This is to certify that, **ROSE AMBULA: D80/80201/2009** is a PhD candidate in the School of Business, University of Nairobi. The title of her study is: “**Learning Organization, Knowledge Management Employee Outcomes and Firm Performance of Large Manufacturing Firms in Kenya.**”

The purpose of this letter therefore, is to kindly request you to assist and facilitate in carrying out the research/study in your organization. A questionnaire is herewith attached for your kind consideration and necessary action.

Data and information obtained through this exercise will be used for academic purposes only. Hence, the respondents are requested not to indicate their names anywhere on the questionnaire.

We look forward to your cooperation.

Thank you



PROF. MARTIN OGUTU
FOR: ASSOCIATE DEAN
GRADUATE BUSINESS STUDIES
SCHOOL OF BUSINESS

SNMN/mwk

Appendix 2: Researchers Letter of Introduction

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: PERMISSION TO CONDUCT PH.D RESEARCH

I am a Doctoral Candidate at the University of Nairobi, School of Business. As part of the requirements for the award of the degree, I am expected to conduct a field study in the manufacturing sector, specifically firms that are registered members of Kenya Association of Manufacturers (KAM). The title of my study is “Learning Organization, Knowledge Management, Employee Outcomes and Firm Performance.”

I am pleased to inform you that your organization falls within the population of interest. I kindly request you to assist me collect data by filling the attached questionnaire. The data collected will be used for academic purpose only and will not be divulged to any third party without your consent or prior authority.

Your cooperation in this exercise will be highly appreciated. The copy of the final report can be made available to you at your request.

Thank you.

Sincerely,

Rose Ambula

rosevike@yahoo.com

0722 828 226

**Appendix 3: Letter of Introduction from National Commission for Science,
Technology and Innovation**



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

24th April, 2015

NACOSTI/P/15/1392/5799

Rose Vike Ambula
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Learning organization, knowledge management, employee outcomes and performance of large manufacturing firms in Kenya*" I am pleased to inform you that you have been authorized to undertake research in **selected Counties** for a period ending 31st July, 2015.

You are advised to report to **the Directors of selected manufacturing firms, the County Commissioners and the County Directors of Education of the selected Counties** before embarking on the research project.

On completion of the research, you are required to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.


DR. S. K. LANGAT, OGW
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The Directors
Selected Manufacturing Firms.

The County Commissioners
Selected Counties.

National Commission for Science, Technology and Innovation is ISO 9001:2008 Certified

Appendix 5: Questionnaire

This questionnaire is designed to collect data on Learning Organization, Employee Outcomes, Knowledge Management and Performance of Large Manufacturing Firms in Kenya. Kindly respond to each item in the questionnaire. The information provided will be used for academic purpose only and will be treated with strict confidence.

PART A: PERSONAL AND ORGANIZATION DETAILS

1. Gender: Tick one of the brackets Male () Female ()
2. How long have you worked in this organization: Tick one of the boxes

0-2 years	3-5 years	6-8 years	9-11 years	12-14 years	Above 15 years

3. Company size (No. of employees): Tick against the appropriate number of employees

100- 150	151- 200	201-250	251- 300	301- 350	351- 400	Above 400

4. Type of industry: Tick one of the boxes on the right to show the type of company you work for

Building, Construction and Mining		Motor Vehicle and Accessories	
Chemical and Allied		Paper and Board	
Energy, Electricals and Electronics		Pharmaceutical and Medical Equipment	
Food and Beverage		Plastics and Rubber	
Leather and Footwear		Textiles and Apparel	
Metal and Allied		Timber, Wood and Furniture	

5. Tick one of the boxes to show the number of years the company has been in operation/business

0-5 years	6-10 years	11-15 years	16-20 years	21-25 years	Above 25 years

6. Business ownership: Tick one of the brackets

Private () Public ()

PART B: LEARNING ORGANIZATION (HUMAN RESOURCE MANAGER)

Indicate the extent to which you agree with each of the following statements concerning learning organization in your company

Key: 1=Not at all 2=Little extent 3=Some extent 4=Large extent 5= Very large extent

7.0	Continuous Learning	1	2	3	4	5
7.0.1	Employees openly discuss mistakes in order to learn from them					
7.0.2	Employees identify skills they need for future work tasks					
7.0.3	Employees look for opportunities to learn new skills					
7.0.4	Employees receive money and other resources to support their training and development					
7.0.5	Employees are given time to pursue further training					
7.0.6	Employees view problems in their work as an opportunity to learn					
7.0.7	Employees are rewarded for further training					
7.1	Dialogue and Inquiry					
7.1.1	Employees give open and honest feedback to each other					
7.1.2	Employees listen to others' views before speaking					
7.1.3	Employees are encouraged to ask 'why' regardless of rank/position					
7.1.4	Employees treat each other with respect					
7.1.5	Employees engage in dialogue because of trust they have in each other					
7.2	Team Learning					
7.2.1	Teams/groups learn by developing their goals within guidelines provided by management					
7.2.2	Members of teams/groups treat each other as equals regardless of rank/position					
7.2.3	Teams/groups revise their decisions as a result of group discussion or information collected					
7.2.4	Teams/groups are rewarded for their collective achievement					

7.2.5	Members of teams/groups learn new skills and knowledge from each other					
7.3	Embedded systems					
7.3.1	My organization encourages two-way communication					
7.3.2	Employees are able to get information they need for their work at the shortest time possible					
7.3.3	My organization maintains up-to-date database relevant for decision making					
7.3.4	My organization gives employees feedback about their performance					
7.3.5	My organization facilitates evaluation of training programs					
7.4	Empowerment	1	2	3	4	5
7.4.1	My organization recognizes employees for taking initiative					
7.4.2	My organization allows employees to use their own discretion in carrying out work assignments					
7.4.3	My organization encourages participative decision making					
7.4.4	My organization gives employees control over resources they need to accomplish their work					
7.4.5	My organization supports employees who take calculated risks					
7.5	Systems Connectivity					
7.5.1	My organization helps employees balance work and family					
7.5.2	My organization encourages employees to think from a global perspective					
7.5.3	My organization encourages employees to bring customers views into the decision making process					
7.5.4	My organization considers the impact of management decisions on employee morale					
7.5.5	My organization works with outside community to meet their needs					
7.6	Strategic Leadership					
7.6.1	Organizational leaders generally support requests by employees for training					
7.6.2	Organizational leaders share information with employees about competitors, industry trends and strategic goals of the organization					
7.6.3	Organizational leaders inspire employees to internalize the organization vision					
7.6.4	Organizational leaders mentor and coach their subordinates					
7.6.5	Organizational leaders ensure that the organization's actions are consistent with its values					

PART C: KNOWLEDGE MANAGEMENT (HUMAN RESOURCE MANAGER)

Indicate the extent to which you agree with each of the following statements concerning knowledge management in your company

Key: 1=Not at all 2=Little extent 3=Some extent 4=Large extent 5= Very large extent

8.0	Knowledge Acquisition	1	2	3	4	5
8.0.1	My organization acquires knowledge from external sources for developing new products					
8.0.2	My organization acquires market development skills from business partners					
8.0.3	My organization acquires new technologies from business partners					
8.0.4	My organization obtains information from its research and development activities					
8.0.5	My organization collects information on consumer needs and preferences					
8.1	Knowledge Application					
8.1.1	My organization uses knowledge to solve new problems					
8.1.2	My organization uses knowledge to respond to consumer needs and preferences					
8.1.3	My organization utilizes different sources and types of knowledge for decision making					
8.1.4	My organization encourages employees to utilize knowledge to solve work related problems					
8.2	Knowledge Sharing					
8.2.1	In my organization supervisors share knowledge with subordinates					
8.2.2	In my organization employees share knowledge through learning by doing and learning by watching					
8.2.3	In my organization knowledge is shared across units					
8.2.4	In my organization knowledge is shared among business partners					

PART D: EMPLOYEE OUTCOMES (EMPLOYEES)

Indicate the extent to which you agree with each of the following statements concerning employee outcomes in your company

Key: 1=Not at all 2=Little extent 3=Some extent 4=Large extent 5= Very large extent

9.0	Part 1: Organizational Commitment	1	2	3	4	5
9.0.1	Employees are willing to continue working in this organization					
9.0.2	Employees readily accept increasingly challenging performance standards					
9.0.3	Employees are willing to contribute much more to the organization than their formal contractual obligation					
9.0.4	Employees always look forward to coming to work					
9.0.5	Employees willingly accept any type of job assignment in order to keep working for this organization					
9.0.6	Employees make no plans to work elsewhere					
9.0.7	Employees respond positively to dynamic performance requirements					
9.0.8	Employees look for developmental opportunities that enhance their value to the organization					
9.0.9	Employees talk about this organization as a great organization to work for					
9.0.10	Employees are reluctant to change to another employer even if the organization was not doing well					
9.1	Part 2: Job Satisfaction	1	2	3	4	5
9.1.1	Employees are satisfied with opportunities for advancement					
9.1.2	Resources/equipment provided by the organization are adequate					
9.1.3	Employees are satisfied with the chance to do something that makes use of their abilities					
9.1.4	Employees are satisfied being able to keep busy all the time					
9.1.5	Employees are satisfied with the working conditions					
9.1.6	Employees perceive their jobs to be highly meaningful					
9.1.7	Employees are satisfied with pay compared to the amount of work they do					
9.1.8	Methods used to resolve grievances are adequate					
9.1.9	Co-workers get along with each other					
9.1.10	Supervisors are competent in making decisions					

PART E: FIRM PERFORMANCE

FINANCIAL PERFORMANCE (FINANCE MANAGER)

Indicate the extent to which you agree with each of the following statements concerning financial performance in your company

Key: 1=Not at all (0 increase or decline) 2=Little extent (1-25% increase) 3=Some extent (26-50%) 4=Large extent (51-75%) 5= Very large extent (76-100%)

10.0	Financial Perspective	1	2	3	4	5
10.0.1	My organization’s net profit margin has increased over the past five years					
10.0.2	My organization’s gross profit margin has increased over the past five years					
10.0.3	The ability of my organization to meet its current debts has improved over the past five years					
10.0.4	Growth in sales has increased over the past five years					
10.0.5	The rate of return on shareholders’ investment has increased over the past five years					

NON-FINANCIAL PERFORMANCE (PRODUCTION MANAGER)

Indicate the extent to which you agree with each of the following statements concerning non-financial measures of performance in your company

Key: 1=Not at all 2=Little extent 3=Some extent 4=Large extent 5= Very large extent

10.1	Customer Perspective	1	2	3	4	5
10.1.1	My organization has received few customer complaints over the past five years					
10.1.2	My organization has retained most of its customers over the past five years					
10.1.3	My organization has attracted a large number of new customers over the past five years					
10.1.4	My organization focuses on specific market segments to provide better service than its competitors					
10.2	Internal Business Process					
10.2.1	Level of creativity and innovation of new products is high					
10.2.2	Ratio of good output to total output is high					
10.2.3	Rate of waste in the production process is low					
10.2.4	The number of defective products is low					

10.3	Learning and growth					
10.3.1	My organization has continually reduced time to market new products					
10.3.2	The number of new product launches has increased over the past five years					
10.3.3	My organization uses knowledge from research and development to develop new products					
10.3.4	Employees perform tasks that allow them to acquire new skills and knowledge					
10.3.5	Employee turnover has reduced over the past five years					

Appendix 6: Selected Firms

Building, Construction and Mining (3)	
East African Portland Cement	Mombasa Cement
Karsan Murji & Co. Ltd	
Chemical and Allied (13)	
Bayer East Africa	Pyrethrum Board of Kenya
Blue King Products	Rumoth Group of Co. Ltd
Decase Chemicals Ltd	Soilex Prosolve
Eveready Batteries East Africa	Syngenta
Ken Nat Ink & Chemicals	Twiga Chemicals
Murphy Chemicals	Sara Lee
Orbit Chemicals Industries	
Energy, Electricals and Electronics (7)	
International Energy Technik	Socabelec E. A. Ltd
Karani Biofuel	Synergy Pro
Kenya Power Co. Ltd	Marshall Fowler Engineers
Mustek E. A. Ltd	
Food and Beverages (28)	
Agriner Agricultural Development	Kamili Packers
Buzeki Dairy Ltd	Kenya Nut Co.Ltd
Chai Trading Co. Ltd	British American Tobacco
Chirag Kenya Ltd	Eastern Produce Kenya
Melvin Marsh International	Trust Flour Mills
Mombasa Maize Millers	T.S.S Green Millers
Nairobi Flour Mills	Nicola Farms Ltd
E.A. Breweries	Palmhouse Diaries Ltd
Erdermann Co.Ltd	Pembe Flour Mills
Excel Chemicals	Premier Food Industries
Global Tea & Commodities	Rafiki Millers Ltd
Gold Crown Foods (EPZ) Ltd	Spice World Ltd
James Finlay KenyaLtd	Usafi Services Ltd
Jetlak Foods Ltd	W.E. Tilley
Leather and Footwear (1)	
Bata Shoe Co. (Kenya) Ltd	
Metal and Allied (12)	
Africa Marine & General Engineering Co.	Orbit EngineeringLtd
Allied E.A Ltd	Sheffield Steel Systems
Alloy Steel Casting Ltd	Kaluworks
Brollo Kenya	Khetshi Dharamshi & Co Ltd

Devki Steel Mills Ltd	Kitchen King
Nampak Kenya Ltd	Mabati Rolling Mills
Motor vehicle and Accessories (5)	
Associated Battery Manufacturers E.A Ltd	Theevan Enterprises Ltd
Auto Spring Manufacturers Ltd	Kenya Grange Vehicle Industries Ltd
Megh Cushion Industries	
Paper and Board (11)	
Carton Manufacturers	Kenafic Diaries Manufacturers Ltd
Colour Labels	Label Converters
Colour Print	Nation Media Group Printing Plant
Ellams Products	Printwell Industries
Graphics and Allied Ltd	The Rodwell Press Ltd
Interlables Africa	
Pharmaceutical and Medical Equipment (4)	
Beta Healthcare Ltd	Medivet Products
Biodeal Laboratories Ltd	Revital Healthcare (EPZ) Ltd
Plastics and Rubber (12)	
Bobmil Industries Ltd	Kingsway Tyres
Elgitread (Kenya) Ltd	lastics & Rubber Industries
Kamba Manufacturing (1986) Ltd	Super Manufacturers
Kentainers	Umoja Rubber Proucts
Kenya Suitcase Manufacturers	Uni-Plastics
Metro Plastics Kenya Ltd	Haco Tiger Brands
Textiles and Apparels (8)	
Alltex EPZ Ltd	Kenya Trading (EPZ) Ltd
Kenya Knit Garment (EPZ) Ltd	Unified Aryan (EPZ) Ltd
Spin Knit Ltd	World of Kikoys
Tarpo Industries Ltd	
Timber and Furniture (4)	
Comply Industries	Shamco Industries
Kenya Wood Ltd	Twiga Stationers

Source: Kenya Association of Manufacturers Directory 2014

Appendix 7: Company Size Classification Structure

		No. of employees			
Country	Micro	Small Scale	Medium Scale	Large Scale	Source
Ethiopia		2 - 10	21 - 50	Above 51	FEMSEDA
Tanzania	1-4	5 - 49	50 - 99	100 and above	TCCIA
Zambia	< 10	10 - 50	51 - 100	100 and above	Zambia Development Agency
China		Less than 300	300 - 2000	More than 2000	National Bureau of Statistics of China
UK		0 - 49	50 - 249	250 and above	Business Population Estimates
USA	500 or fewer	500 - 749	750 - 999	1000 and above	NAICS
Japan	< 50	50-299	300-999	1000 and above	Teikoku Databank Classification
South Africa	5-20	21-50	51-200	201 and above	National Small Business Act 102 of 1996
Kenya	10 or fewer	11-50	51-100	100 and above	KIRDI

Appendix 8: Large Scale Manufacturing Firms in Kenya

Building, Construction and Mining sector (15)			
Company	Operation	Company	Operation
Athi River Mining	Athi River	Kenbro Industries Ltd	Nairobi
Bamburi Cement Ltd	Nairobi	Kenya Builders & Concrete	Nairobi
Central Glass Industries	Nairobi	Malindi Salt Works	Mombasa
East African Portland Cement	Athi River	Manson Hart Kenya	Nairobi
Homa Line Company	Muhoroni	Mombasa Cement Ltd	Mombasa
International Energy Technik Ltd	Nairobi	Orbit Enterprises Ltd	Nairobi
Karsan Murji & Co. Ltd	Nairobi	Saj Ceramics Ltd	Nairobi
Kemu Salt Packers Production	Mombasa		
Chemical and Allied Sector (60)			
Anffi Kenya Ltd	Nairobi	Match Masters Ltd	Nairobi
Basco Products Ltd	Nairobi	Metoxide Africa	Nairobi
Bayer East Africa Ltd	Nairobi	Milly Glass Works Ltd	Mombasa
Belersdorf East Africa Ltd	Nairobi	Murphy Chemicals Ltd	Nairobi
Blue King Products Ltd	Nairobi	Odex Chemicals Ltd	Nairobi
BOC Kenya Ltd	Nairobi	Orbit Chemicals Industries Ltd	Nairobi
Buyline Industries Ltd	Nairobi	Osho Chemicals Industries Ltd	Nairobi
Carbacid (CO2) Ltd	Nairobi	Pan Africa Chemicals Ltd	Webuye
Chemical and Solvents (E.A.) Ltd	Nairobi	Polychem E.A.	Webuye
Continental Products Ltd	Nairobi	Procter & Gamble E. A. Ltd	Nairobi
Cooper K-Brands Ltd	Nairobi	Pyrethrum Board of Kenya	Nairobi
Crown Gases Ltd	Nairobi	PZ Cussons E.A. Ltd	Nairobi
Crown Paints (Kenya) Ltd	Nairobi	Reckitt Benckiser (E.A.) Ltd	Nairobi
Colgate palmolive	Nairobi	Revolution Stores Ltd	Nairobi
Magadi Soda	Magadi	Rumoth Group of Co. Ltd	Nairobi
Decase Chemicals Ltd	Nairobi	Sadolin Paints (E.A.) Ltd	Nairobi
Deluxe Inks Ltd	Nairobi	Strategic Industries Ltd	Nairobi
Desbro Kenya Ltd	Nairobi	Soilex prosolve	Nairobi
Eastern Chemicals Industries	Mombasa	Supa Brite Ltd	Nairobi
Elex Products Ltd	Nairobi	Superfoam Ltd	Nairobi
Eveready Batteries East Africa Ltd	Nairobi	Syngenta E.A. Ltd	Nairobi

Galaxy Paints and Coating Co.	Nairobi	Synresins Ltd	Nairobi
Grand Paints Ltd	Nairobi	Tata Chemicals	Magadi
Haco Tiger Brands (E.A.) Ltd	Nairobi	Tri-Clover Industries (K) Ltd	Nairobi
Henkel Kenya Ltd	Nairobi	Tropikal Brand	Nairobi
Interconsumer Products Ltd	Nairobi	Twiga Chemical Industries	Nairobi
Johnson Diversey E.A. Ltd	Nairobi	Unilever E. and Southern Africa	Nairobi
Kapi Ltd	Nakuru	Vitafoam Products Ltd	Nairobi
Kel Chemicals Ltd	Nairobi	Maroo Polymers Ltd	Nairobi
Ken Nat Ink & Chemicals	Nairobi	Sara Lee	Nairobi
Energy, Electricals and Electronics (32)			
Amedo Centre Kenya Ltd	Nairobi	Meltex International Ltd	Nairobi
Assa Abloy E.A. Ltd	Nairobi	Module Engineering Systems	Nairobi
Aucma Digital Technology Africa Ltd	Nairobi	Mustek E.A. Ltd	Nairobi
Avery E.A. Ltd	Nairobi	Nationwide Electrical Industries	Nairobi
Baumann Engineering Ltd	Nairobi	Optimum Lubricants	Westlands
Centurion Systems Ltd	Nairobi	PCTL Automation Ltd	Nairobi
Digitech E.A. Ltd	Nairobi	Pentagon Agencies	Nairobi
East Africa Cables Ltd	Nairobi	Power Technics Ltd	Nairobi
Holman Brothers (E.A.) Ltd	Nairobi	Manufacturers and Supplies (K) Ltd	Nairobi
IberaAfrica Power (E.A.) Ltd	Nairobi	Reliable Electricals Engineers (Ltd)	Nairobi
International Energy Technik	Nairobi	Socabelec (E.A.) Ltd	Nairobi
Karani Biofuel	Nairobi	Sollatex Electronics (Kenya) Ltd	Mombasa
Kenwest Cables Ltd	Nairobi	Specialized Power Systems Ltd	Nairobi
Kenya Petroleum Refineries	Nairobi	Synergy - Pro	Nairobi
Kenya Power Ltd	Nairobi	Virtual City Ltd	Nairobi
Libya Oil Kenya Ltd	Mombasa	Marshall Fowler Engineers	Nairobi
Food and Beverages (133)			
Africa Spirits Ltd	Nairobi	New Kenya Co-operative Cremaries	Nairobi
Bidco Oil Refineries	Thika	Kenya Tea Growers Association	Kericho
Agriner Agricultural Development	Nairobi	Kenya Tea Packers Ltd	Kericho
Agro Chemical & Food Ltd	Muhoroni	Kenya Wine Agencies Ltd	Nairobi

Alliance One Tobacco Kenya	Thika	Keroche Industries Ltd	Naivasha
Al-Mahra Industries Ltd	Nairobi	Kevian Kenya Ltd	Nairobi
Alpha Fine Foods Ltd	Nairobi	Kibos Sugar and Allied Industries	Kisumu
Alpine Coolers Ltd	Nairobi	Kisii Bottlers Ltd	Kisii
Aquamist Ltd	Nairobi	Koba Waters Ltd	Nairobi
Arkay Industries Ltd	Eldoret	Kwality Candies & Sweets Ltd	Nairobi
Belfast Millers Ltd	Nairobi	London Distillers (K) Ltd	Nairobi
The Breakfast Cereal Co. (K) Ltd	Nairobi	Mafuko Industries Ltd	Meru
Broadways Bakery Ltd	Thika	Manji Food Industries Ltd	Nairobi
Brookside Dairy Ltd	Ruiru	Mastermind Tobacco (K) Ltd	Nairobi
Bunda Cakes & Feeds Ltd	Nakuru	Melvin Marsh International	Nairobi
Buzeki Dairy Ltd	Mombasa	Menegai Oil Refineries Ltd	Nakuru
C. Czarnikow Sugar E.A.	Nairobi	Milly Fruit Processors Ltd	Mombasa
Cadbury Kenya Ltd	Nairobi	Mini Bakeries (Nbi) Ltd	Nairobi
Candy Kenya Ltd	Nairobi	Miritini Kenya Ltd	Nairobi
Capwell Industries Ltd	Thika	Mombasa Maize Millers	Mombasa
Centrofood Industries Ltd	Thika	Mount Kenya Bottlers Ltd	Nyeri
Chai Trading Co. Ltd	Mombasa	Mumias Sugar Co. Ltd	Mumias
Chemelil Sugar Co. Ltd	Kisumu	Mzuri Sweets Ltd	Mombasa
Chirag Kenya Ltd	Nairobi	Nairobi Bottlers Ltd	Nairobi
Coastal Bottlers Ltd	Mombasa	Nairob Flour Mills Ltd	Nairobi
Coca-Cola East & Central Ltd	Nairobi	NAS Airport Services Ltd	Nairobi
Del Monte Kenya Ltd	Thika	NesFoods Industries Ltd	Mombasa
Diamond Industries Ltd	Mombasa	Nestle Foods Kenya Ltd	Nairobi
E.A. Breweries Ltd	Nairobi	Nicola Farms Ltd	Maragua
E.A. Sea Food Ltd	Nairobi	Njoro Canning Factory (Kenya)	Nakuru
Eldoret Grains Ltd	Eldoret	Palmhouse Diairies Ltd	Nairobi
Equator Bottlers Ltd	Kisumu	Patco Industries Ltd	Nairobi
Erdermann Co. (K) Ltd	Nairobi	Pearl Industries Ltd	Nairobi
Excel Chemicals Ltd	Nairobi	Pembe Flour Mills Ltd	Nairobi
Farmers Choice Ltd	Nairobi	Premier Flour Mills Ltd	Nairobi
Frigoken Ltd	Nairobi	Premier Food Industries Ltd	Nairobi
Gil Oil Co. Ltd	Nairobi	Proctor & Allan (E.A.) Ltd	Nairobi
Glaciers Products	Nairobi	Promasidor Kenya Ltd	Nairobi
Global Fresh Ltd	Nairobi	Pwani Oil Products :td	Mombasa
Global Tea & Commodities (K) Ltd	Mombasa	Rafiki Millers Ltd	Nairobi

Gold Crown Foods (EPZ) Ltd	Mombasa	Razco Ltd	Nairobi
Gonas Best Ltd	Nairobi	Re-Suns Spices Ltd	Nairobi
Happy Cow Ltd	Nakuru	Rift - Valley Bottlers Ltd	Eldoret
Highlands Cannery Ltd	Nairobi	Sigma Supplies Ltd	Nairobi
Highlands Minerals Water Co. Ltd	Nyeri	Spectre International Ltd	Kisumu
Insta Products (EPZ) Ltd	Nairobi	Spice World Ltd	Nairobi
Jambo Biscuits (K) Ltd	Nairobi	Sunny processors Ltd	Ruiru
James Finlay Kenya Ltd	Kericho	Trufoods Ltd	Nairobi
Jetlak Foods Ltd	Ruiru	Unga Group Ltd	Nairobi
Kabiana Dairy Ltd	Kisumu	UDV Kenya	Nairobi
Kamili Packers Ltd	Nairobi	United Millers Ltd	Kisumu
Kapa Oil Refineries Ltd	Nairobi	Usafi Services Ltd	Nairobi
Karirana Estate Ltd	Limuru	Valuepack Foods	Nairobi
Kenafic Industries Ltd	Nairobi	Valley Confectionery Ltd	Nakuru
Kenblest Ltd	Thika	W. E. Tilley (Muthaiga) Ltd	Nairobi
Kensalt Ltd	Mombasa	Wanainchi Marine Products (K) Ltd	Mombasa
Kenya Breweries	Nairobi	West Kenya Sugar Co. Ltd	Kakamega
Kenya Nut Co. Ltd	Nairobi	Wrigley Co. (E.A.) Ltd	Nairobi
Kuguru Food Complex	Nairobi	C. Dormans	Nairobi
British American Tobacco	Nairobi	Europack Industries	Nairobi
Eastern Produce Kenya	Thika	Fresh Produce Exporters Association of Kenya	Nairobi
Kenya Seed Company	Nairobi	Deepa Industries	Nairobi
Pristine International	Nairobi	Kambu Distillers	Kisumu
Trust Flour Mills	Thika	Kenchic	Nairobi
T.S.S. Green Millers	Mombasa	Kenlab Supplies	Kisumu
Lari Diaries Alliance	Uplands	Kenya Meat Commission	Athi River
Kenya Sweets Ltd	Nairobi		
Leather and Footwear (5)			
Alpharama Ltd	Athi River	C & P Shoe Industries Ltd	Nairobi
Bata Shoe Co. (Kenya) Ltd	Limuru	Leather Industries of Kenya Ltd	Thika
Sandstorm Africa Ltd	Nairobi		
Metal and Allied Sector (56)			
Africa Marine & General Engineering Co.	Mombasa	Orbit Engineering Ltd	Nairobi
Allied East Africa Ltd	Nairobi	Rolmil Kenya Ltd	Nairobi
Alloy Steel Casting Ltd	Nairobi	Sheffield Steel Systems Ltd	Nairobi
Apex Steel Ltd	Nairobi	Soni Technical Services Ltd	Kisumu
ASL Limited - Steel Division	Nairobi	Specialized Engineering Co. (E.A.) Ltd	Nairobi

ASP Co. Ltd	Nairobi	Standard Rolling Mills Ltd	Mombasa
Athi River Steel Plant	Nairobi	Hobra Manufacturing Ltd	Nairobi
Booth Extrusions Ltd	Thika	Insteel Ltd	Nairobi
Brollo Kenya Ltd	Mombasa	Kaluworks Ltd	Nairobi
City Engineering Works (K) Ltd	Nairobi	Kens Metal Industries	Nairobi
Cook 'N' Lite Ltd	Mombasa	Kenya General Industries Ltd	Mombasa
Corrugated Sheets Ltd	Nairobi	Khetshi Dharamshi & Co. Ltd	Nairobi
Crystal Industries Ltd	Kikuyu	Kitchen King Ltd	Mombasa
Davis & Shirliff Ltd	Nairobi	Laminate Tube Industries	Eldoret
Devki Steel Mills Ltd	Nairobi	Mabati Rolling Mills Ltd	Athi River
Doshi Enterprises Ltd	Nairobi	Mecol Ltd	Nairobi
East Africa Spectre Ltd	Nairobi	Steel Structures Ltd	Nairobi
East Africa Foundry Works (K) Ltd	Nairobi	Steel Makers Ltd	Nairobi
Elite Tools	Nairobi	Steel Wool (Africa) Ltd	Nairobi
Farm Engineering Industries Ltd	Nairobi	Tarmal Wire Products Ltd	Mombasa
Friendship Container Manufacturers Ltd	Nairobi	Tononoka Steel Ltd	Nairobi
General Aluminum Fabricators Ltd	Nairobi	Viking Industries Ltd	Nairobi
Greif East Africa Ltd	Mombasa	Warren Enterprises Ltd	Nairobi
Heavy Engineering Ltd	Nairobi	Welding Alloys Ltd	Nairobi
Metal Crowns Ltd	Nairobi	Wire Products Ltd	Nairobi
Nail & Steel Products Ltd	Nairobi	Narcol Aluminium Rolling Mills	Mombasa
Nampak Kenya Ltd	Thika	Ndume Ltd	Gilgil
Napro Industries Ltd	Nairobi	Southern Engineering	Mombasa
Motor Vehicle and Accessories (22)			
Associated Battery Manufacturers EA Ltd	Nairobi	Labh Singh Harnam Singh Ltd	Thika
Auto Ancillaries Ltd	Nairobi	Mann Manufacturing Co. Ltd	Nairobi
Autofine Filters and Seals Ltd	Eldoret	Megh Cushion Industries Ltd	Nairobi
Auto Springs Manufacturers Ltd	Nairobi	Mutsimoto Co. Ltd	Nairobi
Banbros Ltd		Associated Vehicle Assemblers	Mombasa
Bhachu Industries Ltd	Nairobi	Pipe Manufacturers Ltd	Nairobi
Chui Auto Spring Industries Ltd	Nairobi	Sohansons Ltd	Nairobi

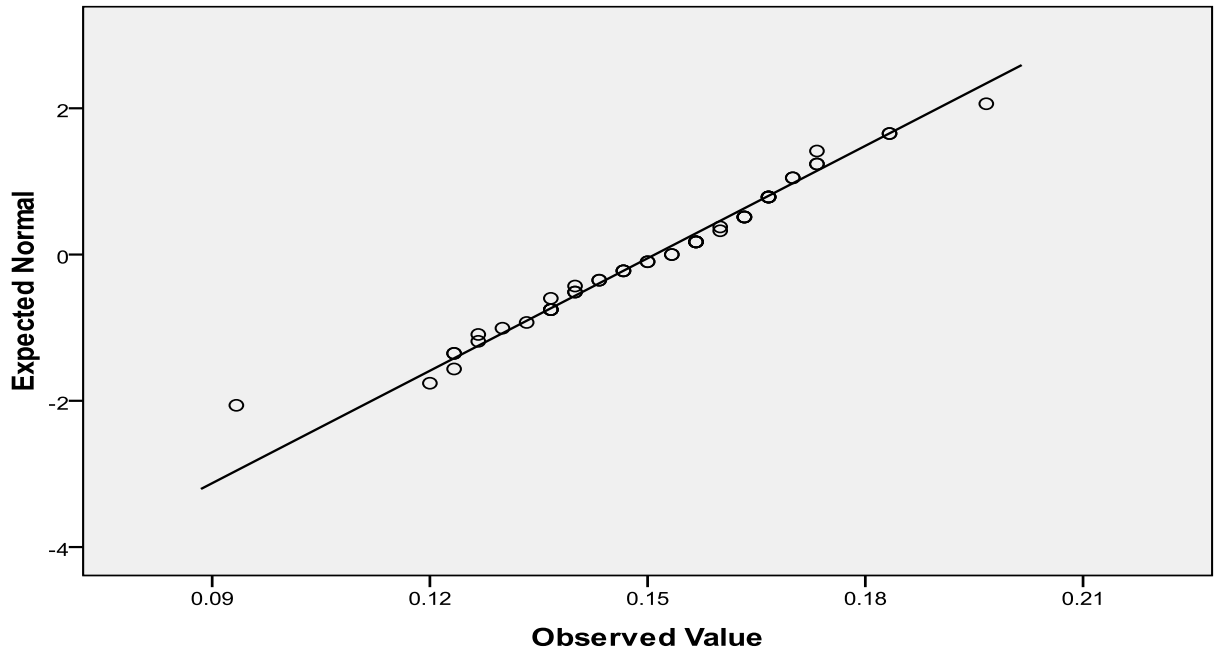
Kenya Vehicle Manufactures Ltd	Thika	Theevan Enterprises Ltd	Nairobi
General Motors E.A. Ltd	Nairobi	Toyota Kenya Ltd	Nairobi
Impala Glass Industries Ltd	Nairobi	Unifilters Kenya Ltd	Nairobi
Kenya Grange Vehicle Industries Ltd	Nairobi	Varsani Brakenlinings Ltd	Nairobi
Paper and Board (50)			
Allpack Industries Ltd	Nairobi	Kenafriic Diaries Manufacturers Ltd	Nairobi
Andika Industries Ltd	Kisumu	Kenya Litho Ltd	Nairobi
Bags and Balers Manufacturers (k) Ltd	Nairobi	Kenya Stationers Ltd	Nairobi
Brand Printers Ltd	Nairobi	Kim - Fay E.A. Ltd	Nairobi
Carton Manufacturers Ltd	Nairobi	Kul Graphics Ltd	Nairobi
Cartubox Industries (E.A.) Ltd	Nakuru	L.A.B. International Kenya Ltd	Nairobi
Cempack Solutions Ltd	Nairobi	Label Converters	Mombasa
Chandaria Industries Ltd	Nairobi	Modern Lithographic (K) Ltd	Nairobi
Colour Labels Ltd	Nairobi	Nation Media Group Ltd - Printing Plant	Nairobi
Colour Packaging Ltd	Nairobi	National Printing Press Ltd	Nairobi
Colour Print Ltd	Nairobi	Packaging Manufacturers Ltd	Kisumu
D.L. Patel Press Ltd	Nairobi	Paperbags Ltd	Nairobi
Dodhia Packaging Ltd	Nairobi	Phonexi Matches Ltd	Nairobi
E.A. Packaging Industries Ltd	Nairobi	Printpak Multi Packaging Ltd	Nairobi
Elite Offset Ltd	Nairobi	Printwell Industries Ltd	Nairobi
Ellams Products Ltd	Nairobi	Punchlines Ltd	Nairobi
English Press Limited	Nairobi	Ramco Printing Works Ltd	Nairobi
Flora Printers Ltd	Mombasa	Regal Press Kenya Ltd	Nairobi
General Printers Ltd	Nairobi	Tetra Pak Ltd	Nairobi
Graphics and Allied Ltd	Nairobi	The Rodwell Press Ltd	Nairobi
Guaca Stationers Ltd	Nairobi	Uneeco Paper Products Ltd	Nairobi
Icons Printers Ltd	Nairobi	Autolitho Ltd	Nairobi
Interlables Africa Ltd	Nairobi	Bag and Envelope Converters	Nairobi
Paper House of Kenya Ltd	Nairobi	Jomo Kenyatta Foundation	Nairobi
Kartasi Industries Ltd	Nairobi	Associated Paper & Stationery	Nairobi
Pharmaceutical and Medical Equipment (21)			
African Cotton Industries Ltd	Nairobi	Manhar Brothers (k) Ltd	Nairobi

Alpha Medical Manufacturers	Nairobi	Medivet Products Ltd	Nairobi
Beta Healthcare Ltd	Nairobi	Novelty Manufacturing Ltd	Nairobi
Cosmos Ltd	Nairobi	Osschemie (k) Ltd	Nairobi
Dawa Ltd	Nairobi	Pharm Access Africa Ltd	Nairobi
Elys Chemical Industries Ltd	Nairobi	Pharmaceutical Manufacturing Co.	Nairobi
Glaxo Smithkline Kenya Ltd	Nairobi	Revital Healthcare (EPZ) Ltd	Mombasa
KAM industries	Nairobi	Universal Co. Ltd	Kikuyu
Bulk Medicals	Nairobi	Regal Pharmaceuticals Ltd.	Nairobi
KAM Pharmacy	Nairobi	Laboratory & Allied Ltd	Nairobi
Biodeal Laboratories Ltd	Nairobi		
Plastics and Rubber (58)			
ACME Containers Ltd	Nairobi	Packaging Masters Ltd	Nairobi
Afro Plastics (k) Ltd	Nairobi	Plastic Electricons	Nairobi
Betatrad (K) Ltd	Nairobi	Plastic & Rubber Industries	Nairobi
Bobmil Industries Ltd	Nairobi	Proolly Propelin Bags Ltd	Mombasa
Cables and Plastics Ltd	Mombasa	Polyblend Ltd	Nairobi
Complast Industries Ltd	Nairobi	Raffia Bags (K) Ltd	Mombasa
Dune Packaging Ltd	Nairobi	Rubber Products Ltd	Nairobi
Elgitread (Kenya) Ltd	Nairobi	Safepak Ltd	Nairobi
Elgon Kenya Ltd	Nairobi	Sameer Africa Ltd	Nairobi
Eslon Plastics of Kenya Ltd	Nairobi	Sanpac Africa Ltd	Nairobi
Five Star Industries Ltd	Nairobi	Shiv Enterprises (E) Ltd	Eldoret
General Plastics Ltd	Nairobi	Signode Packaging Systems Ltd	Nairobi
Hi-Plast Ltd	Nairobi	Silpack Industries Ltd	Nairobi
Jamlam Industries Ltd	Nairobi	Solvochem E.A. Ltd	Nairobi
Kamba Manufacturing (1986) Ltd	Nairobi	Spring box Kenya Ltd	Nairobi
Kenpoly Manufacturers Ltd	Nairobi	Sumaria Industries	Nairobi
Kentainers Ltd	Nairobi	Super Manufacturers	Nairobi
Kenya Suitcase Manufacturers Ltd	Mombasa	Techpak Industries Ltd	Nairobi
L.G. Harris & Co. Ltd	Nairobi	Treadsetters Tyres Ltd	Nairobi
Laneeb Plastic Kenya Ltd	Nairobi	Umoja Rubber Products Ltd	Mombasa
Metro Plastics Kenya Ltd	Nairobi	Uni - Plastics Ltd	Nairobi
Mombasa Polythene Bags Ltd	Mombasa	Vyatu Ltd	Kisumu
Nairobi Plastics Ltd	Nairobi	Wonderpac Industries Ltd	Nairobi
Ombi Rubber Rollers Ltd	Nairobi	Zaverchand Punja Ltd	Mombasa
Packaging Industries Ltd	Nairobi	Pollyflex Industries	Nairobi
Polythene Industries	Nairobi	Prosel Ltd	Nairobi

Premier Industries	Nairobi	Haco Tiger Brands	Nairobi
Pyramid Packaging	Eldoret	King Plastics Industries	Nairobi
Kingsway Tyres	Nairobi	Doshi Ironmongers	Mombasa
Textiles and Apparels (37)			
Alltex EPZ Ltd	Nairobi	Ngecha Industries Ltd	Nairobi
Alpha Knits Ltd	Nairobi	Rivatex (E.A.) Ltd	Eldoret
Apex Apparels (EPZ) Ltd	Nairobi	Rupa Mills Ltd	Athi River
Ashton Apparel EPZ Ltd	Mombasa	Senior Best Garments Kenya (EPZ) Ltd	Mombasa
Bedi Investments Ltd	Nakuru	Shin - Ace Garments Kenya (EPZ) Ltd	Mombasa
Fantex (K) Ltd	Nairobi	Spin Knit Ltd	Nairobi
Kamyn Industries Ltd	Mombasa	Spinners & Spinners Ltd	Nairobi
Kapric Apparels EPZ Ltd	Mombasa	Squaredeal Uniform Centre Ltd	Eldoret
Karivondo Filaments Ltd	Kisumu	Straightline Enterprises	Nairobi
Ken - Knit (Kenya) Ltd	Eldoret	Summit Fibres Ltd	Mombasa
Kenya Knit Garment (EPZ) Ltd	Mombasa	Sunflag Textile & Knitwear Mills Ltd	Nairobi
Kenya Shirts Manufacturing Co. Ltd	Mombasa	Tarpo Industries Ltd	Nairobi
Kenya Trading (EPZ) Ltd	Nairobi	Teita Estate Ltd	Nairobi
Kikoy Co. Ltd	Nairobi	Thika Cloth Mills Ltd	Nairobi
Le Stud Ltd	Nairobi	Unified Aryan (EPZ) Ltd	Nairobi
Leena Apparels Ltd	Mombasa	Vajas Manufacturers Ltd	Nairobi
Lifeworks Shukrani Ltd	Mariakani	Wildlife Works (EPZ) Ltd	Voi
Mega Spin Ltd	Nakuru	World of Kikoys	Changamwe
Midco Textiles (EA) Ltd	Nairobi		
Timber, Wood and Furniture (20)			
Comply Industries Ltd	Nakuru	Rosewood Furniture Manufacturers	Nairobi
Economic Housing Group Ltd	Nairobi	Shah Timber Mart Ltd	Nairobi
Fine Wood Works Ltd	Nairobi	Shamco Industries Ltd	Nairobi
Kenya Wood Ltd	Nairobi	Statpack Industries	Nairobi
Newline Ltd	Nairobi	Timsales Ltd	Nairobi
PG Bison Ltd	Nairobi	Taws Ltd	Nairobi
Rai Plywoods (Kenya) Ltd	Eldoret	Twiga Stationers	Nairobi
Furniture International Ltd	Nairobi	Timber Treatment International Ltd	Eldoret
Uneeco Paper Products	Mombasa	Woodtex Kenya Ltd	Nairobi
Tetra Pack Ltd	Nairobi	Woodmakers Kenya	Nairobi

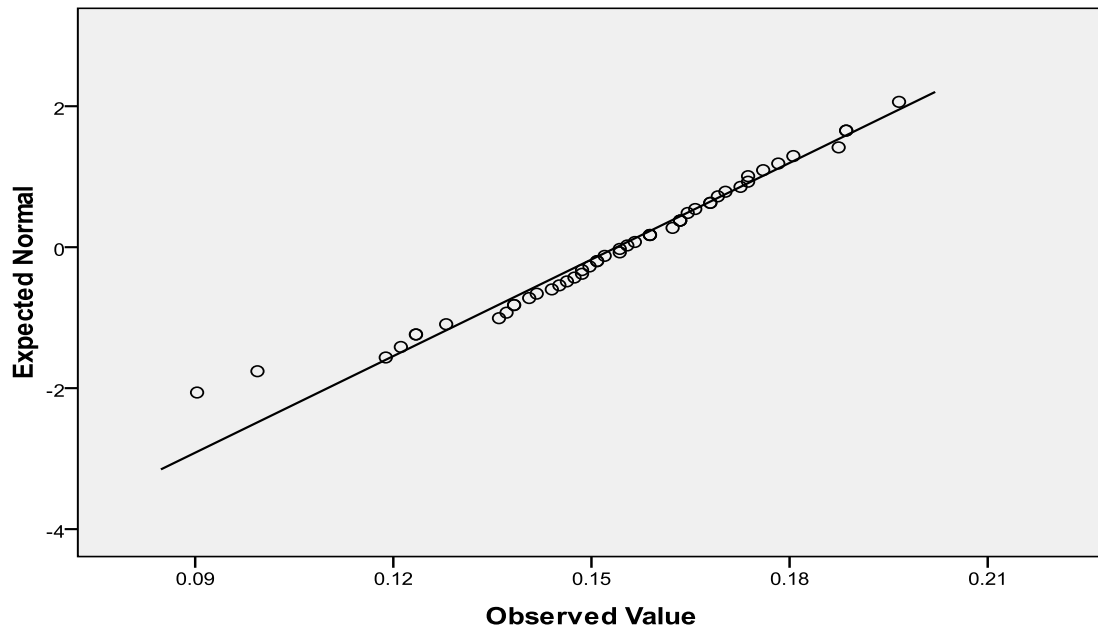
Source: Kenya Association of Manufacturers Directory 2014

Appendix 9a: Normal Q-Q Plot of Non-Financial Performance



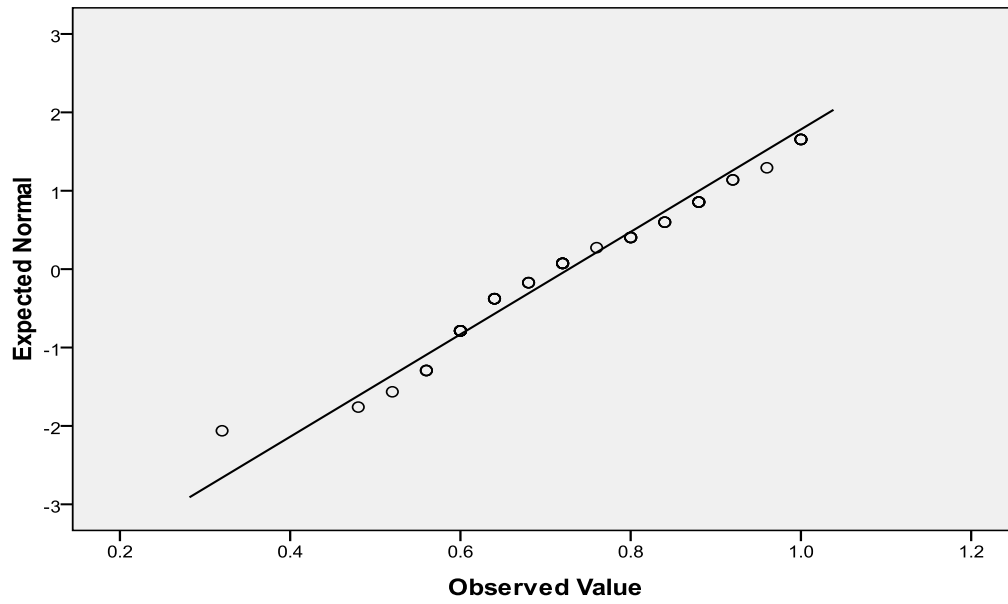
Source: Primary Data (2015)

Appendix 9b: Normal Q-Q Plot of Learning Organization



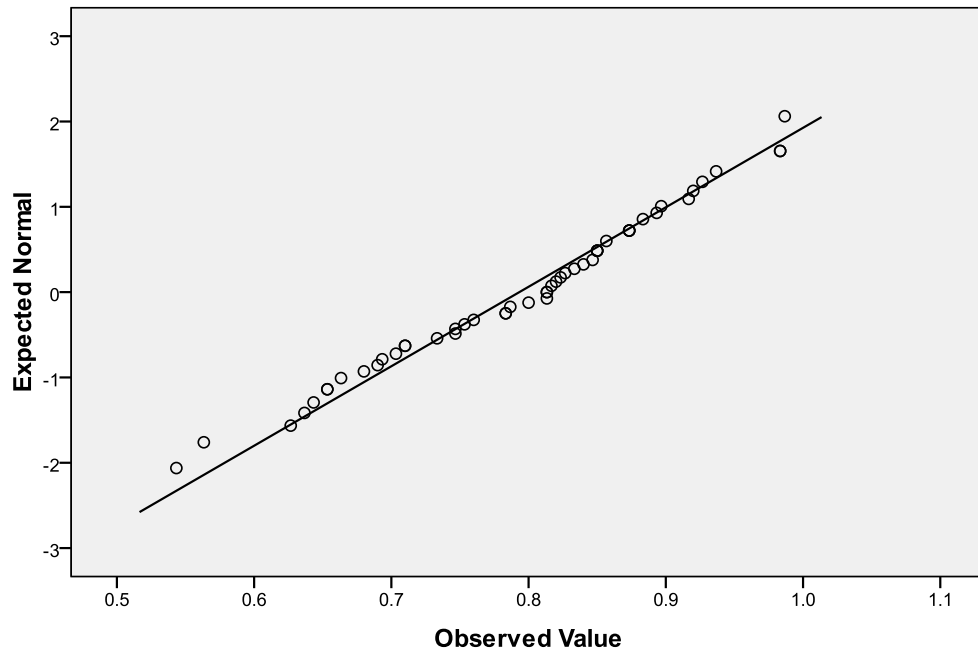
Source: Primary Data (2015)

Appendix 9c: Normal Q-Q Plot of Financial Performance



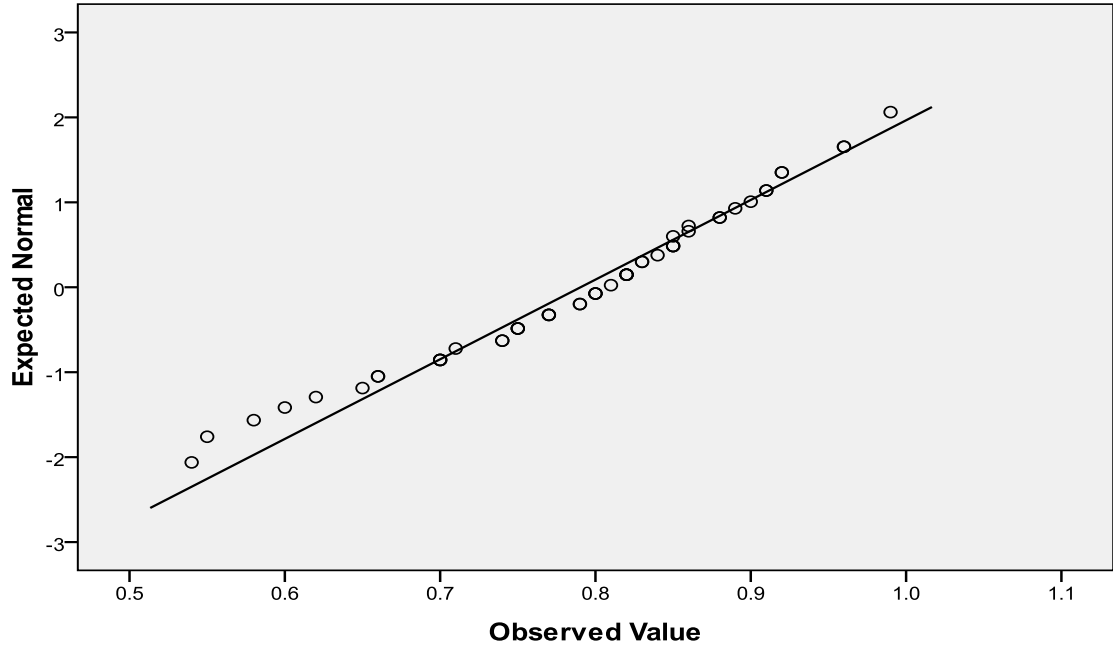
Source: Primary Data (2015)

Appendix 9d: Normal Q-Q Plot of Knowledge Management



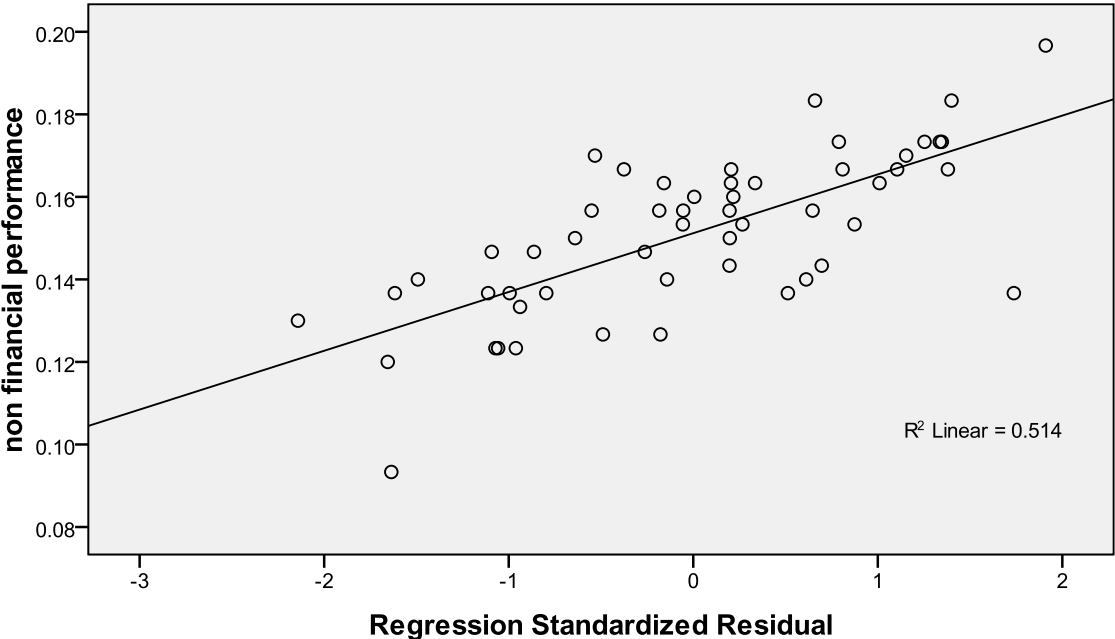
Source: Primary Data (2015)

Appendix 9e: Normal Q-Q Plot of Employee Outcomes



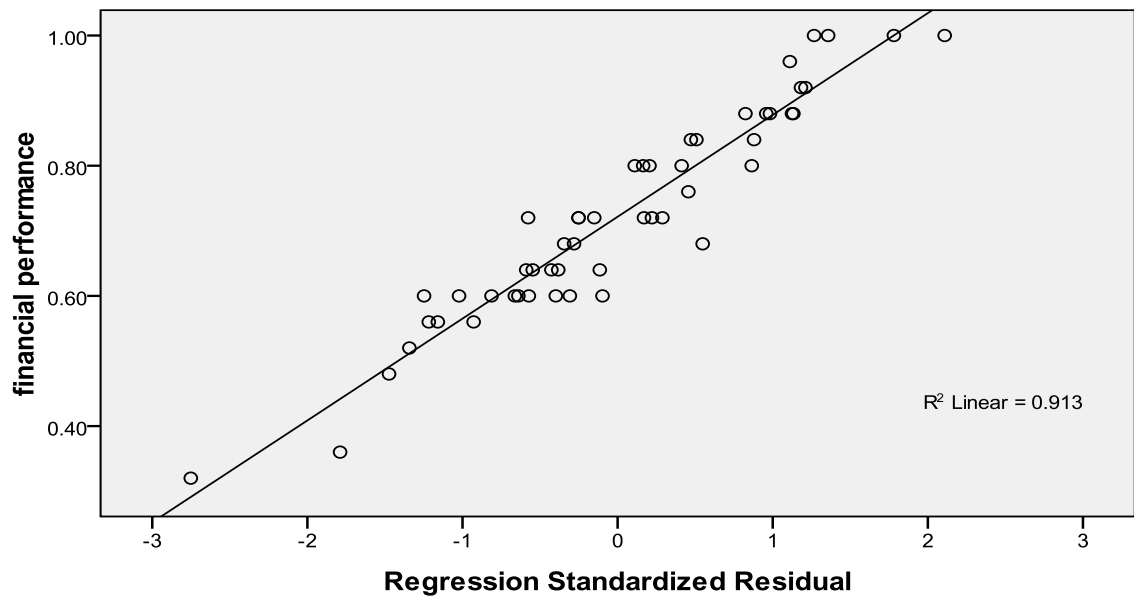
Source: Primary Data (2015)

Appendix 10a: Scatterplot for Non-Financial Performance



Source: Primary Data (2015)

Appendix 10b: Scatterplot for Financial Performance



Source: Primary Data (2015)

Appendix 11a: Regression Results for the Effect of Learning Organization on Employee Outcomes

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.565 ^a	.319	.306	.09166		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.208	1	.208	24.794	.000 ^a
	Residual	.445	53	.008		
	Total	.654	54			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.364	.085		4.258	.000
	Learning Organization	2.745	.551	.565	4.979	.000
a. Predictors: (Constant), Learning Organization						
b. Dependent Variable: Employee Outcomes						

Source: Primary Data (2015)

Appendix 11b: Regression Results for the Mediation of Employee outcomes in the Relationship between Learning Organizations and Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
3	.136 ^a	.019	-.001	.15890	.019	.944	1	50	.336
4	.292 ^b	.085	.048	.15495	.067	3.584	1	49	.064
ANOVA									
Model			Sum of Squares	df	Mean Square	F	Sig.		
3	Regression		.024	1	.024	.944	.336 ^a		
	Residual		1.262	50	.025				
	Total		1.286	51					
4	Regression		.110	2	.055	2.288	.112 ^b		
	Residual		1.176	49	.024				
	Total		1.286	51					
Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
3	(Constant)	.572	.156		3.664	.001			
	Employee Outcomes	.192	.197	.136	.971	.336			
4	(Constant)	.435	.168		2.580	.013			
	Employee Outcomes	-.058	.234	-.041	-.250	.804			
	Learning Organization	2.183	1.153	.314	1.893	.064			
a. Predictors: (Constant), Employee Outcomes									
b. Predictors: (Constant), Employee Outcomes, Learning Organization									
c. Dependent Variable: Financial Performance									

Source: Primary Data (2015)

Appendix 11c: Regression Results for the Moderating Effect of Knowledge Management on the influence of Learning Organization on Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
3	.262 ^a	.069	.035	.15524	.069	2.031	2	55	.141
4	.263 ^b	.069	.017	.15664	.000	.021	1	54	.886
ANOVA									
Model			Sum of Squares	df	Mean Square	F	Sig.		
3	Regression		.098	2	.049	2.031	.141 ^a		
	Residual		1.325	55	.024				
	Total		1.423	57					
4	Regression		.098	3	.033	1.337	.272 ^b		
	Residual		1.325	54	.025				
	Total		1.423	57					
Coefficients									
Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
	B	Std. Error	Beta						
3	(Constant)		.452	.143		3.162	.003		
	Learning Organization		1.368	1.498	.208	.913	.365		
	Knowledge Management		.087	.310	.064	.280	.780		
4	(Constant)		.466	.173		2.687	.010		
	Learning Organization		1.308	1.567	.198	.835	.408		
	Knowledge Management		.083	.314	.061	.265	.792		
	Learning Organization Knowledge Management Interaction		-.002	.017	-.022	-.144	.886		
a. Predictors: (Constant), Knowledge Management, Learning Organization									
b. Predictors: (Constant), Knowledge Management, Learning Organization, Learning Organization Knowledge Management Interaction									
c. Dependent Variable: Financial Performance									

Source: Primary Data (2015)

Appendix 12a: Regression Results for the Mediation of Employee Outcomes in the Relationship between Learning Organization and Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
3	.427 ^a	.182	.166	.01762	.182	11.363	1	51	.001
4	.686 ^b	.471	.450	.01431	.289	27.299	1	50	.000
ANOVA									
Model			Sum of Squares	df	Mean Square	F	Sig.		
3	Regression		.004	1	.004	11.363	.001 ^a		
	Residual		.016	51	.000				
	Total		.019	52					
4	Regression		.009	2	.005	22.261	.000 ^b		
	Residual		.010	50	.000				
	Total		.019	52					
Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
3	(Constant)	.088	.019		4.708	.000			
	Employee Outcomes	.079	.024	.427	3.371	.001			
4	(Constant)	.049	.017		2.860	.006			
	Employee Outcomes	.021	.022	.115	.967	.338			
	Learning Organization	.553	.106	.621	5.225	.000			
a. Predictors: (Constant), Employee Outcomes									
b. Predictors: (Constant), Employee Outcomes, Learning Organization									
c. Dependent Variable: Non-Financial Performance									

Source: Primary Data (2015)

Appendix 12b: Regression Results for the Moderating Effect of Knowledge Management on the Influence of Learning Organization on Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.642 ^a	.412	.391	.01465	.412	19.582	2	56	.000
2	.646 ^b	.417	.386	.01471	.006	.558	1	55	.458
ANOVA									
Model			Sum of Squares	df	Mean Square	F	Sig.		
1	Regression		.008	2	.004	19.582	.000 ^a		
	Residual		.012	56	.000				
	Total		.020	58					
2	Regression		.009	3	.003	13.138	.000 ^b		
	Residual		.012	55	.000				
	Total		.020	58					
Coefficients									
Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
			B	Std. Error	Beta				
1	(Constant)		.065	.014		4.536	.000		
	Learning Organization		.373	.133	.460	2.806	.007		
	Knowledge Management		.037	.028	.214	1.304	.198		
2	(Constant)		.059	.017		3.546	.001		
	Learning Organization		.406	.141	.501	2.888	.006		
	Knowledge Management		.037	.028	.216	1.313	.195		
	Learning Organization Knowledge Management Interaction		.001	.002	.088	.747	.458		
a. Predictors: (Constant), Knowledge Management, Learning Organization									
b. Predictors: (Constant), Knowledge Management, Learning Organization, Learning Organization Knowledge Management Interaction									
c. Dependent Variable: Non-Financial Performance									

Source: Primary Data (2015)

Appendix 13a: Regression Results for the Effect of Knowledge Management on Learning Organization

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.800 ^a	.640	.634	.01441		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.022	1	.022	104.717	.000 ^a
	Residual	.012	59	.000		
	Total	.034	60			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.021	.013		1.617	.111
	Knowledge Management	.167	.016	.800	10.233	.000
a. Predictors: (Constant), Knowledge Management						
b. Dependent Variable: Learning Organization						

Source: Primary Data (2015)

Appendix 13b: Regression Results for the Mediation of Learning Organization in the Relationship between Knowledge Management and Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
3	.627	.394	.383	.01474	.394	37.010	1	57	.000
4	.642	.412	.391	.01465	.018	1.700	1	56	.198
ANOVA									
Model			Sum of Squares	df	Mean Square	F	Sig.		
3	Regression		.008	1	.008	37.010	.000 ^a		
	Residual		.012	57	.000				
	Total		.020	58					
4	Regression		.008	2	.004	19.582	.000 ^b		
	Residual		.012	56	.000				
	Total		.020	58					
Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
3	(Constant)	.073	.013		5.671	.000			
	Learning Organization	.509	.084	.627	6.084	.000			
4	(Constant)	.065	.014		4.536	.000			
	Learning Organization	.373	.133	.460	2.806	.007			
	Knowledge Management	.037	.028	.214	1.304	.198			
a. Predictors: (Constant), Learning Organization									
b. Predictors: (Constant), Learning Organization, Knowledge Management									
c. Dependent Variable: Non-Financial Performance									

Source: Primary Data (2015)

Appendix 14a: Regression Results for the Effect of Employee Outcomes on Learning Organization

Model	R	R Square	Adjusted R Square		Std. Error of the Estimate	
1	.565 ^a	.319	.306		.01885	
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.009	1	.009	24.794	.000 ^a
	Residual	.019	53	.000		
	Total	.028	54			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.062	.018		3.369	.001
	Employee Outcomes	.116	.023	.565	4.979	.000
a. Predictors: (Constant), Employee Outcomes						
b. Dependent Variable: Learning Organization						

Source: Primary Data (2015)

Appendix 14b: Regression Results for the Mediation of Learning Organization in the Relationship between Employee Outcomes and Non-Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
3	.679 ^a	.461	.451	.01430	.461	43.641	1	51	.000
4	.686 ^b	.471	.450	.01431	.010	.936	1	50	.338
ANOVA									
Model			Sum of Squares	df	Mean Square	F	Sig.		
3	Regression		.009	1	.009	43.641	.000 ^a		
	Residual		.010	51	.000				
	Total		.019	52					
4	Regression		.009	2	.005	22.261	.000 ^b		
	Residual		.010	50	.000				
	Total		.019	52					
Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
3	(Constant)	.058	.014		4.039	.000			
	Learning Organization	.604	.091	.679	6.606	.000			
4	(Constant)	.049	.017		2.860	.006			
	Learning Organization	.553	.106	.621	5.225	.000			
	Employee Outcomes	.021	.022	.115	.967	.338			
a. Predictors: (Constant), Learning Organization									
b. Predictors: (Constant), Learning Organization, Employee Outcomes									
c. Dependent Variable: Non-Financial Performance									

Source: Primary Data (2015)