ORGANIZATIONAL AMBIDEXTERITY, DESIGN, ENVIRONMENTAL DYNAMISM AND PERFORMANCE OF LARGE MANUFACTURING FIRMS IN KENYA

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

2021

DECLARATION

I, the undersigned, declare that this thesis is my original work and has not been submitted to any other college, institution or university other than the University of Nairobi.

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DEDICATION

I dedicate this thesis to God Almighty my maker, my tower of strength, source of my motivation, insight, skill and understanding. He has been the foundation of my ability during the PhD journey and on His provisions only have I risen. I also commit this work to my dear wife; Victoria Mbithe, my adorable children Hezron and Ashley for their unwavering support and encouragement. To my father; Bernard Mutisya for his confidence, encouragement and support in all my endeavours. To my late mother; Lucia Syomiti for her teachings for perseverance and preparedness in facing the challenge with faithfulness and modesty. She constantly inspired my life. Though she left us to be with the Lord I constantly sense her appeal urging me to endeavour to realize my life resolutions. My love for you all is beyond measure. Thank you and God's Blessings to All of you.

ACKNOWLEDGMENTS

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ABBREVIATIONS AND ACRONYMS

BSC   Balanced Scorecard

CV   Coefficient of Variation

DCT   Dynamic Capabilities Theory

EPS   Earnings per Share

EU   European Union

GDP   Gross Domestic Product

GOK   Government of Kenya

IT   Information Technology

KAM   Kenya Association of Manufacturers

KBG   Kenya Business Guide

KNBS   Kenya National Bureau of Statistics

KSHS   Kenya Shillings

LMFs   Large Manufacturing Firms

NACOSTI   National Commission for Science, Technology & Innovation

OA   Organizational Ambidexterity

PCA   Principal Component Analysis

ROA   Return on Assets

SBSC   Sustainable Balanced Scorecard

UK   United Kingdom

UNIDO   United Nations Industrial Development Organization

USA   United States of America

USD   United States Dollar

ABSTRACT

The core objective of this research was to establish the role of organizational design and environmental dynamism in the relationship between organizational ambidexterity and performance of large manufacturing firms (LMFs) in Kenya. The studies linking ambidexterity to organizational performance are scanty and with mixed findings. The few studies indicate that there is no clear relationship between ambidexterity and organizational performance. More specifically, the study sought to establish the influence of organizational ambidexterity on the Kenyan LMFs performance. The research aimed at also evaluating the role of organizational design in the relationship between organizational ambidexterity and performance. Further, the research assessed the effect of environmental dynamism in the relationship between organizational ambidexterity and performance. Finally, the study evaluated the joint effect of organizational ambidexterity, design and environmental dynamism on the Kenyan LMFs performance. The research was founded on dynamic capabilities, configurations, and contingency theories, the anchoring theory being dynamic capabilities. A conceptual model was developed and several hypotheses were formulated to guide the study and testing. Positivism philosophy was applied in the research. The population of the study was 107 Kenyan LMFs, resulting into a census survey. Cross-sectional research design was used in the study. Primary data was collected using a structured questionnaire, which incorporated a section where financial performance data extracted from the firm's financial statements over a five year period (2014 to 2018) was provided by the respondents. The respondents were the senior managers of the LMFs in Kenya; namely either Managing Directors/Chief Executive Officers (MDs/CEOs) or General Managers (GMs), or Heads of departments (HODs). Descriptive statistics, correlations, linear, multiple and hierarchical regressions were applied in the data scrutiny and interpretation. The study results showed positive and statistically significant organizational ambidexterity influence on the performance of Kenyan LMFs; the partial organizational design mediating role in the relationship between organizational ambidexterity and performance of LMFs in Kenya. Also, the research revealed no significant environmental dynamism moderating effect on the organizational ambidexterity influence on the performance of Kenyan LMFs. Further, the research revealed that organizational ambidexterity, design and environmental dynamism have positive and statistically significant joint effect on the performance of Kenyan LMFs. The study findings are useful to practitioners and managers of LMFs, manufacturing sector policymakers as well as scholars and researchers. The study had limitations of positivism philosophical orientation, cross-sectional design, possible subjectivity and personal bias and also context. The study recommends for further studies on the mediating role of organizational design as well as the environmental dynamism moderating effect, different variable operationalization, diversify respondents and context as well as longitudinal study.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Organizational ambidexterity which is an organization's capability to concurrently explore and exploit has drawn wide research attention in strategic management (O'Reilly & Tushman, 2013). Exploration whose focus is new knowledge search necessitates adaptability to environmental changes while exploitation ensures current business efficiency and alignment through enhancement and refinement (March, 1991); hence the increasing consensus among strategic management scholars that organizational ambidexterity enhances business sustainability (Tushman & O'Reilly, 1996). However, tensions emerge from the undertaking of the opposing activities, which require appropriate managerial intervention, without which, organizational ambidexterity cannot be achieved (Andriopoulos & Lewis, 2010). Thus, despite growing research undertaken on organizational ambidexterity in different contexts and methodologies, the findings are varied (Junni, Sarala, Taras & Tarba, 2013).

Organizational design intervention has been proposed to address the resultant tensions from the concurrent undertaking of exploration and exploitation activities, thus organizational ambidexterity achievement (Marks, Mathieu & Zaccaro, 2001). However, the organizational design role in easing the inherent tensions of ambidexterity is considered difficult (O'Reilly & Tushman, 2008) due to resultant negative externalities (March, 1991). Further, the contingency perspective recognizes that organizational ambidexterity influence on performance is subject to external factors, including

environmental dynamism (Lawrence & Lorsch, 1967). Although research has been conducted on organizational ambidexterity moderators, researchers have not adequately confirmed the nature of environmental dynamism effect on the performance of organizations (Tamayo -Torres, Roehrich & Lewis, 2017).

This study draws upon Dynamic Capabilities Theory (DCT), Organizational Configurations theory and Contingency theory. The anchoring theory; Dynamic capabilities entails the organizational ability to configure and reconfigure its processes and assets to create growth and adaptation within environmental changes (Teece, Pisano & Shuen, 1997), thus underpins the environmental dynamism concept (Teece, 2014). Hence, O'Reilly and Tushman (2011) organizational ambidexterity recognition as a major dynamic capability. Configurations theorists suggest that fit which according to Mintzberg (1979) is assumed to affect performance is the aim of configuring the organization where its elements are aligned with related challenges. This study acknowledges the contingency theory's view that organizational structures are not universal and must be tailored to specific circumstances (Donaldson, 2001), thus anchors the concepts of organizational design and environmental dynamism, and their attendant influence in the relationship (Morton & Hu, 2008).

The Kenyan manufacturing sector significantly impacts the country's economic performance and has been identified as a pillar of the "Big Four agenda" towards achieving the country's vision 2030 (GOK, 2018). However, despite the significance, its GDP contribution declined from 10% in 2014 to 7.8% in 2018, while its growth is erratic; 2.5% in 2014, 3.6% in 2015, 3.1% in 2016, 0.7% in 2017 and 4.3% in 2018. The declining and erratic performance can be attributed to environmental dynamism in which

the sector firms are operating (KNBS, 2019). Other factors include working capital constraints and operational inefficiencies (KAM & KBG, 2018). Although wide research has been undertaken in the Kenyan manufacturing sector, there is no evidence of any research linking the three variables of organizational ambidexterity, design and environmental dynamism in one single study and in the current context, hence the motivation to undertake this research.

1.1.1 Organizational Ambidexterity

Duncan (1976) pioneered the organizational ambidexterity concept, defining it as the capability of an organization to be simultaneously aligned and adaptive. The assumed generic meaning of the concept is the organizational capacity to concurrently conduct two diverse undertakings and equally well (Birkinshaw & Gupta, 2013). In this study, the definition adopted is the capacity of the organization to simultaneously exploit current competencies and explore new knowledge (Patel, Messersmith & Lepak, 2013).

Exploitation entails being efficient and aligned in the current business through enhancement, proficiency, stability, and execution, while exploration necessitates adaptation to environmental changes through innovation (March, 1991). Scholars have divergent views on ambidexterity with supporters arguing that one-sided focus on either will lead to competence and failure traps, and ultimately obsolescence (O'Reilly & Tushman, 2011). Divergent scholars have argued that the two disparate activities may not be attainable (Ghemawat & Costa, 1993) due to resultant tensions (Koryak, Lockett, Hayton, Nicolaou & Mole, 2018), thus suggesting curtailed attainment of competitive advantage, lasting endurance, and superior organizational performance (Tushman & O'Reilly, 1996).

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Balanced or combined views are the two broad conceptualization approaches to organizational ambidexterity (Birkinshaw & Gupta, 2013). The balanced view holds that exploitation and exploration lie in two points on a scale and the mid-point is the optimal balance (Auh & Menguc, 2005). However, supporters of combined view and which this study adopts argue that only the combination of both activities matter (Lavie, Stettner & Tushman, 2010). Also, the combined approach is aligned to March (1991) view that the main organization's concern should be adequate exploitation for their existing viability as well as future sustainability through enough exploration. Further, the combined view is also straight-forward in the activities measurement. The divergent conceptualization and measurements possibly explain non-conclusive study findings (O'Reilly & Tushman, 2013).

Organizational ambidexterity has attracted significant research attention due to its association with several favourable organizational outcomes (Wang & Rafiq, 2014) and responsiveness (O'Reilly & Tushman, 2013). Hence, it is critical for enduring organizational success and survival, but also difficult to attain (Ghemawat & Costa, 1993). In addition, empirically tested research findings on organizational ambidexterity and performance relationship are scanty and inconclusive (Junni et al., 2013). Further, consensus is lacking on the ambidexterity enablers such as organizational design (Zhou & Wu, 2010) while empirical studies on environmental dynamism moderating effect on the organizational ambidexterity and performance relationship have reported mixed results (Tushman & O'Reilly, 1996). This study aims to establish the effect of organizational ambidexterity on an organization's performance, thus contributing to this debate.

1.1.2 Organizational Design

According to Mintzberg (1979) organizational design is a multidimensional assembly of strategies, structures, processes, and relationships through which the organization operates, integrating people, systems, and processes to enhance adaption with environmental changes thus increasing the likelihood of success. Therefore, organizational design choice affects speed and agility of strategy execution and reaction to the environment, hence the organization's performance (Vohries & Morgan, 2003) and dynamic capability (Girod & Whittington, 2017). However, organic configurations tend to evolve in uncertain environments, and mechanistic configurations suited for stable environments (Burns & Stalker, 1961).

Full alignment through organizational design is considered difficult (O'Reilly & Tushman, 2008). The ambidexterity complementary effect in generating high performance is undermined by negative externalities created by organizational designs (Raisch & Zimmermann, 2017), hence a paradox. This situation can be resolved through the creation of two units separately pursuing exploitative and explorative activities (Duncan, 1976), and configuring each unit to fit its task-specific conditions (Lawrence & Lorsch, 1967). The separation coupled with senior management coordination and unit integration reduces negative externalities thus enhances desired high performance (Koryak et al., 2018).

Burns and Stalker (1961) identified organic and mechanistic designs as two polar extremities of organizational configurations and explained that organic configurations are flexible and adaptive, with lateral communication - based emphasis on information exchange approach, expertise, and knowledge-based leadership and loosely defined responsibilities. In addition, the authors argue that mechanistic organizations are

characterized by complexity, formalization, and centralization depicted by routines and heavy reliance on programmed behaviours (Ogollah, 2012). Adler, Goldoftas and Levin (1999) suggest mixed designs by combining mechanistic and organic features to resolve the ambidexterity - organizational design paradox. Further, organizational ambidexterity triggers organizational design alignment through the implementation of organic and mechanistic structures and an effect on performance (Raisch & Birkinshaw, 2008).

However, other scholars hold divergent views on organization design as an enabler to organizational ambidexterity arguing that as much as duality may allow for separate unit-level focus and alignment, intra - organizational conflicts may emerge, and may lead to low performance (Doty, Glick & Huber, 1993). Further, a consensus is yet to be attained among scholars on integration justification and its magnitude in the organizational units (Levinthal, 1997). Raisch and Birkinshaw (2008) view and which the current study adopts is that the exploitative and explorative activities in ambidexterity exhibit opposing features, and require diverse structural designs. This study contributes to this debate by seeking an organization design role in the organizational ambidexterity and performance relationship.

1.1.3 Environmental Dynamism

Among the broadly studied strategic management concepts is environmental dynamism. It denotes the extent and instability of variation of the organization's macro-environment, characterized by the environment's volatility and unpredictability (Dess & Beard, 1984). Accordingly, organizations can be located on an environmental scale from stable to dynamic, with stable environments depicted by infrequent changes, while highly dynamic environments have rapid and discontinuous changes (Zhou & Wu, 2010).

The construct is important due to its influence on relations among several firm-level concepts; for example the organization's structural design (Lawrence & Lorsch, 1967), strategic management process (Prajogo, 2016), and performance outcomes (Keats & Hitt, 1988). The increased uncertainty, unclear relationships, and inappreciable future constrain effectiveness and timeliness in decision making; hence performance (Eisenhardt, 1989). Strategy and organizational design scholars recognize environmental dynamism significance and hold that no single strategy and/or design is appropriate to all situations, hence organizations have to embrace diverse plans and organization designs to align to the dynamic business environment (Mintzberg, 1979).

Management is required to continuously align the capabilities to changes in the environment through continual redesigning and integration into new configurations to cope with the changes (Girod & Whittington, 2017). Devising and promoting agile and flexible organizational designs may be necessary for enhancing organizations' receptiveness towards evolving fluctuations in dynamic environments (Miller & Friesen, 1983). According to Raisch and Birkinshaw (2008) exploitative and explorative activities in ambidexterity exhibit opposing features, and require supportive organizational contexts, including environmental dynamism. This study seeks to establish environmental dynamism effect on organizational ambidexterity and performance relationship.

1.1.4 Organizational Performance

Strategic management scholars have shown significant interest in organizational performance as a yardstick in evaluating organizations and their actions (Yang, Huang, & Hsu, 2014). According to Jenatabadi (2015), organizational performance as a construct has many dimensions and its explanation cannot be through a single index, and

researchers are yet to reach consensus on its definition and measurement. Organizational performance is a measure of real outcomes or productivity viewed against the organization's set targets (Richard, Devinney, Yip & Johnson, 2009). Valmohammadi (2012) definition and which this study adopts is that organizational performance is an indicator measuring an organization's accomplishment of its set objectives and targets. Kariuki (2015) used a similar approach.

Prosperity in organizations is one of the main goals and performance improvement is core in strategic management, thus necessitating close attention to performance measurement by organizations (Venkatraman & Ramanujam, 1986). The organization's performance should be aligned to conflicting current and future aspirations and optimal resource exploitation in the short-run as well as the new resources generation (Miller & Friesen, 1983). However, researchers are yet to reach an agreement on the causes of organizational performance disparities and hence its appropriate measurements (Mugambi & K'Obonyo, 2012).

Researchers have identified financial, product/market, and stakeholder value as the main organizational outcomes for measuring its performance. Financial performance and shareholder value are measured using accounting measures (Danielson & Press, 2003). However, financial measures have been criticized as being lag indicators (Chenhall & Langfield-Smith, 2007). Accordingly, Kaplan and Norton (1992) recommend the application of an all-inclusive measurement approach, incorporating financial and non-financial measures. Market size, innovativeness, customer satisfaction, and technology are some of the non-financial measures (Venkatraman & Ramanujam, 1986).

According to Hubbard (2009) measuring organizational performance has become complex due to the changing expectations by stakeholders on the firm's financial, societal and environmental responsibilities. The emphasis today and which this study adopts is to operationalize performance using the Sustainable Balanced Scorecard (SBSC) which enhances the Kaplan and Norton (1992) balanced scorecard by adding elements to incorporate an organization's focus on the community and the environment within which it operates. The SBSC includes performance measures on; shareholder interests, organizational processes, customer satisfaction, human factor, societal, and environmental concerns (Hubbard, 2009; Ndegwa, 2015). Organizational performance outcomes and its measurement are methodology and context-dependent and the current study targeted to contribute to the ongoing debate among scholars on what influences it (Mugambi & K'Obonyo, 2012).

1.1.5 Large Manufacturing Firms (LMFs) in Kenya

Manufacturing represents all activities entailing the conversion of inputs or raw materials into finished products or merchandise for use or sale, using human effort and technology (UNIDO, 2012). Although there is no consensus on the definition of a large organization, the number of employees, capital employed, and revenue are some of the key parameters used in its definition. In the USA, UK, and EU, large organizations are those with a sales turnover of over USD 250 million, the asset value of over USD 100 million, and employing at least 1,000 persons (Nickels & McHugh, 1999). According to the definition of large business by KAM (2018) which this study adopts, they are businesses employing at least fifty employees and minimum Kenya Shillings One Billion sales revenue per annum.

This definition is appropriate for a Kenyan study. Awino (2015) and Kariuki (2015) used a similar approach. The manufacturing sector comprises diverse industries categorized as; food-processing, textile, wood, cement production, metal, and commodities sectors (UNIDO, 2012). The Kenyan manufacturing sector is appropriate for this study, given its diversity due to the differences across the industry. The manufacturing sector in Kenya contributed over 7.8% of the 2018 GDP and over 12.2% of employment (KNBS, 2019). It has been identified as one of the "Big Four agenda" pillars towards the attainment of Vision 2030 (GOK, 2018). However, its growth is erratic; 2.5% in 2014, 3.6% in 2015, 3.1% in 2016, 0.7% in 2017 and 4.3% in 2018, while its GDP contribution declined from 10% in 2014 to 7.8% in 2018 (KNBS, 2019).

The declining performance in the sector could be partly explained by several environmental dynamism related challenges. Uncertainties related to political volatility, high cost of doing business, unfavourable tax regimes, technological advancements, unpredictable weather conditions and weak enforcement of laws and regulations have led to stiff competition from imported goods from China (KNBS, 2019). Other factors include; working capital constraints, labour productivity challenges and inefficiencies in the supply chain and production processes (KAM & KBG, 2018). The declining performance suggests that strategies deployed have not been effective in enhancing performance.

1.2 Research Problem

The consensus is increasing among scholars that organizational ambidexterity is important for business sustainability but it is not easily achievable (O'Reilly & Tushman, 2008). The exploitative and explorative activities in ambidexterity exhibit opposing features, and require diverse structural designs and supportive organizational contexts (Raisch &

Birkinshaw, 2008). The resultant tensions and potential intra-organizational conflict may require trade-offs, often resulting in organizations favouring one activity at the expense of the other, thus making organizational ambidexterity difficult (Ghemawat & Costa, 1993). In addition, organizational ambidexterity is expected to trigger organizational design alignment which eases the tensions, therefore affecting performance (Raisch & Birkinshaw, 2008). However Lawrence and Lorsch (1967) argue that it is difficult to reconcile organic and mechanistic structures in a single firm. Therefore, full ambidexterity - organizational design alignment is considered difficult (O'Reilly & Tushman, 2008) due to resultant negative externalities (March, 1991; Raisch & Zimmerman, 2017), hence a paradox. According to Adler et al. (1999) the paradox can be fixed with a combination of organic and mechanistic organizational structures. Further, researchers have not adequately affirmed the nature of environmental dynamism effect on this alignment (Tamayo Torres et al., 2017).

The Kenyan manufacturing sector has great prospects for spurring growth in other sectors, including export and is one of the government's "Big Four agenda" pillars towards the attainment of Vision 2030 (GOK, 2018). However, the manufacturing sector GDP contribution declined from 10% in 2014 to 7.8% in 2018, while its growth is erratic; 2.5% in 2014, 3.6% in 2015, 3.1% in 2016, 0.7% in 2017 and 4.3% in 2018 (KNBS, 2019). The declining and erratic manufacturing firms' performance compounded by a fast-changing business environment curtails their ability to maximize current business potential and keep pace with environmental changes through innovation, thus threatening their survival. The declining performance also suggests that the strategies deployed have

not been effective in enhancing performance. The environmental changes and competition in the sector may require organizational ability to be ambidextrous. This suggests that the manufacturing sector's performance may be influenced by its capacity for ambidexterity. However, it is not clear whether and how organizational ambidexterity influences the performance of Kenya's large manufacturing firms. Also, studies conducted on organizational ambidexterity in the Kenyan manufacturing sector are limited.

Despite the theoretical ambidexterity-organizational performance nexus, empirical studies testing this relationship are scanty and have yielded inconsistent results (Junni et al., 2013). Whereas some studies (Tamayo-Torres et al., 2017) reported positive ambidexterity - organizational performance relationship, Venkatraman, Lee and Lyer (2007) did not find a direct relationship. Popadic, Cerne & Milohnic (2015) reported negative effects. This inconsistency in the findings suggests that there may be other factors mediating or moderating the relationship.

Raisch and Birkinshaw (2008) suggested organizational design mediating effect in the organizational ambidexterity - performance relationship. However, researchers have reported mixed findings in the organizational ambidexterity - organizational design - performance relationship. While some studies (Hill & Birkinshaw, 2014; Boumgarden, Nickerson & Zenger, 2012) reported a positive organizational design - organizational ambidexterity - performance association, the organizational design mediating role was not explored. O'Reilly and Tushman (2011) reported a mediating effect of structural

mechanisms linked with top management's integration on organizational ambidexterity and performance relationship. Study by Venkatraman, Lee and Lyer (2007) revealed an insignificant organizational design mediating role. Mwangi (2017) reported OA mediating effect on IT capability - performance relationship.

According to Jansen, Tempelaar, Van den Bosch and Volberda (2009) environmental dynamism determine certainty and predictability, which affect decision making and performance. Studies on environmental dynamism moderating effect on the organizational ambidexterity-performance relationship have reported inconsistent findings. Whereas some studies (Tamayo-Torres et al., 2017; Girod & Whittington, 2017; and Halevi, Carmeli & Brueller, 2015) reported environmental dynamism positive moderating effect, Mwazumbo (2016) reported negative moderating effects.

The above empirical studies have reported inconsistent results on the organizational ambidexterity, organizational design, environmental dynamism, and organizational performance relationships. Besides, although the individual influences of organizational ambidexterity, organizational design and environmental dynamism on organizational performance have been studied, there has been no examination of the variables' joint effect on performance. Overall, there thus exist conceptual, contextual and methodological gaps. Therefore, this study seeks to answer the question; what is the role of organization design and environmental dynamism in the relationship between organizational ambidexterity and performance of organizations?

1.3 Objectives of the Study

The broad study objective is to determine the role of organizational design and environmental dynamism in the relationship between organizational ambidexterity and performance of large manufacturing firms (LMFs) in Kenya. The specific objectives are to:

(i) Establish the influence of organizational ambidexterity on the performance of LMFs in Kenya.

(ii) Determine the role of organizational design in the relationship between organizational ambidexterity and performance of LMFs in Kenya.

(iii) Assess the effect of environmental dynamism in the relationship between organizational ambidexterity and performance of LMFs in Kenya.

(iv) Evaluate the joint effect of organizational ambidexterity, organizational design, and environmental dynamism on the performance of LMFs in Kenya.

1.4 Value of the Study

This study advances research and literature on organizational ambidexterity focusing on performance consequences of concurrent engagement in exploitation and exploration by organizations. By establishing the influence of organizational ambidexterity on performance, the study contributes to the dynamic capabilities theory. The findings support the organizations configurations theory as the firms could perform differently depending on their organizational designs. The study considers environmental dynamism as a moderating variable in organizational ambidexterity - performance relationship, hence contributing to the contingency theory. Further, the study findings enhance the replication of comparable studies in a divergent context, thus nurturing comparative study.

The study findings will influence policy making in the manufacturing sector. The research results will provide information on organizational ambidexterity, organizational design, and environmental design, in the manufacturing sector. The findings will enable the formulation of relevant policies that address the contemporary manufacturing sector requirements by policymakers.

The study findings will enable management of firms in simultaneously exploiting current competencies while exploring future opportunities, thus achieve the organization's competitiveness, hence enable coping with environmental dynamism effects. Manufacturing firms' leadership and management practitioners will be better empowered from the study findings to better align the exploitative and explorative activities for performance enhancement. Company leadership and management practitioners will be enabled to incorporate the moderating variable (environmental dynamism) and the mediating variable (organizational design) together in their business plans and processes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explains theories forming the study foundation, and literature review on results of previous studies on the organizational design and environmental dynamism role in the organizational ambidexterity - performance relationship. In addition, a conceptual framework will be developed. Further, the hypothesized relationships will be identified to enable the empirical study of the advanced propositions.

2.2 Theoretical Foundation

The research study's theoretical underpinnings will be discussed in this section. These theories include Dynamic capabilities, Organizational configurations, and Contingency theories. The dynamic capabilities theory is the anchoring theory.

2.2.1 Dynamic Capabilities Theory

Dynamic Capabilities Theory (DCT) was proposed by Teece, et al. (1997) and extends Resource-Based View and focuses on capabilities deployed by firms for competitive advantage and sustained superior performance by enhancing the firm's sensing effectiveness and external environment dynamics adaptation seizing capability. Dynamic capabilities theory places emphasis on competitive survival in reaction to business environmental dynamism through dynamic capabilities deployment (Eisenhardt & Martin, 2000). Dynamic capabilities entail an organization's integration, building internal and external competencies, reconfiguration capabilities and include business practices, molded by the organization's asset base support, and growth cycle (Helfat & Peteraf, 2003). They are typically the managerial activities of sensing, seizing and reconfiguring, that can make a capability dynamic (Teece, 2007).

Sensing entails the environmental scanning capability of an organization from which opportunities are recognized, and competitive threats identified (Helfat & Peteraf, 2015). Seizing on the other hand refers to formulation and execution of appropriate organizational strategies for the exploitation of opportunities and eluding any threats, in line with its strengths and weaknesses (Li & Liu, 2014). Strategic renewal will require organizational design reconfiguration (Teece, 2007).

Organization's capacity to concurrently undertake exploration and exploitation activities is organizational ambidexterity (O'Reilly & Tushman, 2008). Exploration relates to activities such as novelty, search, discover and change; which is similar to sensing, which is characterized by increased research activities. Exploitation in the contrary entails organizational processes, including production and through-put enhancement, implementation and monitoring; similar to seizing. Organizational ambidexterity is linked to better performance, therefore, makes the concept part of the dynamic capabilities.

Contributing to the theory, scholars have made significant milestones in describing its main constituents. Wang and Ahmed (2007) identified capacities to adapt, absorb and innovate as the main factors reflecting organization-wide capabilities. Erickson (2014) argued that the organization's internal and external antecedents influence its dynamic capabilities for development and sustainability. The theory according to Teece et al. (1997) assumes timely responsiveness to market dynamics and effective configuration and reconfiguration of organizational competencies result in competitive advantage and hence superior performance.

Dynamic Capabilities Theory has achieved significant growth in terms of scope and use in research (Di Stefano, Peteraf & Verona, 2010). Its theoretical and practical significance in explaining organizational performance variations in diverse business environmental settings is well recognized (Zahra, Sapienza & Davidson, 2006). It provides a reliable tool for management practitioners by focusing on the organizations to quickly orchestrate and reconfigure externally sourced competence and therefore enabling adaptation to change as well as capability standards endurance (Peteraf, Stefano & Verona, 2013). Organizational ambidexterity is recognized as a major dynamic capability (Birkinshaw & Gupta, 2013).

Scholars have questioned what constitutes dynamic capabilities and their source(s) (Easterby-Smith, Lyles & Peteraf, 2009). Lacking also is clarity on industry-specific dynamic capability building processes (Gregory & Pemberton, 2011). Further, a consensus is lacking among researchers on its conceptualizations, measurements, and interpretation (Peteraf et al., 2013). Varied perspectives have consequently been advanced and there exists no universal definition (Zollo & Winter, 2002). This, therefore, calls for further research to demonstrate how organizations get to prosper (Teece, et.al., 1997). This will be clarified through the organizational ambidexterity- performance influence.

2.2.2 Organizational Configurations Theory

Organizational configurations theory has its roots from the ideas by Max Weber (1947)'s contingency prediction on organizational configurations evolution and prosperity. Organizational configurationists hold the view of interconnection and mutual dependency of organizational design elements, thus advocating a wholistic view based on the systems

approach (Fiss, Marx & Cambré, 2013). An organizational configuration has been referred to as an alignment of different organizational attributes; including; structure strategy, and other operational aspects of the organizational design, with characteristics from environments (Ketchen, Thomas & Snow, 1993). Proposed by Mintzberg (1979), organizational configurations theory posits that configuring the organization so that all these elements fit together with key strategic challenges including their environment, is critical to strategy implementation and organizational success.

Organizational configurations theory has developed over time with contributions from various scholars. Burns and Stalker (1961) identified organizational configurations; namely, organic and mechanistic, suggesting that the prosperity of each was the environment - type dependent. According to Lawrence and Lorsch (1967), stable environments require mechanistic, while organic configurations are suitable in dynamic environments. Mintzberg (1979) opines that an organization has only a few configurations and these result from the strategic management practice. The performance - fit assumption holds that enhanced configuration sync will lead to improved execution by the organization (Drazin & van de Ven, 1985).

Organizational configurations study has wide recognition in strategic management literature and organizational research (Ketchen et al., 1993), and has a vital contribution in understanding the determinants of competitive advantage and superior performance (Short, Payne & Ketchen, 2008). Organizational design enables the organization's structure - environment alignment (Mintzberg, 1979), and can enhance the organization's advantage sources, specifically on strategy implementation (Chandler, 1962). Successful

strategy implementation is also characterized by strategic renewal in the organization through organizational design reconfiguration, and is therefore transformational and a dynamic capability (Teece, 2007). Also Girod and Whittington (2017) recognized the ability to achieve an aligned configuration as a dynamic capability.

However, the likely existence of conflicting and extraneous components in the current configurations renders the consistency logic unsustainable (Hannan, Burton & Baron, 1996). It has also been criticized for instrumentation deficiency, divergent research designs and analysis, and conflicting conceptualizations among researchers (Fiss, 2011). These limit the theory testing through empirical research, whose progress is unsatisfactory and unclear evidence on the impact of configuring an organization on its performance relationships between organizations (Ferguson & Ketchen, 1999). This will be assessed through the organizational design mediating role on the ambidexterity-organizational performance relationship.

2.2.3 Contingency Theory

Contingency theory is an outgrowth of systems design; the so-called universal approach. Based on the open systems view, Donaldson (2001) the proposer of the theory stresses a no-one-fits-all-approach in designing organizational structures. Instead, the optimal design is dependent upon the internal and external situation, with emphasis on striking an optimal balance in adapting to external environment changes and satisfying the needs in its internal processes, through alignments and optimal fits. The theory thus supports the concept of external environment (Lawrence & Lorsch, 1967), and its pertinent characteristics, including environmental dynamism (Dess & Beard, 1984).

The no-one-fits-all-assumption implies no universal approach to organizing; suggesting differing organization effectiveness (Galbraith, 1973). Accordingly, the theory demonstrates the need to align organizational internal elements (such as strategy and designs) to different organizational circumstances (Venkatraman & Prescott, 1990). Organizational - environmental alignment determines performance (Prajogo, 2016). Organizational outcomes according to contingency theory are subject to variant variables. It is therefore relevant as the research aimed to determine environmental dynamism effect on the organizational ambidexterity influence on organizational performance.

Numerous scholars have participated in advancing the contingency theory. Burns and Stalker (1961) came up with two ideal types; mechanistic theorized as suitable for organizations facing stable environments and predictable technologies, and organic structures theorized as suited for organizations facing rapidly changing environments as well as unpredictable technologies. Lawrence and Lorsch (1967) demonstrated the need to account for contingencies for efficient organizational design and therefore organizational performance. Further, contingency theorist Galbraith (1973) argued against the earlier held one-fits-all proposition in organizing and its effectiveness.

There has been considerable application of contingency theory in the diverse field in research, including the business environment-organizational features and their relationships. For instance, Hitt, Ireland, Camp, and Sexton (2001) applied the contingency fit in their research on resource strategy and entrepreneurship, while Prajogo (2016) studied innovation strategy - environment co-alignment. These studies commonly affirm the view that structure-contingencies fit is a key determinant of the organizational design effectiveness.

Despite its demonstrated usefulness in research, there are theoretical and empirical challenges to it. The contingency theory has been criticized as being too mechanical in the study of the organizational design (Galunic & Eisenhardt, 1994). Its practical application is doubtful as critics have questioned the organizations - contingencies fit rationale (Donaldson, 2001). Also, the consensus is lacking in contingency - fit conceptualization, with some scholars adopting configuration logic (Hill & Birkinshaw, 2008), while others adopt a Cartesian approach (Meyer, Allen & Smith, 1993). These will be clarified through the proposed environmental dynamism moderating effect on the organizational ambidexterity - organizational performance relationship.

2.3 Organizational Ambidexterity and Performance

Scholars have increasingly recognized organizational ambidexterity's major contribution to an organization's sustained enhanced performance. The organization's capability to concurrently pursue two disparate undertakings and with equal dexterity is what is meant by organizational ambidexterity; namely the organization's capacity to concurrently exploit current competencies and explore new knowledge (March, 1991; O'Reilly & Tushman, 2013). However, the reviewed literature reveals scanty and inconclusive organizational ambidexterity - performance linkage research results (Junni et al., 2013).

There are numerous empirical study findings reporting positive correlations between ambidexterity and organizational performance. Hill and Birkinshaw (2014) research on the effect of ambidexterity on the survival of business units found a positive effect. However, the researchers acknowledge gaps including; lack of objectivity due to systemic data collection obstacles. In their study of the organizational ambidexterity

effect on firm performance, Fu, Flood, and Morris (2016) reported a positive effect. Generalization of the findings is limited due to context - restrictive sampling frame, in terms of both industry and country. Tamayo-Torres et al. (2017) studied the manufacturing performance to organizational ambidexterity linkage and reported that manufacturing performance is positively and significantly affected by organizational ambidexterity. However, the findings generalization is constrained by possible informant bias in data collection and also a contextual limitation to Spanish manufacturing firms.

Also, there are researchers who have reported negative ambidexterity - organizational performance correlation. The results in the study on organizational ambidexterity and firms' innovation performance by Popadic et al. (2015) indicate negative organizational ambidexterity - innovation performance relationship. The limitations of the study include data inaccuracy due to shortcomings of the data source. In their analysis of small firm performance - efficiency-flexibility strategies relationships, Ebben and Johnson (2005) reported a negative outcome of mixed efficiency and flexibility strategies on performance.

Mwangi (2017) in the study on IS integration, IT capability, organizational ambidexterity (OA) and performance of Kenyan banks reported OA mediating effect on IT capability - performance relationship. Further, other studies have reported no effects for organizational ambidexterity on performance. For instance, Venkatraman et al. (2007) research on ambidexterity influence on software firms performance concluded that the ambidexterity hypothesis was not empirically supported. The current research will provide more understanding on the ambidexterity and performance relationship, thus ongoing debate contribution.

2.4 Organizational Ambidexterity, Organizational Design, and Performance

There is consensus on the merits of organizational ambidexterity influence on organizational performance or even survival` (Junni et al., 2013). This influence is affected by the tensions arising from the pursuance of two contrasting and contradicting activities (Birkinshaw & Gupta, 2013) and appropriate managerial intervention is required to ease the tensions (Andriopoulos & Lewis, 2010). Organizational design has been suggested as one of the managerial interventions for managing the tensions and therefore achieving ambidexterity impact on performance (Marks, Mathieu & Zaccaro, 2001). However, researchers have reported mixed findings on the ambidexterity - organizational design and performance relationships.

Hill and Birkinshaw (2014) study on Corporate Venture units found a positive association between structural design and ambidextrous orientation development. The study focused on the relationship between structural design and ambidexterity in corporate venture units. The results do not adequately explain the role of structural design in the ambidexterity - performance relationship of the corporate venture units. Boumgarden et al. (2012) study on the relationship between organizational ambidexterity and organizational design found that spatial separation, an aspect of organizational design, aids organizational ambidexterity and therefore enhances performance. However, the study did not explore the role of organizational design in explaining the influence of organizational ambidexterity on performance. O'Reilly and Tushman (2011) reported a mediating effect of structural mechanisms linked with top management's integration on organizational ambidexterity and performance relationship. It is however not clear what the mediator actually was, between structural mechanism and top management

integration. Findings of a study by Venkatraman et al. (2007) revealed a weaker and insignificant effect of structural separation, compared to that of temporal separation in ambidexterity effect on performance, as evidenced by their relative effects on sales growth. Kariuki (2015) study findings established a significant influence of structure on Kenyan large manufacturing enterprises' performance. The study focus was on the effect of structure on organizational performance and does not explain the role of organizational design in the influence of organizational ambidexterity on performance.

Despite inconsistency in the research findings of studies on the effect of organizational ambidexterity on performance, there is consistency that structural mechanisms, coupled with top management's overarching vision targeted to leverage assets, enable the organizational ambidexterity effect on performance (Birkinshaw & Gupta, 2013; Hill & Birkinshaw, 2014). However, there are very few studies that have explored the role of organizational design in explaining organizational ambidexterity influence on organizational performance. Although a few studies have explored the organizational design mediating role in the organizational ambidexterity - performance relationship, the process through which this happens remains unclear. In particular the role of organizational design in easing the tensions arising from the pursuance of the contradicting and contrasting exploitation and exploration activities. Arising from this, the study seeks to examine how organizational ambidexterity influences organizational performance through organizational design.

2.5 Organizational Ambidexterity, Environmental Dynamism, and Performance

Environmental dynamism is an environmental characteristic and denotes the degree and volatility of variation in an entity's macro - environment (Dess & Beard, 1984), with attributes such as technological fluctuations, consumer preferences, and inputs supply (Jansen et al., 2009). The implication is that it determines certainty and predictability, which affect decision making and performance. These suggest a relationship between environmental dynamism and organizational performance (Volberda & Lewin, 2003). Researchers have reported mixed findings on ambidexterity - environmental dynamism relationship and therefore performance.

In their study, Halevi et al. (2015) found significant environmental dynamism moderating effect on Top Management Team (TMT) behavioural integration influence on ambidexterity. However, findings generalization is limited due to methodological challenges of common method bias. Empirical study findings by Ebben and Johnson (2005) suggest positive ambidexterity - firm performance relationship under environmental dynamism conditions. Girod and Whittington (2017) study of reconfiguration and restructuring, dynamic capabilities and environmental dynamism roles on firm performance found a positive environmental dynamism moderating effect on reconfiguration - firm performance and negative environmental dynamism effect on restructuring - firm performance relationships. However, the study used economic performance measures only.

Tamayo-Torres et al. (2017) studied environmental dynamism and organizational ambidexterity effect on manufacturing performance and reported stronger manufacturing performance - organizational ambidexterity association in relatively dynamic environments, compared to that in steady and very dynamic environments, where the association was weaker. However, the study used operational parameters of quality, speed, and cost in performance measurement. Mwazumbo (2016) "Organizational resources, dynamic capabilities, environmental dynamism, and performance of large manufacturing companies in Kenya" research reported environmental dynamism does not significantly influence organizational resources - dynamic capabilities relationship. However, the study conceptualized organizational resources as independent variable and not ambidexterity and also conceptualized dynamic capabilities as mediating variable and not organizational design as used in the current study. In aggregate, these studies suggest an external environment contingency impact on the ambidexterity effect on firm performance. Further, these suggests environmental dynamism moderating effect on performance. The current research assesses how environmental dynamism moderates the ambidexterity effectiveness.

2.6 Organizational Ambidexterity, Organizational Design, Environmental Dynamism and Performance

According to DeWaal (2004), diverse factors impact on the degree to which the organization exhibits performance. Such factors include ambidexterity, organizational design, and environmental dynamism. As reviewed in the previous sections, the majority of the studies' focus has been the independent effect on organization performance. Ambidexterity achievements and effects on performance are varied at different

environmental dynamism levels (Tamayo-Torres et al., 2017). Hitt et al., 2001) research established a link between environmental dynamism and strategic orientation. In their study, Garcia-Zamora, Gonzalez-Benito and Munoz-Gallego (2014) established environmental dynamism moderating effect on organizational creativity, innovativeness, risk - taking and therefore marketing innovation performance.

Donaldson (2001) concluded that organizational performance originates from a fit between organizational design and environmental aspects. Bedford (2015) suggests that in terms of either exploration or exploitation, organization design control systems have independent effects on performance in ambidextrous firms. Mihalache, Jansen, Van den Bosch and Volberda (2014) reported that the top management shared leadership effect on ambidexterity is impacted by organizational design.

There is no evidence in the literature of ambidexterity - organizational design - environmental dynamism organizational performance relationships research in one single study and therefore further research is needed to establish the joint effect. The joint variable effect is anticipated to be statistically significant. It is also anticipated that an organization management would make sure that there is the proper alignment of its structures, processes, and relationships to achieve ambidexterity in dynamic environments. According to DeWaal (2004), taking full advantage of the diverse factors joint effect will enhance organizational performance. These suggest that the joint effect is statistically significant. The current research seeks to evaluate the organizational ambidexterity, design and environmental dynamism joint effect on performance of LMFs in Kenya.

2.7 Summary of Literature Review and Knowledge Gaps

The current study will address the following gaps indicated in Table 2.1. The study will determine the organizational ambidexterity influence on performance. The study will establish the environmental dynamism moderating effect and the mediating role of organizational design. The current study will use quantitative performance measures.

Table 2.1: Summary of Previous Studies and Knowledge Gaps

Author(s)	The focus of the cited studies	Methodology	Main Finding	Knowledge Gaps	The focus of the study
Tamayo-Torres, Roenhrich, and Lewis (2017)	Organizational ambidexterity, environmental dynamism and manufacturing performance of Spanish manufacturing firms.	Cross-sectional	Organizational ambidexterity positively and significantly affects manufacturing performance. Environmental dynamism moderates the organizational ambidexterity-manufacturing - performance relationship.	Performance measurement limited to only manufacturing process parameters, e.g. Quality, speed, etc.	Sustainable Balanced Scorecard was applied in measuring performance.
Girod and Whittington (2017)	Environmental Dynamism effect on reconfiguration and restructuring relationship with performance of US industrial firms.	Longitudinal	Positive environmental dynamism moderating effect on reconfiguration impact on firm performance and negative environmental dynamism moderating effect on the restructuring-firm performance relationship.	Firm performance measured in terms of economic outcomes only.	The current study used more encompassing organizational performance measures; namely Sustainable Balanced Scorecard.
Mwangi (2017)	IS Integration, IT Capability, Organizational Ambidexterity and the performance of banks in Kenya	Cross-sectional survey	Organizational ambidexterity mediates the relationship between IS integration and banks' performance. IT capability moderates the relationship between IS integration and banks' ambidexterity.	Organizational ambidexterity is a mediating variable in the study. The study was undertaken in the banking services sector. Performance measurement using a Balanced Score Card.	In the current study organizational ambidexterity was an independent variable. The study context was LMFs in Kenya. Performance measured using a Sustainable Balanced Score Card.
Fu, Flood & Morris (2016)	Organizational ambidexterity impact and the moderating effect of organizational capital on performance in Irish Accounting professional service firms.	Survey	Organizational ambidexterity positively affects firm revenue growth.	Contextual limitation of single professional firms and country. Performance measurement limited to revenue growth rate only	The current study was undertaken on various LMFs in Kenya. The organizational performance was measured using SBSC.
Mwazumbo (2016)	Organizational Resources-Dynamic Capabilities-Environmental Dynamism - Organizational Performance relationships in Large Manufacturing Companies in Kenya.	Cross-sectional survey	No significant moderating effect of environmental dynamism on the organizational resources - dynamic capabilities relationship.	The study used organizational resources as independent variables and not ambidexterity and also used dynamic capabilities as mediating variable and not organizational design.	The current study sought to establish the organizational ambidexterity-organizational design-environmental dynamism-performance relationships, in the same context of Kenyan LMFs.
Kariuki (2015)	Firm-Level factors, Industry Environment, Competitive Strategy and Performance of LMFs in Kenya.	Cross-Sectional Survey	Organizational structure significantly affects the performance of LMFs in Kenya.	Organizational structure used as one of the independent variable (Firm-Level factors) dimensions. Performance measured financial, internal	Organizational design (which includes organizational structure) was a mediating variable. Performance measured using the six-perspective Sustainable

Author(s)	The focus of the cited studies	Methodology	Main Finding	Knowledge Gaps	The focus of the study
				processes and customer perspectives only.	Balanced Score Card.
Halevi, Carmeli, & Brueller (2015)	The environmental dynamism effect on TMT's effectiveness in supporting the balancing of explorative and exploitative learning.	Survey	Moderating effect of environmental dynamism on TMT behavioural integration-strategic ambidexterity relationship.	Limitations associated with common method bias, thus affecting the causality evaluation.	Regression models applied in causality tests, and manufacturing firms was the unit of analysis in the current study.
Popadic, Cerne, and Milohnic (2015)	Effect of organizational ambidexterity and firms' innovation performance	Survey	Negative and significant effect of Organizational ambidexterity on innovation performance.	Assumption of the direct relationship of organizational ambidexterity and performance, regarding moderators or mediators. Performance measured in terms of innovation which is limiting.	The current study tested the moderating effect of environmental dynamism and the organizational design mediating role in the organizational ambidexterity - performance relationship. Performance measured using Sustainable Balanced Scorecard.
Hill and Birkinshaw (2014)	Ambidexterity - survival relationship in the context of Corporate Venture Unit	Longitudinal	Positive ambidexterity - survival relationship. Structural design positively related to the successful development of the ambidextrous orientation of the units.	Data objectivity limited due to systemic data collection obstacles, relatively small sample size constraining analysis, and reliance on self – reporting compromising objectivity.	The current study ensured objectivity during data collection, with the independence of the researcher and from a reasonably large sample.
Boumgarden, Nickerson & Zenger (2012)	Seeking to explore ambidexterity- vacillation- organizational performance relationships.	Case studies	The complementary relationship between ambidexterity and vacillation in relation to their effect on performance; but the mechanisms differ.	The use of archival research limits data by its sources, as well as self-presentation and retrospective biases. Study did not explore the role of organizational design in explaining the organizational ambidexterity influence on organizational performance.	The current study used quantitative measures and objective cross-sectional survey data collection methods and applied adequate statistical analysis, including regression analysis of the data from the diverse Kenyan manufacturing industry context. Organizational design mediation role in the organizational ambidexterity-performance relation was explored in the current study.

Source: Literature Review (2019)

2.8 Conceptual Framework

The link amongst the four variables under study is shown in Figure 2.1 (conceptual model) below. The variables are organizational ambidexterity, organizational design, environmental dynamism, and organizational performance. Organizational ambidexterity is the predictor variable and performance is the criterion variable. Organization design is the mediator variable whereas the moderating variable is environmental dynamism. Organizations operate within an open environmental system, thus the conceptualization of environmental dynamism as a moderator. Organizational design is conceptualized to mediate because organizations remain relevant if their assembly of structures, processes, and systems facilitate the link of the organization to its environment.

Figure 2.1: Conceptual Model

Moderating Variable

Environmental Dynamism
- Intensity of change
- Frequency of change

$H0_3$ $H0_1$

$H0_4$

Organizational ambidexterity
- Exploitation
- Exploration

Organizational Performance
Sustainable Balance Score Card (SBSC): Financial, Customer, Internal Processes, Learning and Growth, Societal and environmental perspectives.

Independent Variable

Organizational Design
- Organic Designs
- Mixed Designs
- Mechanistic Designs

Dependent Variable

$H0_2$

Mediating Variable

Source: Researcher (2019)

2.9 Research Hypotheses

The following are the hypotheses, all stated in null:

H0$_1$:   Organizational ambidexterity has no significant influence on the performance of LMFs in Kenya.

H0$_2$:   Organizational design has no mediating role in the influence of organizational ambidexterity on the performance of LMFs in Kenya.

H0$_3$:   Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the performance of LMFs in Kenya.

H0$_4$:   Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on the performance of LMFs in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research approach is presented in this chapter. There is also a discussion on research philosophy, research design, target population, methods of collecting data, and measurement scales validity and reliability. Also presented are study variables operationalization and data analysis procedures for testing research hypotheses. It also provides objectives, hypotheses and data analysis summary.

3.2 Research Philosophy

As a way of thinking or world view, a philosophy provides guidance in the research investigation for the development of knowledge and is mainly categorized based on its ontology and epistemology (Guba & Lincoln, 1994). Ontology refers to postulations about the nature of truth and reality and affect the researcher's world view and what they consider to be 'real', thus it affects knowledge construction. Epistemology is a theory of knowledge and is concerned with how we go about the research investigation to uncover this knowledge and learn about reality (Hudson & Ozanne, 1988). In the social sciences, diverse research philosophies exist. Strategic management research uses two main philosophies; namely positivism and phenomenology.

Positivists argue that reality exists externally and its features should be assessed objectively. Accordingly, positivism philosophy pursues truths of social phenomena with no abstraction or consideration of an individual's subjective status, as there is impartiality between the researcher and the research object. Positivism prefers quantitative

perspectives usage and objective realities with explanatory and predictive power (Cooper & Schindler, 2014). Also, knowledge according to positivists stems from human experience, and ontologically that discrete, observable elements and events comprise the world and favours observable and measurable facts (Collins, 1994). Variable operationalization is a critical ingredient in positivism and refers to how the variables are defined and measured, thus rendering the related concepts measurable (Sekaran & Bougie, 2016).

Positivist use the scientific method with focus on search for causal explanations, predictions, and law-like generalisations. Theory testing and increased phenomena prediction and understanding are its main focus, and thereby increases the results neutrality, objectivity and validity (Saunders, Lewis, & Thornhill, 2012). According to Babbie (2005), positivist approach proceeds from an established theoretical underpinning which forms the basis of the research, with a number of hypotheses formulated for testing and empirical verification is sought. It then seeks to obtain and analyze data collected from large samples selected randomly. The hypothesis is supported or rejected based on the inferences concerning the variable correlations, based on the empirical evidence. The researcher seeks to use results for generalization to the population through statistical probability (Easternby-Smith, Thorpe & Jackson, 2012).

The phenomenological approach on the other hand holds that perspectives of individuals form the basis of knowledge, which is therefore subjective. Accordingly phenomenology focuses on experiences of individuals, knowledge and their interpretations (Saunders et al., 2012). Phenomenologists believe that reality and the researcher are inseparable and

the observer should allow and value the diverse views and meanings placed by people based on their experiences. Phenomenologists believe that no single reality exists but is composed of inter-dependent systems for their meaning and thus views individual realities holistically and does not predefine dependent and independent variables (Guba & Lincoln, 1994).

It favours the use of a qualitative perspective in which knowledge is through the interpretation of human experiences and is inherent in perception. Phenomenology adopts a subjective approach for knowledge acquisition and development through deep-level and multi-method phenomena investigation and analysis to gain its understanding, and does not claim generalizability and prediction of causes and effects of outcomes, but rather delivers outcomes that are context-specific (Easternby-Smith et al., 2012). The researcher develops ideas through induction from data and investigates small samples in depth or overtime (Guba & Lincoln, 1994).

The study was grounded on the positivist philosophy. The person conducting the research in the study was independent of the research objects and there was little he/she could do to influence the outcome of the study, hence the study's adoption of the deductive approach to empirically establish relationships among variables. Moreover, the researcher concentrated on facts and only considered observable and measurable phenomena as knowledge. The study also had predefined hypotheses and it was for theory testing. The data collected from the entire 107 large manufacturing firms in Kenya was subjected to quantitative statistical analysis for hypotheses testing to establish existence or non-existence of significant spot-on among variables relationships, with recommendations for further research.

3.3 Research Design

Research design is a roadmap through which the scientist navigates the journey of data collection and analysis, based on the research questions or hypothesis being examined (Sekaran & Bougie, 2016). The study design should incorporate in a distinct study, the examination of numerous components and results (Bryman & Bell, 2011). A robust research design that captures realism and possesses satisfactory reliability and validity levels between the research questions and the proposed research method should provide scientific community confidence on the resultant findings (Kerlinger, 2008). This study adopted a cross-sectional survey approach involving spot-on data collection about views, practices, and situations across population members (Cooper & Schindler, 2014).

The study adopted the positivism philosophy in which a social phenomenon should be rendered as it is naturally. According to Burns and Grove (2003), cross-sectional survey enables the measurement of the study variables naturally without their manipulation or control, hence its application in the study. Also, it permits statistical analysis of the data collected and facilitates quantitative hypotheses testing establishing existence/non-existence of significant spot-on among variables relationships (Cooper & Schindler, 2014), thus study appropriateness. Further, it is linked to the deductive approach whose aim is causal relationships explanation and helps in the outcomes generalization to a bigger firms population instead of the few study participants.

According to Cooper and Schindler (2014), situations in which objective establishment of significant variable spot-on associations is key, cross-sectional survey approach is appropriate. The current study aim was determination of the organizational design and environmental dynamism effects on the organizational ambidexterity - performance

relationship of Kenyan LMFs. The spot-on information obtained informed the research problem conclusions, thus the cross-sectional survey suitability. A number of researchers; including Ogollah (2012: 2015); Halevi et al.(2015); Kariuki (2015); Popadic et al.(2015); Fu et al.(2016); Mwazumbo (2016), Tamayo-Torres et al.(2017); Mwangi (2017), amongst others, have applied cross-sectional research survey designs, enabling their hypotheses testing and drawing conclusions.

3.4 Population of the Study

The study was a census, with the population being all the 107 Kenyan LMFs. KAM (2018) classifies manufacturing companies with 50 and above employees and annual sales turnover of Kshs.1 Billion and above as large. The definition was adopted for purposes of this study. The similarity of the Kenyan conditions under which the study was conducted made the number of employees and sales revenue appropriate in size determination. Awino (2015) and Kariuki (2015) used a similar approach.

3.5 Data Collection

The study collected primary and secondary data. A structured questionnaire was the tool for primary data collection. Questionnaire was adapted from strategic management studies. These were modified to align with the current study objectives. Questionnaire has the advantage of high respondents reach. The companies' annual financial statements were used to obtain secondary data on financial measures of performance.

Quantitative data was incorporated into the questionnaire. This enabled achievement of the study overriding aim, which was to understand in detail the diverse issues affecting organizational performance. The evaluation of past studies on the study variables

informed the construction of the questionnaire. The questionnaire was divided into six (A to F) distinct sections. Section A covered respondent profile, section B organizational ambidexterity, and section C organizational design. In addition, section D addressed environmental dynamism, and section E and F focused on organizational performance.

The questionnaire was delivered to the Managing Directors/Chief Executive Officers (MDs/CEOs) of the firms or with their permission, General Managers(GMs) or Heads of department (HODs) of Finance, Sales and Marketing, Human Resources and production, thus targeting one senior manager per firm. Organizations' key informants and typically most responsible and familiar with the organization's performance parameters are the CEOs and HODs. Organizations are a replication of its senior management, who shapes the destiny of organizations (Hambrick, 2007). The questionnaire administration was by drop and pick or send by e-mail in cases where firms' e-mail addresses had been provided in the KAM directory or in accordance with the respondents' preference.

3.6 Validity Tests

The instrument's ability to measure what it purports to is its validity, and it concerns the accuracy of inferences (Cooper & Schindler, 2014). Face, content and construct validity were assessed in the study. The subjective view of an instrument's coverage of the concept as it purports to measure is its face validity (Gaber & Salkind, 2013). The ability of the instrument to generate satisfactory coverage of the investigative questions on the constructs under investigation is its content validity (Zikmund, Babin, Carr & Griffin., 2012). Construct validity is the degree the construct operationalization actually measures as stated by the theory (Leedy & Ormod, 2005; Mugenda, 2010).

The suitability of the items in obtaining information that would help fulfill the research objectives was ascertained by discussing the draft questionnaire with supervisors who are knowledgeable in research. The expected discussants' questionnaire double-checking during the various presentations also ensured that the theoretical dimensions emerge as conceptualized. The research questionnaire was adopted from existing literature, and customized for current study objectives alignment. The thorough review and verification of extant literature ensured that items needed for measuring the concepts were incorporated.

Further, the understanding of the questions by the respondents was assessed during the pilot study (Zapolski, Guller & Smith, 2012). A randomly selected 5(five) firms from the study population were used in the questionnaire pretesting pilot study. The feedback collected guided review of the data collection questionnaire, and also helped avoid comprehension problem, therefore improving the questionnaire suitability. Finally, the thorough checking of the returned questionnaires ensured their consistency and completeness after data collection, thus acceptability. Only acceptable questionnaires were used in the subsequent analysis. These initiatives ensured face, content, and construct validity.

More construct validity testing was done using factor analysis (Zapolski et al., 2012). The constructs of the variables (Organizational ambidexterity, Organizational design, environmental dynamism, and Organizational performance) were subjected to extraction by means of Principal Component Analysis (PCA), and rotation using varimax. Factor analysis is suitable in data reduction and aids in reaching a more parsimonious

understanding of measured variables (Fabrigar, Wegener, MacCallum, & Strahan, 1999). It involves the extraction of as much common factors as possible from the variables and commonly scoring them. The central aim is the orderly simplification of the number of interrelated measures, leading to data summarization. Therefore, it aids in isolating constructs and concepts.

3.7 Reliability Tests

The consistency of the results yield from repeated trials and the measurement is referred to as reliability of the research instrument (Cooper & Schindler, 2014). Consistency in an instrument is assessed by measuring its extent of freedom from random or unstable error and therefore bias (Sekaran & Bougie, 2016). The research questions were tested against test items for internal consistency through reliability tests and this informs replicability.

A pilot test with five (5) firms randomly selected from the study population of 107 LMFs in Kenya was also carried out prior to data collection. The participants were invited to respond to the study questionnaire and report any unclear questions and instructions, pinpoint any deficiencies in the questions as well as propose any amendments, therefore ensure consistency in the understanding and interpretation of the questions by the participants. The study questionnaire was amended appropriately based on the pilot study results. Furthermore, research assistants were trained on objectivity in results scoring, while the researcher ensured that the same questions in the questionnaire were presented to all the respondents, therefore enhancing consistency.

An instrument's test scores desired consistency measure is its reliability (Crocker & Algina, 1986). A reliability test was undertaken on the instruments used for data collection using Cronbach's Alpha index for the model variables. The index ranges from zero (0) which signifies nil consistency, to one (1) which signifies full consistency. A higher index denotes a higher reliability scale. Numerous authors such as Bland and Altman (1997) have placed the reliability threshold at the Alpha scale index of 0.7, while others such as Field (2000) considers adequate a threshold of 0.6 and higher. This study considers suitable an Alpha index of 0.7 and above.

3.8 Operationalization of the Study Variables

Study variable operationalization refers to how they are defined and measured, thus rendering the concepts measurable (Sekaran & Bougie, 2016). Consideration of the construct operationalization and measurement in the work of other researchers is a meaningful way to understand its study variables' operationalization and measurement (Yi, 2009). Study variables operationalization and measurement are as discussed below and summarized in Table 3.1.

The study's independent variable, organizational ambidexterity was measured using exploration and exploitation variables. Exploration was as evidenced by activities such as; new knowledge search, experimentation, flexibility, risk-taking, creativity, and innovativeness. Exploitation activities on the other hand included; efficiency and improvement, standardization, continual refinement, constant surveys and penetration into existing markets. A combined perspective was applied, in which the two activities are considered orthogonal, but

complementary, based on which ambidexterity was studied as the summed-up outcome (Blindenbach-Driessen & Ende, 2014). The measure reliably predicts the ambidexterity synergistic effect and was adapted from Hill and Birkinshaw (2014) in whose similar operational approach it was used.

The mediating variable in this study is organizational design, which was operationalized as evidenced by mechanistic and organic designs. Complexity and centralization, division of labour into specialized functions, rules and procedures, narrow span of control and long command hierarchy characterize mechanistic designs. Being at the two extremes implies that on a scale ranging from organic to mechanistic, the mid-point is mixed organizational designs. These were adapted from past studies (Akdogan, Akdogan & Cingoz, 2009; Ogollah, 2012).

Environmental dynamism which is the moderating variable was operationalized and measured in terms of the perceived intensity and frequency of change; as evidenced by changes such as, product demand/profitability, and technology (Miller, 1987; Zhou & Wu, 2010). The dependent variable organizational performance, which was measured by adopting performance measures from SBSC by Hubbard (2009) that considers performance in six perspectives; financial, internal processes, customer satisfaction, learning, and innovation, societal and environmental perspectives, using Likert-scale instrument adopted with modifications from Hubbard (2009) and Ndegwa (2015).

Table 3.1: Operationalization of Variables

Nature	Variable	Dimensions	Indicators	Source	Measurement	Questionnaire Section
Independent	Organizational Ambidexterity	Exploration	New knowledge search, Experimentation, Flexibility, Risk-taking, Creativity, and innovativeness.	Blindenbach-Driessen & Ende (2014); and Hill & Birkinshaw (2014).	5-Point Likert type scale (Interval)	Section B: Sub-sections:(a) Questions (i) to (vi)
		Exploitation	Efficiency and improvement, Standardization, Continual refinement, Constant surveys and Penetration into existing markets.			Section B: Sub-sections:(b) Questions (i) to (vi)
Mediating	Organizational Design	Organic	Simple and decentralization, Greater decision-making discretion, Low job specialization, Loose departmentation, Few and short management hierarchies.	Akdogan, Akdogan, & Cingoz (2009); and Ogollah (2012).	5-Point Likert type scale (Interval)	Section C: Questions (i) to (xv)
		Mechanistic	Complexity, formalization, and centralization, Division of labour into many highly specialized functions, Discretion in performing tasks is limited, Well defined rules and procedures, Participation in decision-making is limited, Decision making concentrated at top-level management, Complexity characterize decisions, Rigid departmental structures, Many layers of management, Narrow span of control, and Long chains of command.			
Moderating	Environmental Dynamism	Intensity of change	Perceived amount/rate of change in external environment parameter, namely: Politics; Economical; Socio-Demographics; Technology; Physical environment and Legislative.	Miller (1987); and Zhou & Wu (2010).	5-Point Likert type scale (Interval)	Section D:Sub-section(a) Questions (i) to (x)

Nature	Variable	Dimensions	Indicators	Source	Measurement	Questionnaire Section
		Frequency of change	Perceived frequency of change of listed external environmental parameters, namely: Politics; Economical; Socio-Demographics; Technology; Physical environment and Legislative.	Miller (1987); and Zhou & Wu (2010).	5-Point Likert type scale (Interval)	Section D: Sub-section (b) Questions (i) to (x)
Dependent	Organizational Performance	Financial Performance	Sales Revenue/Turnover, Profitability, Total assets, Number of shares, Return on assets, Investments, and Equity.		5-Point Likert type scale for primary data (Interval)

Numerical secondary data (Ratio scale) | Section E: Sub-section (a) Questions (i) to (iv) and

Section F: Questions (i) to (iv) |
		Customer Focus	Delivery and product quality performance for the customer, Customer satisfaction and retention, and Market size.		5-Point Likert type scale (Interval)	Section E: Sub-section (b) Questions (v) to (x)
		Internal business processes	Process automation, Supports innovation Efficiency levels: Machinery efficiency level, Labour productivity level and Material efficiency level.	Hubbard (2009); and Ndegwa (2015).	5-Point Likert type scale (Interval)	Section E: Sub-section (c) Questions (xi) to (xv)
		Learning and Growth	Employee skill development, innovativeness, and productivity.		5-Point Likert type scale (Interval)	Section E: Sub-section (d) Questions (xvi) to (xxii)
		Societal performance	Impact a firm has on the communities in which it works (corporate social responsibility).		5-Point Likert type scale (Interval)	Section E: Sub-section (e) Question (xxiii) to (xxvi)
		Environmental performance	Investment and focus on the environment in the firm's operations.		5-Point Likert type scale (Interval)	Section E: Sub-section (f) Questions (xxvii) to (xxx).

Source: Researcher (2019)

3.9 Diagnostic Tests

The study unit of analysis was a large manufacturing firm. Data analysis entailed cleaning the data, editing, and coding. Completeness of the questionnaire was ensured by checking the returned questionnaires. Exploration of the organizations' and respondents' principal characteristics was through descriptive statistical analysis; namely frequencies, graphs, and percentages. The data was subjected to descriptive and inferential statistical analysis.

The regression method was a major part of the data analysis. Pre-tests to confirm conformity with the regression assumptions of linearity, normality, multicollinearity, and homogeneity of variances, were undertaken. Linearity test was undertaken to determine whether or not the independent-dependent variable relationship is linear. Linear regression and correlation analysis assume linearity. Correlation analysis was applied in linearity testing. Shapiro-Wilks test and Q-Q plot were used for normality tests with the assumption upheld with Shapiro-Wilk statistic greater than 0.5 and the Q-Q plots observed values close to expected values (Razali & Yap, 2011; Field, 2009). Variance Inflation Factor (VIF) was applied in multicollinearity testing and VIF values of below 10(Hair, Black, Babin & Anderson, 2010) and tolerance of more than 0.10(Menard, 1995) confirmed the desired non-multicollinearity between model variables.

Homogeneity of variances was tested through the tests for homoscedasticity and heteroscedasticity using Levene test. The study adopted the greater - than - 0.05 Levene value (Hair, et al., 2010) criterion in homogeneity of variances assumption support confirmation. Recognizing that in samples greater than 30, significant Levene test can be

produced due to small differences in group variance, Field (2009) recommends further assessment by taking the ratio of the highest and the lowest Levene statistics. In such cases, homogeneity is confirmed if the ratio is around 2 or 3.This study adopted the recommendation in assessing homogeneity of variances. The variable strength and their relationship nature were measured using the Pearson correlation coefficient.

3.10 Data Analysis

Hypothesized relationships were tested by computations of simple linear regression, multiple regressions, and hierarchical regression. Hypothesis 1 was tested using simple linear regression. The organizational design mediating role and the environmental dynamism moderating effect on the ambidexterity - performance relationship were tested using hierarchical multiple regression. The contribution by each variable was assessed by the successive addition of a variable for assessment and therefore facilitating the examination of the predictor - dependent variables relationship. The joint effect was tested using multiple regressions. Organizational ambidexterity, organizational design and environmental dynamism joint effect on organizational performance was determined by regressing all the independent variables against each individual organizational performance indicator.

The regression model's goodness of fit and overall robustness were tested using the F-test and p-values. The null hypothesis was rejected if the p-value was less than or equal to 0.05 ($p \leq 0.05$), otherwise, failed to reject the null hypothesis. The organizational performance was measured as a composite of the SBSC perspectives; financial, customer, internal processes, learning and growth, societal and environmental as well as in terms of

the individual SBSC perspectives. The composite is computed as the unit weighted mean in which each item is equally weighted (Rudner, 2001). Analysis and model estimations were done for both performance as a composite of the SBSC perspectives and for the individual SBSC performance perspectives. The summary of the research objectives, hypotheses, analysis and model estimation, and interpretation is in Table 3.2.

Table 3.2: Objectives, Hypotheses, Analysis, and Model Estimation

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
Establish the influence of Organizational ambidexterity on organizational performance.	$H0_1$: Organizational ambidexterity has no significant influence on organizational performance.	Simple regression analysis: (i) Based on Organizational performance as a composite(unit weighted mean) of the combined individual SBSC perspectives: Equation: OP=f(OA) $OP = \beta0_1 + \beta_1 OA + \varepsilon_1$ Where: OP=Aggregate unit weighted mean (composite)score of the combined individual SBSC Organizational Performance perspectives β_{01}, β_1 are regression coefficients $_{OA=}$Aggregate mean of the combined individual organizational ambidexterity indicators ε_1 Error term.	Mean, t-value, Pearson's correlation, R, R^2, F-ratio, p-Values R value (Range +1 to -1) If R = +1 there exists a strong positive relationship. If R = -1 then there is a strong negative relationship R^2 shows the variation in organizational performance explained by organizational ambidexterity. F-test and p-values will be used to assess the overall robustness of the regression model. t-test and p-values will help determine the individual significance of the study variables.
	$H0_{1a}$: Organizational ambidexterity has no significant influence on organization financial performance.	(ii) Based on individual SBSC performance perspectives: (a) Financial performance: Equation: FP=f(OA) $FP= \beta0_1 + \beta_1 OA + \varepsilon_1$ Where: FP=Aggregate unit weighted mean (composite)score of the combined Financial Performance indicator items β_{01}, β_1 are regression coefficients $_{OA=}$Aggregate mean of the combined individual organizational ambidexterity indicators ε_1 Error term.	The relationship between organizational ambidexterity and performance of LMFs in Kenya is significant if (β, t is significant, $p<0.05$)
	$H0_{1b}$: Organizational ambidexterity has no significant influence on organizational customer focus.	(b) Customer focus: Equation: CP=f(OA) $CP= \beta0_1 + \beta_1 OA + \varepsilon_1$ Where: CP=Aggregate unit weighted mean (composite) score of the combined Customer Performance indicator items β_{01}, β_1 are regression coefficients $_{OA=}$Aggregate mean of the combined individual organizational	

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
		ambidexterity indicators ε_1=Error term.	
	$H0_{1c}$: Organization ambidexterity has no significant influence on organizational internal processes.	(c) Internal Processes: Equation: IP=f(OA) IP= $\beta0_1+\beta_1OA+\varepsilon_1$ Where: IP=Aggregate unit weighted mean (composite) score of the combined Internal Processes indicator items $\beta_{01,}$ $\beta_{1,}$ are regression coefficients $_{OA=}$Aggregate mean of the combined individual organizational ambidexterity indicators ε_1=Error term.	
	$H0_{1d}$: Organizational ambidexterity has no significant influence on organization learning and growth performance.	(d) Learning and Growth Performance: Equation: LIP=f(OA) LIP= $\beta0_1+\beta_1OA+\varepsilon_1$ Where: LIP=Aggregate unit weighted mean (composite) score of the combined Learning and Growth Performance indicator items $\beta_{01,}$ $\beta_{1,}$ are regression coefficients $_{OA=}$Aggregate mean of the combined individual organizational ambidexterity indicators ε_1=Error term.	
	$H0_{1e}$: Organizational ambidexterity has no significant influence on organization societal performance.	(e) Societal Performance: Equation: SP=f(OA) SP= $\beta0_1+\beta_1OA+\varepsilon_1$ Where: SP=Aggregate unit weighted mean (composite)score of the combined Societal Performance indicator items $\beta_{01,}$ $\beta_{1,}$ are regression coefficients $_{OA=}$Aggregate mean of the combined individual organizational ambidexterity indicators ε_1=Error term.	

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
	$H0_{1f}$: Organizational ambidexterity has no significant influence on organization environmental performance.	(f) Environmental Performance: Equation: EP=f(OA) $EP= \beta0_1+\beta_1 OA+\varepsilon_1$ Where: EP=Aggregate unit weighted mean (composite)score of the combined Environmental Performance indicator items β_{01}, β_1 are regression coefficients $_{OA=}$Aggregate mean of the combined individual organizational ambidexterity indicators ε_1=Error term.	
Determine the role organizational design in the relationship between organizational ambidexterity and organizational performance.	$H0_2$: Organizational design has no mediating role in the relationship between organizational ambidexterity and organizational performance. $H0_{2a}$: Organizational design has no mediating role in the relationship	Path Analysis(4-Step): (i) Based on Organizational performance as a composite(unit weighted mean) of the combined individual SBSC perspectives: Equations: OP=f(Organizational ambidexterity, Organizational design) Step 1: $OP= \beta0_1+\beta_1 OA+\varepsilon_{10}$ Step 2:$OD=\beta0_2+ \beta_2 OA+ \varepsilon_{11}$ Step 3:$OP= \beta0_3+ \beta_3 OD+ \varepsilon_{12}$ Step 4:$OP= \beta0_4+ \beta0_4 OA+ \beta0_5 OD+ \varepsilon_{13}$ Where : OP=Aggregate unit weighted mean (composite)score of the combined individual SBSC Organizational Performance perspectives $\beta_{01}... \beta_{05}; \beta_{1...} \beta_3$ are regression coefficients OA=Aggregate mean of the combined individual organizational ambidexterity indicators OD= Aggregate mean of the combined individual organizational design indicators $\varepsilon_{1=Error}$ term. (ii) Based on individual SBSC performance perspectives: (a) Financial Performance Equations: FP=f(Organizational ambidexterity, Organizational design) Step 1: $FP= \beta0_1+\beta_1 OA+\varepsilon_{10}$ Step 2:$OD=\beta0_2+ \beta_2 OA+ \varepsilon_{11}$ Step 3:$FP= \beta0_3+ \beta_3 OD+ \varepsilon_{12}$	R^2 shows the variation in organizational performance explained by the introduction of organizational design - the mediator between organizational ambidexterity and organizational performance. F-test and p-values will be used to assess the overall robustness of the regression model. t-test and p-values will help determine the individual significance of the study variables. The relationship between organizational ambidexterity and organizational design is significant if (β, t is significant, $p<0.05$); the relationship between organizational design and performance of LMFs in Kenya is significant if (β, t are significant, $p<0.05$); and the relationship between organizational ambidexterity and performance of LMFs in Kenya is no longer significant when the effect of organizational design is controlled for (β, t are significant, $p<0.05$) then organizational design mediate the relationship.

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
	between organizational ambidexterity and organization financial performance.	Step 4:FP= $\beta 0_4$+ $\beta 0_4$OA+ $\beta 0_5$OD+ ε_{13} Where : FP=Aggregate unit weighted mean (composite)score of the combined Financial Performance indicator items β_{01}…. $\beta_{05;}$ $\beta_{1……}$ β_3 are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators OD= Aggregate mean of the combined Individual organizational design indicators $\varepsilon_{1=Error}$ term.	
	$H0_{2b}$: Organizational design has no mediating role in the relationship between organizational ambidexterity and organizational customer focus.	(b) Customer Focus Equations: CP=f(Organizational ambidexterity, Organizational design) Step 1: CP= $\beta 0_1$+β_1OA+ε_{10} Step 2:OD=$\beta 0_2$+ β_2OA+ ε_{11} Step 3:CP= $\beta 0_3$+ β_3OD+ ε_{12} Step 4:CP= $\beta 0_4$+ $\beta 0_4$OA+ $\beta 0_5$OD+ ε_{13} Where : CP=Aggregate unit weighted mean (composite) score of the combined Customer Performance indicator items $\beta_{01…..}$ $\beta_{05;}$ $\beta_{1…..}$ β_3 are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators OD= Aggregate mean of the combined Individual organizational design indicators $\varepsilon_{1=Error}$ term.	
	$H0_{2c}$: Organizational design has no mediating role in the relationship between organizational ambidexterity and	(c) Internal Processes Equations: IP=f(Organizational ambidexterity, Organizational design) Step 1: IP= $\beta 0_1$+β_1OA+ε_{10} Step 2:OD=$\beta 0_2$+ β_2OA+ ε_{11} Step 3:IP= $\beta 0_3$+ β_3OD+ ε_{12} Step 4:IP= $\beta 0_4$+ $\beta 0_4$OA+ $\beta 0_5$OD+ ε_{13} Where : IP=Aggregate unit weighted mean (composite) score of the combined Internal Processes indicator items $\beta_{01…}$ $\beta_{05;}$ $\beta_{1…}$ β_3 are regression coefficients	

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
		organizational internal processes.	OA=Aggregate mean of the combined Individual organizational ambidexterity indicators OD= Aggregate mean of the combined Individual organizational design indicators $\varepsilon_{1=Error}$ term.	
	$H0_{2d}$: Organizational design has no mediating role in the relationship between organizational ambidexterity and organization learning and growth performance.	(d) Learning and Growth Performance Equations: LIP=f(Organizational ambidexterity, Organizational design) Step 1: $LIP= \beta0_1+\beta_1OA+\varepsilon_{10}$ Step 2:$OD=\beta0_2+ \beta_2OA+ \varepsilon_{11}$ Step 3:$LIP= \beta0_3+ \beta_3OD+ \varepsilon_{12}$ Step 4:$LIP= \beta0_4+ \beta0_4OA+ \beta0_5OD+ \varepsilon_{13}$ Where : LIP=Aggregate unit weighted mean (composite) score of the combined Learning and Growth Performance indicator items $\beta_{01}\ldots \beta_{05;} \beta_{1\ldots} \beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators OD= Aggregate mean of the combined Individual organizational design indicators $\varepsilon_{1=Error}$ term.	
	$H0_{2e}$: Organizational design has no mediating role in the relationship between organizational ambidexterity and organization societal performance.	(e) Societal Performance Equations: SP=f(Organizational ambidexterity, Organizational design) Step 1: $SP= \beta0_1+\beta_1OA+\varepsilon_{10}$ Step 2:$OD=\beta0_2+ \beta_2OA+ \varepsilon_{11}$ Step 3:$SP= \beta0_3+ \beta_3OD+ \varepsilon_{12}$ Step 4:$SP= \beta0_4+ \beta0_4OA+ \beta0_5OD+ \varepsilon_{13}$ Where : SP=Aggregate unit weighted mean (composite)score of the combined Societal Performance indicator items $\beta_{01}\ldots. \beta_{05;} \beta_{1\ldots.} \beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators OD= Aggregate mean of the combined Individual organizational design indicators $\varepsilon_{1=Error}$ term	

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
	$H0_{2f}$: Organizational design has no mediating role in the relationship between organizational ambidexterity and organization environmental performance.	(f) Environmental Performance Equations: EP=f(Organizational ambidexterity, Organizational design) Step 1: EP= $\beta0_1 + \beta_1 OA + \varepsilon_{10}$ Step 2: OD= $\beta0_2 + \beta_2 OA + \varepsilon_{11}$ Step 3: EP= $\beta0_3 + \beta_3 OD + \varepsilon_{12}$ Step 4: EP= $\beta0_4 + \beta0_4 OA + \beta0_5 OD + \varepsilon_{13}$ Where : EP=Aggregate unit weighted mean (composite)score of the combined Environmental Performance indicator items $\beta_{01} \dots \beta_{05}; \beta_{1} \dots \beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators OD= Aggregate mean of the combined Individual organizational design indicators $\varepsilon_{1=Error}$ term.	
Assess the effect of environmental dynamism on the relationship between organizational ambidexterity and organizational performance.	$H0_3$: Environmental dynamism has no significant moderating effect on the relationship between organizational ambidexterity and organizational performance. $H0_{3a}$: Environmental dynamism has	Step-wise regression analysis(3-Step): (i) Based on Organizational performance as a composite(unit weighted mean) of the combined individual SBSC perspectives: Equations: Step 1: OP= $\beta0_1 + \beta_1 OA + \varepsilon M_0$ Step 2: OP= $\beta0_2 + \beta_1 OA + \beta_2 XED + \varepsilon M_1$ Step 3: OP= $\beta0_3 + \beta_1 OA + \beta_2 ED + \beta_3 (OA*ED) + \varepsilon M_2$ Where: OP=Aggregate unit weighted mean (composite)score of the combined individual SBSC Organizational Performance perspectives $\beta_{01}, \dots \beta_{03}; \beta_{1} \dots \beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators ED=Aggregate mean of the combined Individual environmental dynamism indicators OD*ED= Interaction term $\varepsilon M_1, Em_{2=Error}$ term. (ii) Based on individual SBSC performance perspectives: (a) Financial Performance Equations: Step 1: FP= $\beta0_1 + \beta1 OA + \varepsilon M_0$	R^2 shows the variation in organizational performance explained by the introduction of environmental dynamism - the moderator between organizational ambidexterity and organizational performance. F-test and p-values will be used to assess the overall robustness of the regression model. t-test and p-values will help determine the individual significance of the study variables. If the change in R^2 after the addition of interaction term (moderator) is significant (R^2 change, F change, β, t are significant. $p < 0.05$) then environmental dynamism moderates the relationship.

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
	no significant moderating effect on the relationship between organizational ambidexterity and organization financial performance.	Step 2: $FP = \beta0_2 + \beta_1 OA + \beta_2 XED + \varepsilon M_1$ Step 3: $FP = \beta0_3 + \beta_1 OA + \beta_2 ED + \beta_3 (OA*ED) + \varepsilon M_2$ Where: FP=Aggregate unit weighted mean (composite)score of the combined Financial Performance indicator items $\beta0_1 \ldots \beta0_3; \beta_1 \ldots \beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators ED=Aggregate mean of the combined Individual environmental dynamism indicators OD*ED= Interaction term εM_1, $Em_{2=Error}$ term.	
	$H0_{3b}$: Environmental dynamism has no significant moderating effect on the relationship between organizational ambidexterity and organizational customer performance.	(b) Customer Performance Equations: Step 1: $CP = \beta0_1 + \beta1 OA + \varepsilon M_0$ Step 2: $CP = \beta0_2 + \beta_1 OA + \beta_2 XED + \varepsilon M_1$ Step 3: $CP = \beta0_3 + \beta_1 OA + \beta_2 ED + \beta_3 (OA*ED) + \varepsilon M_2$ Where: CP=Aggregate unit weighted mean (composite) score of the combined Customer Performance indicator items $\beta0_1 \ldots \beta0_3; \beta_1 \ldots \beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators ED=Aggregate mean of the combined Individual environmental dynamism indicators OD*ED= Interaction term εM_1, $Em_{2=Error}$ term.	
	$H0_{3c}$: Environmental dynamism has no significant moderating effect on the relationship between organizational ambidexterity	(c) Internal Processes Equations: Step 1: $IP = \beta0_1 + \beta1 OA + \varepsilon M_0$ Step 2: $IP = \beta0_2 + \beta_1 OA + \beta_2 XED + \varepsilon M_1$ Step 3: $IP = \beta0_3 + \beta_1 OA + \beta_2 ED + \beta_3 (OA*ED) + \varepsilon M_2$ Where: IP=Aggregate unit weighted mean (composite) score of the combined Internal Processes indicator items $\beta0_1 \ldots \beta0_3; \beta_1 \ldots \beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational	

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
	and organizational internal processes.	ambidexterity indicators ED=Aggregate mean of the combined Individual environmental dynamism indicators OD*ED= Interaction term εM_1, $Em_{2=Error}$ term.	
	$H0_{3d}$: Environmental dynamism has no significant moderating effect on the relationship between organizational ambidexterity and organization learning and growth performance.	(d) Learning and Growth Performance Equations: Step 1: $LIP = \beta 0_1 + \beta 1OA + \varepsilon M_0$ Step 2: $LIP = \beta 0_2 + \beta_1 OA + \beta_2 XED + \varepsilon M_1$ Step3: $LIP = \beta 0_3 + \beta_1 OA + \beta_2 ED + \beta_3(OA*ED) + \varepsilon M_2$ Where: LIP=Aggregate unit weighted mean (composite) score of the combined Learning and Growth Performance indicator items $\beta_{01} \ldots \beta_{03}$; $\beta_{1 \ldots} \beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators ED=Aggregate mean of the combined Individual environmental dynamism indicators OD*ED= Interaction term εM_1, $Em_{2=Error}$ term.	
	$H0_{3e}$: Environmental dynamism has no significant moderating effect on the relationship between organizational ambidexterity and organization societal performance.	(e) Societal Performance Equations: Step 1: $SP = \beta 0_1 + \beta 1OA + \varepsilon M_0$ Step 2: $SP = \beta 0_2 + \beta_1 OA + \beta_2 XED + \varepsilon M_1$ Step3: $SP = \beta 0_3 + \beta_1 OA + \beta_2 ED + \beta_3(OA*ED) + \varepsilon M_2$ Where: SP=Aggregate unit weighted mean (composite)score of the combined Societal Performance indicator items $\beta_{01} \ldots \beta_{03}$; $\beta_1 \ldots \beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators ED=Aggregate mean of the combined Individual environmental dynamism indicators OD*ED= Interaction term εM_1, $Em_{2=Error}$ term.	

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
	$H0_{3f}$: Environmental dynamism has no significant moderating effect on the relationship between organizational ambidexterity and organization environmental performance.	(f) Environmental Performance Equations: Step 1: $EP = \beta0_1 + \beta1OA + \varepsilon M_0$ Step 2: $EP = \beta0_2 + \beta_1OA + \beta_2XED + \varepsilon M_1$ Step3: $EP = \beta0_3 + \beta_1OA + \beta_2ED + \beta_3(OA*ED) + \varepsilon M_2$ Where: EP=Aggregate unit weighted mean (composite)score of the combined Environmental Performance indicator items $\beta_{01}... \beta_{03;} \beta_1.....\beta_3$ are regression coefficients OA=Aggregate mean of the combined Individual organizational ambidexterity indicators ED=Aggregate mean of the combined Individual environmental dynamism indicators OD*ED= Interaction term εM_1. $Em_{2=Error}$ term.	
Evaluate the joint effect of organizational ambidexterity, organizational design, and environmental dynamism on organizational performance.	$H0_4$: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on organizational performance.	Multiple Regression analysis. (i) Based on Organizational performance as a composite(unit weighted mean) of the combined individual SBSC perspectives: Equation: OP=f(Organizational ambidexterity, Organizational Design, Environmental dynamism) $OP = \beta_0 + \beta_1OA + \beta_2OD + \beta_3ED + \varepsilon_4$ Where: OP=Aggregate unit weighted mean (composite)score of the combined individual SBSC Organizational Performance perspectives $\beta_0, \beta_1, \beta_2, \beta_3$ are regression coefficients OA =Aggregate mean of the combined individual organizational ambidexterity indicators OD =Aggregate mean of the combined individual organizational design indicators ED =Aggregate mean of the combined individual environmental dynamism indicators $\varepsilon_{4 =}$ Error term.	R^2 shows the variation in performance explained by the joint effect of ambidexterity, organizational design, and environmental dynamism. F-test and p-values will be used to assess the overall robustness of the regression model. t-test and p-values will help determine the individual significance of the study variables. The joint effect of organizational ambidexterity, organizational design and environmental dynamism on the performance of LMFs in Kenya is significant if (β, t is significant, $p<0.05$).

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
	$H0_{4a}$: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on organization financial performance	(ii) Based on individual SBSC performance perspectives: (a) Financial Performance Equation: FP=f(Organizational ambidexterity, Organizational Design, Environmental dynamism) $FP = \beta_0 + \beta_1 OA + \beta_2 OD + \beta_3 ED + \varepsilon_4$ Where: FP=Aggregate unit weighted mean (composite)score of the combined Financial Performance indicator items $\beta_0, \beta_1, \beta_2, \beta_3$ are regression coefficients OA =Aggregate mean of the combined individual organizational ambidexterity indicators OD =Aggregate mean of the combined individual organizational design indicators ED =Aggregate mean of the combined individual environmental dynamism indicators ε_4 = Error term.	
	$H0_{4b}$: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on organization customer performance.	(b) Customer Performance Equation: CP=f(Organizational ambidexterity, Organizational Design, Environmental dynamism) $CP = \beta_0 + \beta_1 OA + \beta_2 OD + \beta_3 ED + \varepsilon_4$ Where: CP=Aggregate unit weighted mean (composite) score of the combined Customer Performance indicator items $\beta_0, \beta_1, \beta_2, \beta_3$ are regression coefficients OA =Aggregate mean of the combined individual organizational ambidexterity indicators OD =Aggregate mean of the combined individual organizational design indicators ED =Aggregate mean of the combined individual environmental dynamism indicators ε_4 = Error term.	
	$H0_{4c}$: Organizational ambidexterity, organizational	(c) Internal Processes Equation: IP=f(Organizational ambidexterity, Organizational Design, Environmental dynamism)	

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Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
	design, and environmental dynamism have no significant joint effect on organizational internal processes.	$IP= \beta_0+\beta_1 OA+ \beta_2 OD+ \beta_3 ED+\varepsilon_4$ Where: IP=Aggregate unit weighted mean (composite) score of the combined Internal Processes indicator items $\beta_0, \beta_1, \beta_2, \beta_3$ are regression coefficients OA =Aggregate mean of the combined individual organizational ambidexterity indicators OD =Aggregate mean of the combined individual organizational design indicators ED =Aggregate mean of the combined individual environmental dynamism indicators $\varepsilon_4 =$ Error term.	
	$H0_{4d}$: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on organization learning and growth performance.	(d) Learning and Growth Performance Equation: LIP=f(Organizational ambidexterity, Organizational Design, Environmental dynamism) $LIP= \beta_0+\beta_1 OA+ \beta_2 OD+ \beta_3 ED+\varepsilon_4$ Where: LIP=Aggregate unit weighted mean (composite) score of the combined Learning and Growth Performance indicator items $\beta_0, \beta_1, \beta_2, \beta_3$ are regression coefficients OA =Aggregate mean of the combined individual organizational ambidexterity indicators OD =Aggregate mean of the combined individual organizational design indicators ED =Aggregate mean of the combined individual environmental dynamism indicators $\varepsilon_4 =$ Error term.	
	$H0_{4e}$: Organizational ambidexterity, organizational design, and environmental dynamism have no significant	(e) Societal Performance Equation: SP=f(Organizational ambidexterity, Organizational Design, Environmental dynamism) $SP= \beta_0+\beta_1 OA+ \beta_2 OD+ \beta_3 ED+\varepsilon_4$ Where: SP=Aggregate unit weighted mean (composite)score of the combined Societal Performance indicator items $\beta_0, \beta_1, \beta_2, \beta_3$ are regression coefficients	

Research Objective	Hypotheses	Analysis and Model Estimation	Interpretation
	joint effect on organization societal performance.	OA =Aggregate mean of the combined individual organizational ambidexterity indicators OD =Aggregate mean of the combined individual organizational design indicators ED =Aggregate mean of the combined individual environmental dynamism indicators $\varepsilon_{4=}$ Error term.	
	$H0_{4f}$: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on organization environmental performance.	(f) Environmental Performance Equation: EP=f(Organizational ambidexterity, Organizational Design, Environmental dynamism) EP= $\beta_0+\beta_1$OA+ β_2OD+ β_3ED+ε_4 Where: EP=Aggregate unit weighted mean (composite)score of the combined Environmental Performance indicator items β_0, β_1, β_2, β_3 are regression coefficients OA =Aggregate mean of the combined individual organizational ambidexterity indicators OD =Aggregate mean of the combined individual organizational design indicators ED =Aggregate mean of the combined individual environmental dynamism indicators $\varepsilon_{4=}$ Error term.	

Source: Researcher (2019)

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

Data scrutiny and outcomes are presented in this chapter. Included in the scrutiny is general information on the respondents' and their firms' profiles. Also analysed and presented is information on the response. Validity and reliability test results on the data collection instruments' usefulness are also presented. Results of linearity, normality, multicollinearity, and homogeneity of variance tests, undertaken to ascertain that the regression assumptions have been met, are also presented. Key aspects of the data are summarized and presented using descriptive statistics; which comprise minimum/maximum scores, mean, standard deviation, and coefficient of variation. Also presented is correlation analysis of study variables.

The hypotheses test outcomes are presented in the second part of this chapter, whose organization is guided by the study objectives and hypotheses. Simple regression, multiple regression, and hierarchical multiple regression have been applied in testing the hypotheses. The tests have been done at a 95 percentage confidence level ($p < 0.05$). The hypotheses are stated and have been analysed in the null form. Organizational performance is measured using the sustainable balanced scorecard (SBSC) six indicators. Testing involves regressing each independent variable against organizational performance as well as against the six indicators of the SBSC.

Tables and graphs have been used to present the study results. The regression results include; nature and strength of the relationship which is presented in form of model summary with Pearson product correlation moment(R), while the dependent variable variation proportion accounted for by the predictor variable is in form of coefficient of determination (R^2). Analysis of variance (ANOVA) demonstrates the general model significance, while beta coefficients demonstrate the predictor - criterion variable relationships.

4.2 Response Rate

The study target population was 107 LMFs in Kenya (KAM, 2018). Out of the 107 firms, five (5) firms were used for the pilot study. The five (5) pilot study firms were excluded in the final questionnaire participation, therefore 102 questionnaires were sent out for the final study. Out of the 102 questionnaires completed and returned, four (4) questionnaires were incomplete and therefore rejected for analysis, leaving 98 questionnaires used for analysis. This is a 96 percent effective response from the target population of 102 LMFs. This is in Table 4.1.

Table 4.1: Data Collection Questionnaires Summary

Description	No.of items	Percentage (%)
Accepted questionnaire	98	96
Rejected questionnaires	4	4
Total	**102**	**100**

Source: Research Data (2019)

The effective response rate of 96% was considered satisfactory and compares reasonably well with prior studies (Kariuki, 2015; Halevi et al., 2015; Mwazumbo, 2016; Mwai, 2017; and Tamayo-Torres et al., 2017). Kariuki (2015) in the study on

"Firm-Level factors, Industry environment, Competitive Strategy and Performance of Large Manufacturing Firms in Kenya" had a response rate of 92% while Halevi et al. (2015) study "Ambidexterity in SBUs: TMT Behavioural Integration and Environmental Dynamism" had a 51.5% response rate. Mwazumbo (2016) in the study "Organizational Resources, Dynamic Capabilities, Environmental Dynamism and Performance of Large Manufacturing Companies in Kenya" had a response rate of 62%. Mwai (2017) in the study on "Customer Relationship Management Practices, Firm Characteristics, Market Orientation, and Performance of Large-Scale Manufacturing Firms in Kenya" had a 78% response rate. Tamayo-Torres et al. (2017) study on "Organizational ambidexterity, manufacturing performance and environmental dynamism" had a 12.49% response. Awino and Gituro (2011) recommended that in similar studies, a questionnaire feedback rate of above 65 percent is satisfactory.

A high response rate is satisfactory as it is expected to yield better result inferences to a population. The empowerment in the data collection process facilitated the high response rate. There was adequate facilitation in form of the University of Nairobi introduction letter (Appendix I), personal introduction letter for the research assistant (Appendix II), research authorization and license from National Commission for Science Technology and Innovation (NACOSTI) (Appendix III). Finally, the research assistants who administered the questionnaires were trained and guided by the researcher.

4.3 Validity Test

The instrument's ability to measure what it purports to is its validity, and it concerns the accuracy of inferences (Cooper & Schindler, 2014). Face, content and construct validity were assessed in the study. The degree of test's subjective view of concept's coverage as purported in its measurement is face validity (Gaber & Salkind, 2013). The ability of the instrument to generate satisfactory coverage of the investigative questions on the constructs under investigation is its content validity (Zikmund et al., 2012). The degree of construct's operationalization actually measuring what the theory says it does is construct validity (Leedy & Ormod, 2005; Mugenda, 2010).

The suitability of the items in obtaining information that would help fulfill the research objectives was ascertained by discussing the draft questionnaire with supervisors who are knowledgeable in research. The expected discussants' double-checking of the questionnaire during the various presentations also ensured that the theoretical dimensions emerge as conceptualized. The research questionnaire was adopted from existing literature, and customized for current study objectives alignment. The thorough review and verification of extant literature ensured that items needed for measuring the concepts were incorporated.

Further, the understanding of the questions by the respondents was assessed during the pilot study. The pilot was conducted on 5(five) randomly selected firms from the study population. The feedback collected guided review of the data collection questions. This also helped avoid comprehension problem, therefore improving the questionnaire

suitability. The final (main) study excluded firms used in the pilot study. Finally, the thorough checking of the returned questionnaires ensured their consistency and completeness after data collection. Only acceptable questionnaires were used in the subsequent analysis. Four returned questionnaires were rejected for analysis due to incompleteness.

Factor analysis was applied to further test construct validity (Zapolski et al., 2012). Factor analysis is suitable in data reduction and aids in reaching a more parsimonious understanding of measured variables (Fabrigar et al., 1999). It involves the extraction of as much common factor as possible from the variables, and commonly scoring them. The central aim is the orderly simplification of the number of interrelated measures, leading to data summarization. Therefore, it aids constructs and concepts isolation.

Principal components analysis (PCA) as a data reduction procedure applied in extracting as much common variance as possible from data sets (Tabachnick & Fidell, 2007), was applied in data extraction. The extraction aim is removal of as much common factor as possible. The proportion of observed variables variation accounted for by the common factor/variance is referred to as communality (Child, 2006), and varies between zero (0) and one (1). High communality values nearer to one (1) imply that the particular set of factors explained a high amount of the variation (Kline, 1994). This study adopted the communality value of 0.5 and above (Child, 2006). Any item with less than 0.5 communality was eliminated since they contained a high amount explained by unique factors, contrary to the aim of factor analysis which is to identify high explanation by common factors (which were retained).

Factor loading, which shows the variation accounted for by the variable on the particular factor was also analysed. Eigenvalues, which measure the amount of variation accounted for by the particular factor out of the total variance, were applied in determining the factors to retain. This study adopted above 1(one) eigenvalue (Kaiser, 1960) factor retention criterion. To enable factor loadings interpretation, the factor model was rotated using varimax rotation. Kaiser normalization was applied to obtain stability of solutions across samples. Outcomes of PCA, eigenvalues, and varimax rotation on the study variables are presented and discussed in subsections 4.3.1 to 4.3.11 and the summary in 4.3.12.

4.3.1 Exploration Tasks Performance

The questionnaire items sought information on the exploration activities performance in Kenyan LMFs. There were six questions based on whose answers the respondents indicated the task performance approach used by their firms. On a measure of 1 to 5, they were required to score the presented statements' explanation of their firm's task performance approach. The factor analysis findings in relation to exploration task performance approach are in Table 4.2.

Table 4.2: Dimension Reductions Outcomes for Exploration Tasks Activities

Communalities		
Variable/Item	Initial	Extraction
(1) Seeking and searching for new knowledge (e.g. on customer demands, novel technological trends, and new opportunities).	1	0.722
(2) Experimentation by, for instance, introducing novel technological, products/services and ideas by thinking "outside the box".	1	0.629
(3) Flexibility and readiness for variation from the norm.	1	0.618
(4) Ready to take risks (e.g. on new ideas, technologies, and products/services).	1	0.533
(5) Innovativeness in, for example, creating new products or satisfying its customers' needs.	1	0.765
(6) Aggressiveness in new markets and actively targeting new customer groups.	1	0.538
Rotated Component Matrix[a]		
Variable/Component	Component	
	1	2
(1) Seeking and searching for new knowledge (e.g. on customer demands, novel technological trends, and new opportunities).	0.791	
(2) Experimentation by, for instance, introducing novel technological, products/services and ideas by thinking "outside the box".	0.791	
(3) Flexibility and readiness for variation from the norm.		
(4) Ready to take risks (e.g. on new ideas, technologies, and products/services).		
(5) Innovativeness in, for example, creating new products or satisfying its customers' needs.		0.859
(6) Aggressiveness in new markets and actively targeting new customer groups.	0.587	
Eigenvalue	1.932	1.472
% of variance	32.207	24.53
Cumulative % of variance	32.207	56.737
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 3 iterations.		

Source: Research Data (2019)

The findings in Table 4.2 show communality values above 0.5 for all the six questionnaire items. This suggests that all the questionnaire items are well related to measuring the performance of exploration activities. It also indicates convergence of the questionnaire items on exploration activities performance.

Computed eigenvalues were indicative of the analysed factor substantive importance. The factors that were retained from the PCA are shown in Table 4.2. This study adopted the extraction rule of greater than 1(one), retain only factor loadings of more than 0.5 and exclude loadings of less than 0.5 (Kaiser, 1960). Accordingly, two factors namely new knowledge search and risk-taking were extracted and retained. The two factors explain 56.737 percent of the exploration approach.

Varimax rotation was done on the extracted two factors. The rotated component matrix output in Table 4.2 indicates that three constructs; namely new knowledge search, experimentation, and new markets search loaded on factor one. Also, the results show that one construct loaded onto factor two, namely innovativeness. All these constructs are related to exploration which was one of the dimensions in the operationalization of organizational ambidexterity variable.

4.3.2 Exploitation Tasks Performance

The study pursued information about the performance of exploitation tasks. Participants rated the six questionnaire items by indicating their firms' performance of tasks, guided by a Likert-like scale of 1 to 5. Dimension reduction was undertaken on the six questionnaire items. The outcome is in Table 4.3.

Table 4.3: Dimension Reduction Outcome for Exploitation Tasks

Communalities		
Variable/Item	Initial	Extraction
(1) Increases and exploits efficiencies in the current operations through continual improvement in execution.	1	0.642
(2) Standardization and minimization of variation from standards.	1	0.646
(3) Continual refinement, commitment to quality and reliability, improvement and cost reduction in production processes/operations.	1	0.582
(4) Continually conducting surveys on existing customers' satisfaction.	1	0.579
(5) Continually fine-tuning products to enhance customer satisfaction.	1	0.548
(6) Enhancing market size through deeper penetration into existing customer base.	1	0.514
Rotated Component Matrix[a]		
Variable/Component	Component	
	1	2
(1) Increases and exploits efficiencies in the current operations through continual improvement in execution.	0.757	
(2) Standardization and minimization of variation from standards.		0.787
(3) Continual refinement, commitment to quality and reliability, improvement and cost reduction in production processes/operations.		
(4) Continually conducting surveys on existing customers' satisfaction.		
(5) Continually fine-tuning products to enhance customer satisfaction.	0.693	
(6) Enhancing market size through deeper penetration into existing customer base.		0.632
Eigenvalue	1.722	1.606
% of variance	28.707	26.769
Cumulative % of variance	28.707	55.476
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 3 iterations.		

Source: Research Data (2019)

The outcome in Table 4.3 show above 0.5 communality values for all the six questionnaire items. This shows that all the questionnaire items are well related to measuring the performance of exploitation activities. It also indicates that the questionnaire items converge on exploitation activities performance.

Table 4.3 shows the computed eigenvalues outcome is indicative of the analysed factor substantive importance. Kaiser (1960) eigenvalues-greater-than 1(one) factors retention criterion was applied. Also, based on Kaiser (1960) recommendation, less than 0.5 factor loadings were excluded and only loading of more than 0.5 considered. Two factors namely continual knowledge seeking and continual improvement, which explain 55.476 percent of exploitation approach were extracted and retained.

Table 4.3 presents rotated component matrix, upon subjecting the two factors to varimax rotation. The results show that two constructs; namely efficiency and continual improvement loaded on factor one. Also, the results show that two constructs each loaded onto factors one and two. The constructs are increased efficiency, continual improvement, standardization and market size enhancement. All these constructs are related to exploitation which was one of the dimensions in the operationalization of organizational ambidexterity variable.

4.3.3 Organizational Design Characteristics

The researcher sought information about the Kenyan LMFs' organizational design characteristics. The questionnaire had fifteen (15) statements describing various organizational design characteristics. All the questions were phrased with an inclination towards mechanistic designs. Dimension reduction was done on the survey items. The outcome is presented in Table 4.4.

Table 4.4: Dimension Reduction Outcome of Organizational Design Characteristics

Communalities		
Variable/Item	Initial	Extraction
(1) Highly formal organizational structure.	1	0.649
(2) Defined lines of authority.	1	0.710
(3) Precise definition of employee responsibilities and expected deliverables and coordination relationships through detailed job descriptions.	1	0.778
(4) Break down of the tasks to be performed and assigning these to specialized functions/departments.	1	0.680
(5) High level of specialization in the tasks within the assigned functions/departments.	1	0.744
(6) Hierarchical structure of control and authority.	1	0.780
(7) Knowledge about and control of the task are located at the top of the hierarchy.	1	0.737
(8) Vertical communication with emphasis on instructions.	1	0.744
(9) Detailed procedures and instructions from superiors govern operations and behaviour.	1	0.745
(10) Close adherence to the chain of command.	1	0.772
(11) Loyalty and obedience are mandatory.	1	0.825
(12) Greater importance and prestige attached to homegrown rather than diverse knowledge, experience and skill.	1	0.688
(13) Complex formal control systems applied in most of the operations.	1	0.770
(14) Greater emphasis on home-grown ideas as opposed to foreign.	1	0.620
(15) An organization-wide standardized management style.	1	0.601

Rotated Component Matrix[a]							
Variable/Component	Component						
	1	2	3	4	5	6	7
1	0.596						
2							
3			0.863				
4					0.721		
5							
6							
7						0.786	
8						0.566	
9		0.675					
10							
11							0.896
12				0.789			
13	0.770						
14	0.701						
15		0.688					
Eigenvalue	1.731	1.708	1.699	1.527	1.449	1.400	1.330
% of variance	11.543	11.386	11.330	10.181	9.662	9.334	8.868
Cumulative % of variance	11.543	22.929	34.259	44.44	54.102	63.436	72.304

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 24 iterations.

Source: Research Data (2019)

As shown in Table 4.4, communality coefficients were above 0.5, an indication that all the questionnaire items are well related to organizational design characteristics. Computed eigenvalues are indicative of the analysed factor substantive importance. This study adopted the larger - than -1(one) eigenvalue rule for factor extraction, and retain loadings of more than 0.5 only, while loadings of less than 0.5 are excluded (Kaiser, 1960). Table 4.4 shows the factors extracted and retained using PCA. Seven factors namely detailed job descriptions, organization in form of functions/departments, written down instructions from supervisors, detailed chain of command, loyalty and obedience expected, homegrown ideas as opposed to foreign ideas and organization-wide standardized management were extracted and retained. The seven factors explain 72.304 percent of organizational design characteristics.

Table 4.4 presents rotated component matrix upon varimax rotation of seven factors that were extracted. The outcome shows that three constructs loaded onto factor one; two constructs each loaded on factors two and six; while for factors three, four, five and seven, there was one construct each loading onto the factors. All these constructs are related to organizational design and therefore fairly represent the operationalization of organizational design variable.

4.3.4 Environmental Intensity of Change Characteristics

The intensity of change in the organizational environment was one of the dimensions in measuring environmental dynamism. Information regarding the environmental change intensity characteristics was provided by responding to ten (10) related questions. Factor analysis was undertaken for the ten (10) items. The output is shown in Table 4.5.

Table 4.5: Dimension Reduction Output of Environmental Intensity of Change Characteristics

Communalities		
Variable/Item	Initial	Extraction
(1) Intensified enforcement of taxation regulations.	1	0.788
(2) Reduced credit available from lending institutions.	1	0.812
(3) Increased influx of cheaper imported products.	1	0.728
(4) Increasing cost of production inputs.	1	0.844
(5) The technology in our industry is changing in a major way.	1	0.860
(6) Increased trade union demands for higher wages.	1	0.762
(7) Climatic conditions and weather patterns are unpredictable.	1	0.738
(8) Pressure from NGOs for environmental preservation is intense.	1	0.642
(9) Increased enforcement of consumer protection laws.	1	0.700
(10) Intensive enforcement of health and safety laws.	1	0.585

Rotated Component Matrix[a]					
Variable/Component	Component				
	1	2	3	4	5
(1) Intensified enforcement of taxation regulations.			0.825		
(2) Reduced credit available from lending institutions.	0.637		0.599		
(3) Increased influx of cheaper imported products.	0.794				
(4) Increasing cost of production inputs.					0.895
(5) The technology in our industry is changing in a major way.					0.540
(6) Increased trade union demands for higher wages.				0.842	
(7) Climatic conditions and weather patterns are unpredictable.				0.602	
(8) Pressure from NGOs for environmental preservation is intense.		0.745			
(9) Increased enforcement of consumer protection laws.			0.524		
(10) Intensive enforcement of health and safety laws.					
Eigenvalue	1.905	1.549	1.38	1.342	1.282
% of variance	19.054	15.487	13.799	13.425	12.819
Cumulative % of variance	19.054	34.541	48.34	61.765	74.584
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 17 iterations.					

Source: Research Data (2019)

Output in Table 4.5 show communality coefficients of above 0.5, an indication that the ten (10) items are well related in measuring the intensity of change in the environment. The items were converging on the intensity of change characteristics. Computed eigenvalues were indicative of the analysed factor substantive importance. This study adopted the rule to extract factors with greater than 1(one) eigenvalues and recommendation of considering only factor loading of more than 0.5(Kaiser, 1960). Accordingly, five (5) factors were extracted namely; politico-legal, economic, socio-cultural, technological and ecological, explaining 74.584 percent of the variation were extracted and retained.

Table 4.5 presents rotated component matrix, from varimax rotation on the five factors. The results show that three constructs each loaded onto factor three; two constructs each loaded in factors one, four, and five, while one construct loaded onto factor two. These constructs are a fair representation of the environmental intensity of change which was one of the dimensions in the operationalization of environmental dynamism variable.

4.3.5 Environmental Frequency of Change Characteristics.

The study aimed to obtain frequency of change data in the Kenyan LMFs' external environment. Respondents in the firms were required to provide this information by responding to ten (10) questionnaire items. Dimension reduction was undertaken on the items and the outcome is in Table 4.6.

Table 4.6: Dimension Reduction Outcome of Environmental Frequency of Change Characteristics

Communalities			
Variable/Item		Initial	Extraction
(1) Government policies change regularly.		1	0.789
(2) Tax regimes are continually changing.		1	0.870
(3) Interest rates change regularly.		1	0.884
(4) Foreign exchange rates are continually changing.		1	0.660
(5) Increasing frequency of inflation rate changes.		1	0.738
(6) Fast changing job performance attitudes, especially among the youth.		1	0.673
(7) Consumer preferences are changing fast and often.		1	0.658
(8) Technology in our industry is changing rapidly.		1	0.765
(9) Electioneering related political stability uncertainty is on the increase		1	0.590
(10) Climatic conditions and weather patterns changing too often.		1	0.596

Rotated Component Matrix[a]					
Variable/Component	Component				
	1	2	3	4	5
(1) Government policies change regularly.			0.885		
(2) Tax regimes are continually changing.	0.802				
(3) Interest rates change regularly.	0.902				
(4) Foreign exchange rates are continually changing.		0.614			
(5) Increasing frequency of inflation rate changes.		0.560			
(6) Fast changing job performance attitudes, especially among the youth.				0.768	
(7) Consumer preferences are changing fast and often.					
(8) Technology in our industry is changing rapidly.					0.848
(9) Electioneering related political stability uncertainty is on the increase		0.726			
(10) Climatic conditions and weather patterns changing too often.				0.696	
Eigenvalue	1.786	1.647	1.352	1.314	1.126
% of variance	17.859	16.467	13.52	13.14	11.258
Cumulative % of variance	17.859	34.326	47.846	60.986	72.244
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 8 iterations.					

Source: Research Data (2019)

The communality coefficients as presented in Table 4.6 are all above 0.5. This is an indication that the questionnaire items are all related. It also signifies the item's convergence on external environmental frequency of change characteristics. Computed eigenvalues are indicative of the analysed factor substantive importance. This study adopted the greater-than-1 eigenvalue factor extraction rule and also the retention recommendation to exclude factor loadings of less than 0.5 and consideration of only loadings of more than 0.5(Kaiser, 1960). Accordingly, five (factors) were extracted and retained namely; politico-legal, economic, socio-cultural, technological and ecological. The five factors explain 72.244 percent of the environmental frequency of change characteristics, as evidenced by the computed eigenvalues

Table 4.6 shows the rotated component matrix; the results upon subjecting to varimax rotation of the five factors. The outcome shows that three constructs loaded onto factor two; with two constructs each loading onto factors one and four; while one construct each loaded onto factors three and five. All these constructs are related to the environmental frequency of change which was one of the dimensions in the operationalization of environmental dynamism variable.

4.3.6 Organizational Financial Performance Indicators

The Sustainable Balanced Scorecard (SBSC) was applied in measuring organizational performance. This includes six (6) perspectives in organizational performance measuring. The six perspectives are shareholder interests, customer satisfaction, organizational processes, human factor, societal and environmental concerns. Information was sought on Kenyan LMFs' financial performance. The respondents responded to four (4) questions as financial performance indicators. Dimension reduction outcome on the four (4) items is in Table 4.7.

Table 4.7: Dimension Reduction Outcomes for Organizational Financial

            Performance

Communalities		
Variable/Item	Initial	Extraction
(1) Our Sales Revenue/Turnover has been increasing	1	0.765
(2) Profit before tax has been increasing	1	0.872
(3) Return on assets has been growing	1	0.870
(4) Earning per share has been growing	1	0.525
Rotated Component Matrix[a]		
Variable/Component	Component	
	1	2
(1) Our Sales Revenue/Turnover has been increasing	0.677	
(2) Profit before tax has been increasing	0.926	
(3) Return on assets has been growing		0.876
(4) Earnings per share has been growing		
Eigenvalue	1.455	1.277
% of variance	36.377	31.922
Cumulative % of variance	36.377	68.299
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 3 iterations.		

Source: Research Data (2019)

The outcome in Table 4.7 show communality coefficients of above 0.5, an indication

that the four items were closely related. Also, it indicates the convergence of the items

in measuring financial performance. Computed eigenvalues are indicative of the

analysed factor substantive importance. This study adopted greater-than -1 eigenvalue

factor extraction rule and the recommendation to exclude loadings of 0.5 and less and

consider loading of more than 0.5 (Kaiser, 1960). Consequently, two factors namely

profitability and investor returns were extracted and retained. The two factors explain

68.299 percent of financial performance, as evidenced by the computed eigenvalues.

Table 4.7 shows the rotated component matrix; the results upon subjecting to varimax rotation of the two factors. The results show that two constructs loaded onto factor one; while one construct loaded onto factor two. All these constructs are related to financial performance which was one of the dimensions in the operationalization of organizational performance variable.

4.3.7 Customer Perspective Indicators

The researcher sought information regarding customer perspective by LMFs in Kenya. Six (6) questionnaire items were presented to the respondents. The outcome of dimension reduction on the items is presented in Table 4.8.

Table 4.8: Dimension Reduction Outcome of Customer Perspective Indicators

Communalities		
Item	Initial	Extraction
(1) Our delivery performance to customer has been improving	1	0.580
(2) Quality of our products has been improving	1	0.846
(3) Our customer satisfaction rate has been increasing	1	0.788
(4) We have a growing market share	1	0.613
(5) Customer loyalty has continued to improve	1	0.544
(6) Number of new customers has been increasing	1	0.762

Rotated Component Matrix[a]			
Variable/Component	Component		
	1	2	3
(1) Our delivery performance to customer has been improving	0.617		
(2) Quality of our products has been improving	0.810		
(3) Our customer satisfaction rate has been increasing		0.878	
(4) We have a growing market share			
(5) Customer loyalty has continued to improve			
(6) Number of new customers has been increasing			
Eigenvalue	1.537	1.467	1.129
% of variance	25.615	24.458	18.824
Cumulative % of variance	25.615	50.073	68.897
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 6 iterations.			

Source: Research Data (2019)

Communality coefficients of above 0.5 as shown in Table 4.8 is an indication that the items are well related. Also, it indicates the convergence of customer perspective measures. Computed eigenvalues are indicative of the analysed factor substantive importance. This study adopted the greater-than-1 eigenvalue factor extraction rule and recommendation to exclude loadings of 0.5 or less; and retention of loading of more than 0.5 (Kaiser, 1960). Hence, as shown in Table 4.8 three factors namely quality, customer satisfaction, and market which explain 68.897 per cent relation to customer perspective indicators were extracted and retained.

Varimax rotation was undertaken on the three factors that were extracted, resulting to the matrix as presented in Table 4.8. The outcome shows that two constructs loaded onto factor one; while one construct loaded onto factor two, while factor three had no construct loading onto it. All these constructs are related to customer perspective which was one of the dimensions in the organizational performance variable operationalization.

4.3.8 Internal Processes Indicators

The study sought information relating to Kenyan LMFs' internal processes. The questionnaire had six (6) items whose response provided the required information. Dimension reduction was undertaken on the six items. The outcome of factor analysis is in Table 4.9.

Table 4.9: Dimension Reduction Outcome for Internal Processes Indicators

Communalities		
Item	Initial	Extraction
(1) We have intensified investment in process automation	1	0.714
(2) Employee morale and productivity has been growing	1	0.619
(3) Employee satisfaction has been increasing	1	0.746
(4) Our production cost per unit has been decreasing	1	0.558
(5) Working capital/sales has continued to improve	1	0.661
(6) Utilisation of our working capacity has been increasing	1	0.897

Rotated Component Matrix[a]			
Variable/Component	Component		
	1	2	3
(1) We have intensified investment in process automation		0.704	
(2) Employee morale and productivity has been growing		0.757	
(3) Employee satisfaction has been increasing			
(4) Our production cost per unit has been decreasing			
(5) Working capital/sales has continued to improve	0.777		
(6) Utilisation of our working capacity has been increasing			0.947
Eigenvalue	1.559	1.546	1.09
% of variance	25.981	25.762	18.168
Cumulative % of variance	25.981	51.743	69.911

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 4 iterations.

Source: Research Data (2019)

The questionnaire items are well related. This is indicated by the study results of communality coefficients of above 0.5. This is also an indication that the items converge well on internal processes measurement. Computed eigenvalues are indicative of analysed factor substantive importance. This study adopted the factor extraction rule of greater-than-one eigenvalue, and the retention criterion to consider only factor loading of more than 0.5 and exclude loadings of less than 0.5(Kaiser,1960). Hence, three factors namely efficiency, employee satisfaction, and effectiveness, explaining 69.911 percent of the variation were extracted and retained.

Table 4.9 shows the matrix resulting from varimax rotation on the three factors. The outcome shows that two constructs loaded onto factor two; while one construct each loaded onto factors one and three. All these constructs are related to internal processes which was one of the dimensions in the operationalization of organizational performance variable.

4.3.9 Learning and Growth Performance Indicators

The study aimed to find out the Kenyan LMFs' learning and growth performance. Respondents responded to six (6) questions that are phrased in line with learning and growth indicators. Dimension reduction was done on the questionnaire items. The outcomes are in Table 4.10.

Table 4.10: Dimension Reduction Results for Learning and Growth Performance Indicators

Communalities			
Item		Initial	Extraction
(1) Our investment in research and development has intensified		1	0.748
(2) The number of defects has been declining		1	0.841
(3) Employee skill development has been intensified		1	0.831
(4) Our capacity to introduce new products has been increasing		1	0.661
(5) There has been increase in new markets by our firm		1	0.541
(6) Our firm develops new products frequently		1	0.803
Rotated Component Matrix[a]			
Variable/Component	Component		
	1	2	3
(1) Our investment in research and development has intensified	0.617	0.602	
(2) The number of defects has been declining		0.897	
(3) Employee skill development has been intensified			
(4) Our capacity to introduce new products has been increasing			0.626
(5) There has been increase in new markets by our firm	0.612		
(6) Our firm develops new products frequently			0.886
Eigenvalue	1.533	1.488	1.305
% of variance	25.548	24.796	21.747
Cumulative % of variance	25.548	50.344	72.091
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 5 iterations.			

Source: Research Data (2019)

From the outcome presented in Table 4.10, the communality coefficients was above 0.5. This signifies that the items are well related and converge in measuring learning and growth performance. This study adopted the factor extraction rule of greater - than - one eigenvalue. Factor retention was based on the recommendation of only more - than - 0.5 factor loadings to be considered and less - than - 0.5 loadings excluded (Kaiser, 1960). Thus, three factors namely research and development, employee development and innovation were extracted and retained. The three factors explain 72.091 percent of learning and growth performance, as evidenced by the computed eigenvalues as shown in Table 4.10.

Varimax rotation was carried out on the three factors that were extracted; resulting into the matrix as presented in Table 4.10. The outcome shows that two constructs each loaded onto factors one to three. All these constructs are related to learning and growth which was one of the dimensions in the operationalization of organizational performance variable.

4.3.10 Societal Performance Indicators

Societal performance was one of the SBSC performance perspectives. The research sought information regarding Kenyan LMFs' societal performance. Respondents responded to four (4) questions in providing the sought-for information. Dimension reduction outcome on the items is shown in Table 4.11.

Table 4.11: Dimension Reduction Outcome for Societal Performance Indicators

Communalities			
Item		Initial	Extraction
(1) Community service budget has been increasing		1	0.827
(2) Our firm has enhanced community relationships		1	0.861
(3) Our firm has increased investments in philanthropy		1	0.959
(4) We continually enhanced dedicated community-focused activities, for example, open days		1	0.939
Rotated Component Matrix[a]			
Variable/Component	Component		
	1	2	3
(1) Community service budget has been increasing	0.786		
(2) Our firm has enhanced community relationships	0.878		
(3) Our firm has increased investments in philanthropy			0.979
(4) We continually enhanced dedicated community-focused activities, for example, open days		0.968	
Eigenvalue	1.389	1.117	1.079
% of variance	34.730	27.918	26.981
Cumulative % of variance	34.730	62.648	89.629
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 5 iterations.			

Source: Research Data (2019)

The outcome of factor analysis is presented in Table 4.11. The presented outcome shows above 0.5 communality coefficients. This implies that the three items are well related to measuring societal performance. Computed eigenvalues are indicative of analysed factor substantive importance. This study adopted the greater-than-1 eigenvalue rule and the recommendation to exclude factor loadings of less than 0.5 and consider only loadings of more than 0.5(Kaiser, 1960). Three factors; namely, community support, community relations, and philanthropy enhancement, explaining 89.629 percent of the variation, were accordingly extracted and retained.

Table 4.11 shows the rotated component matrix, results of varimax rotation carried out on the three factors that were extracted. The results show that two constructs loaded onto factor one while one construct each loaded onto factors two and three. All these constructs are related to societal performance which was one of the dimensions in the operationalization of organizational performance variable.

4.3.11 Environmental Performance Indicators

Information was sought on Kenyan LMFs' environmental performance. Respondents provided this information by responding to four (4) questions in the research data collection questionnaire. Table 4.12 is the output of dimension reduction undertaken on the four (4) items.

Table 4.12: Dimension Reduction Output for Environmental Performance Indicators

Communalities		
Item	Initial	Extraction
(1) Our material usage per unit is decreasing	1	0.800
(2) Water usage per in our firm is decreasing	1	0.841
(3) Our energy efficiency has been improving	1	0.712
(4) We prioritize environment protection in our firm	1	0.539
Rotated Component Matrix[a]		
Variable/Component	Component	
	1	2
(1) Our material usage per unit is decreasing	0.761	
(2) Water usage per in our firm is decreasing	0.860	
(3) Our energy efficiency has been improving		0.819
(4) We prioritize environment protection in our firm		
Eigenvalue	1.375	1.338
% of variance	34.363	33.438
Cumulative % of variance	34.363	67.801
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 3 iterations.		

Source: Research Data (2019)

The output shows communality coefficients of above 0.5, an indication that the items were well related and converge in measuring environmental performance. Computed eigenvalues are indicative of analysed factor substantive importance. This study adopted the rule to extract only factors of larger - than - 1(one) eigenvalue and also, loadings of 0.5 and less were excluded based on Kaiser (1960) rule for consideration of only loading of more than 0.5. Consequently, two factors; namely wastage reduction and utilities utilization, were extracted and retained, explaining 67.801 percent of environmental performance.

Varimax rotation was conducted on the extracted factors and Table 4.12 shows the rotated component matrix. The results show that two constructs loaded onto factor one while one construct loaded onto factor two. All these constructs are related to environmental performance which was one of the dimensions in the operationalization of organizational performance variable.

4.3.12 Summary of Dimension Reduction for Variable Indicators

The research had four variables namely organizational ambidexterity, design, environmental dynamism, and organizational performance. The organizational performance was operationalized and measured using SBSC approach, which has six (6) perspectives. A total of seventy-seven (77) questions were presented to the respondents in collecting information on the four variables in Kenyan LMFs. Factor analysis was undertaken on the seventy-seven questionnaire items. Detailed results are presented in Tables 4.2 to 4.12. Using factor analysis, the seventy-seven (77) items have been reduced to thirty-seven (37) factors. These are summarised and presented in Table 4.13.

Table 4.13: Summary of Factors

Variable	Dimensions	Factors	Factor name	Decision/Action Taken
Organizational Ambidexterity	Exploration	Factor 1	New knowledge search	Include all items in the questionnaire
		Factor 2	Risk-taking	Include all items in the questionnaire except (ii)
	Exploitation	Factor 3	Continual knowledge-seeking	Exclude questionnaire item (vi)
		Factor 4	Continual improvement	Exclude questionnaire item (v)
Organizational Design		Factor 5	Detailed Job descriptions	Include all questionnaire items except (iii), (viii), (ix), (x), and (xi)
		Factor 6	Organization in form of functions/departments	Include all questionnaire items except (iii), (iv), (vi), (vii), (xi), and (xii).
		Factor 7	Written down instructions from supervisors	Include all questionnaire items except (x), (xi) and (xii)
		Factor 8	Defined chain of command	Include all questionnaire items except (xi), (i), vi) (iii), (vii), (v), (ix), and (iv)
		Factor 9	Loyalty and obedience expected	Include all questionnaire items except (v), (ix), (x), (xi), (xii), and (xiii)
		Factor 10	Homegrown ideas as opposed to foreign ideas	Include all questionnaire items except (i),(iii),(iv), (v),(xi), and (xiii)
		Factor 11	Organization-wide standardized management style	Include all questionnaire items except (iii),(vi),(xiv),and(xv)
Environmental Dynamism	Intensity of change	Factor 12	Political –Legal	Include all questionnaire items except (i), (ix),and (x)
		Factor 13	Economic	Include all questionnaire items except(iv), (v), and (vi)
		Factor 14	Socio-cultural	Exclude questionnaire items (iii), (vii), and (x)
		Factor 15	Technological	Exclude questionnaire items (iii), (iv), (viii), and (x)
		Factor 16	Ecological	Exclude questionnaire items (vi), (vii), and (x)
	Frequency of change	Factor 17	Political –Legal	Include all questionnaire items except (i), (vi), and (x)
		Factor 18	Economic	Include all questionnaire items except (i), (ii), (iii), (viii), and (x)
		Factor 19	Socio-cultural	Include all questionnaire items except (v), (vii), (viii) and (ix)
		Factor 20	Technological	Include all questionnaire items except (i), (iii) and (iv)
		Factor 21	Ecological	Include all questionnaire items except (i), (ii),(iv),(vi),and (ix)

Variable	Dimensions	Factors	Factor name	Decision/Action Taken
Organizational Performance	Financial	Factor 22	Profitability	Include all items in the questionnaire
		Factor 23	Investor returns	Include all items in the questionnaire
	Customer	Factor 24	Quality	Include all items in the questionnaire except (iii) and (vi)
		Factor 25	Customer satisfaction	Include all items in the questionnaire except (iv) and (vi)
		Factor 26	Market share	Include all items in the questionnaire
	Internal processes	Factor 27	Efficiency	Exclude questionnaire items (iv) and (vi)
		Factor 28	Employee satisfaction	Exclude questionnaire items (vi)
		Factor 29	Effectiveness	Exclude questionnaire items (i), (ii), (iii), and (iv)
	Learning and Growth	Factor 30	Research and development	Exclude questionnaire items (iv) and (vi)
		Factor 31	Employee development	Exclude questionnaire items (v)
		Factor 32	Innovation	Exclude questionnaire items (i) and (ii)
	Societal	Factor 33	Community support	Include all questionnaire items except (iii) and (iv)
		Factor 34	Community relations	Include all questionnaire items except (iii)
		Factor 35	Philanthropy enhanced	Include all questionnaire items except (iv)
	Environmental	Factor 36	Wastage reduction	Include all questionnaire items
		Factor 37	Utilities utilization	Include all questionnaire items

Source: Research Data (2019)

The summary shows a total of 37(thirty seven) factors extracted. The statements in the questionnaire represent measures of the respective variables. There are a total of 77(seventy seven) statements for the four study variables. As shown in Table 4.13, these have now been summarized and reduced to 37(thirty seven) factors/constructs. This is interpreted as a confirmation of construct validity. It is a confirmation that the questionnaire statements represent measures of the respective study variables.

4.4 Reliability Test

As conceptualized by Crocker and Algina (1986), the consistency of the research instrument's results yield from repeated trials and the measurement is referred to as its reliability. The testing of research questions against test items for internal consistency through reliability tests informs replicability. Internal reliability is a measure of how well the instrument is actually measuring what is being measured. On the other hand, external reliability means that the measure can be generalized beyond what is currently being used for. Reliability is, therefore, the *sine qua non* in the authentication not only of test clarification but also of test usage, that is, applicability and usefulness, as well as the appropriateness of test used, depends or should depend on the score meaning.

The model variables reliability was examined with Cronbach's Alpha index. The reliability test was run on the reduced items (factors). The index ranges from zero (0); implying nil consistency, to one (1); implying full consistency. A higher index denotes a higher reliability scale. Numerous authors such as Bland and Altman (1997) have placed reliability threshold at the Alpha scale index of 0.7, while others such as Field (2000) considers adequate a threshold of 0.6 and above. This study considered an Alpha index of 0.7 and above satisfactory. Cronbach's Alpha reliability test output is in Table 4.14.

Table 4.14: Reliability Test

Variable	No.of items	Cronbach's Alpha
Organizational Ambidexterity	4	0.835
Organizational Design	7	0.957
Environmental Dynamism	10	0.912
Organizational Performance	16	0.842

Source: Research Data (2019)

The output in Table 4.14 range from a low of 0.835 Cronbach's Alpha index for Organizational Ambidexterity to a high of 0.957 for Organizational Design. The study variables have a Cronbach's Alpha index above 0.70. Thus, the instrument for collecting data is reliable.

4.5 Diagnostic Tests

The regression method is a major part of the data analysis. Pre-tests to confirm conformity with the regression assumptions of linearity, normality, multicollinearity, and homogeneity of variances, were undertaken. The findings are presented and discussed in subsections 4.5.1 to 4.5.4.

4.5.1 Linearity Tests

Linearity test was undertaken to determine whether or not the independent-dependent variable relationship is linear. Linear regression and correlation analysis assume linearity; which is, therefore, an imperative prerequisite. Linearity is a mathematical relation/function, thus can be graphically represented as a straight line

The correlation coefficient (R) tells us about the linear independent - dependent variable relationships strength. The coefficient closeness to +/- 1 signifies its perfect linearity closeness and thus the relationship strength scale (Cohen, 1988). According to Cohen (1988), the correlation coefficients have been classified as in Table 4.15.

Table 4.15: Correlation Coefficients Classified

Classification	Description
0.00 to 0.01	No correlation
0.02 to 0.09	Very weak correlation
0.10 to 0.29	Weak correlation
0.30 to 0.49	Moderately weak correlation
0.50 to 0.69	Moderately strong correlation
0.70 to 0.89	Strong correlation
0.90 to 0.98	Very strong correlation
0.99 to 1.00	Perfect correlation

Source: Cohen (1988)

The output of correlation coefficients is presented in Table 4.16.

Table 4.16: Correlation Coefficients of Predictor Variables against the Criterion Variable

Variables	Correlation coefficient	Comment
Organizational Ambidexterity	0.589	Positive linear relationship
Organizational Design	0.562	Positive linear relationship
Environmental Dynamism	-.0.063	Negative linear relationship

Source: Research Data (2019)

The Table 4.16 output range from a very weak negative linear correlation of -0.063 between environmental dynamism and organizational performance to a moderately strong positive linear organizational ambidexterity - performance relationship of 0.589. The organizational design - performance relationship is also moderately strong and linear at 0.562. The linearity test results are positive based on the analysed correlation coefficients. The data, therefore, conforms to the linearity requirement.

4.5.2 Normality Tests

Symmetric clustering of most of the observations around the central peak is indicative of normal data distribution. For sample size exceeding 2,000 Kolmogorov-Smirnov should be used for normality testing, otherwise Shapiro-Wilk test should be applied for samples of 3 to 2,000(Field, 2009). The current study population included all the 107 LMFs in Kenya, thus justifying use of Shapiro-Wilk for normality test. Shapiro-Wilks test and Q-Q plot were used for normality tests with the assumption upheld with Shapiro-Wilk statistic greater than 0.5 and the Q-Q plots observed values close to expected values (Razali & Yap, 2011; Field, 2009). Table 4.17 presents the normality test output.

Table 4.17: Shapiro-Wilk Test for Normality

Variables	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Organizational Ambidexterity	.098	98	.022	.974	98	.052
Organizational Design	.074	98	.200[*]	.978	98	.093
Environmental Dynamism	.143	98	.000	.942	98	.000
Organizational Performance	.071	98	.200[*]	.979	98	.125
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Source: Research Data (2019)

The Table 4.17 output indicate that all the variables have a significant Shapiro-Wilk statistic except Environmental dynamism with Shapiro-Wilk statistic of 0.942 at 0.000 significance. All the other variables have a Shapiro-Wilk statistic at significance greater than 0.05. The highest significance was 0.125 for Organizational performance with the Shapiro-Wilk statistic of 0.979. Organizational Ambidexterity has a Shapiro-Wilk statistic of 0.974 with significance 0.052, while Organizational design at the significance of 0.093 has a Shapiro-Wilk statistic of 0.978. Environmental dynamism is, therefore, an exceptional, with less than 0.05 p-value threshold.

However, the Q-Q plots confirm normality in all variables, including Environmental dynamism. Q-Q plots entail the plotting of the actual observation values against the expected values. The study variables observed data will be close to the expected value, in normally distributed data. Figures 4.1 to Figure 4.4 shows the Q-Q plots for the four variables.
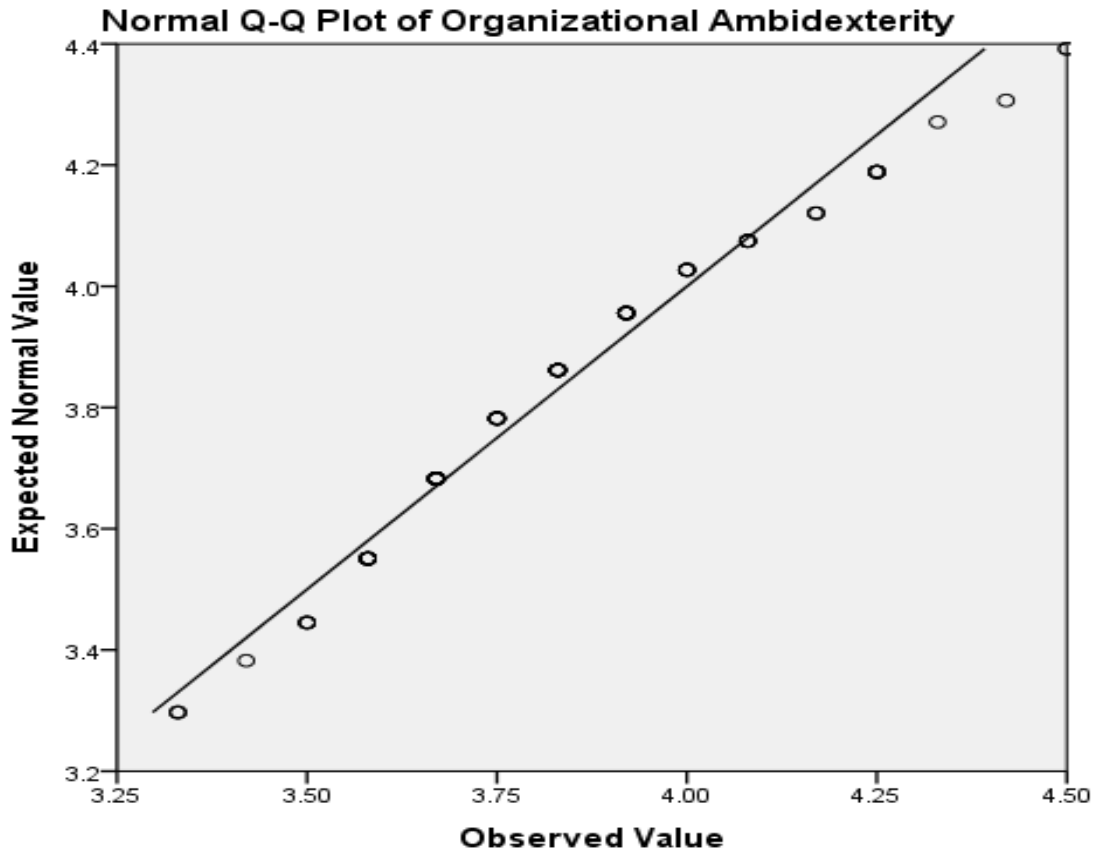
Figure 4.1: Normal Q-Q Plot of Organizational Ambidexterity
Source: Research Data (2019)

Figure 4.1 shows the output upon the plotting of observed values against the expected

values for organizational ambidexterity. The resultant Q-Q plot shows a normal Q-Q

plot of organizational ambidexterity which shows most data points proximity to the

idyllic transverse line; an indication of normal distribution for organizational

ambidexterity data.
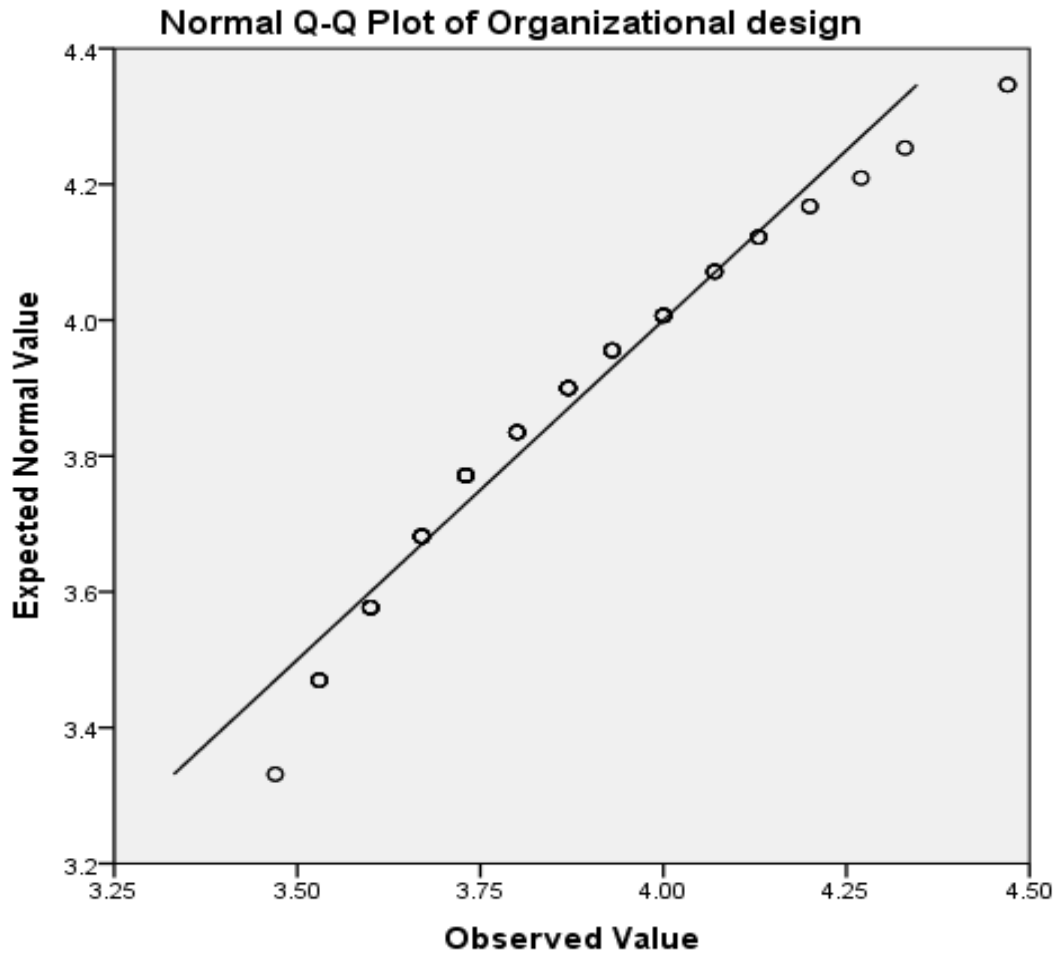
Figure 4.2: Normal Q-Q Plot of Organizational Design

Source: Research Data (2019)

Figure 4.2 shows the Q-Q plot for organizational design in which the observed values against the expected values. The resultant Q-Q plot shows a normal Q-Q plot of organizational design which implies most data points proximity to the model diagonal line. This is indicative of normal distribution of the organizational design data.
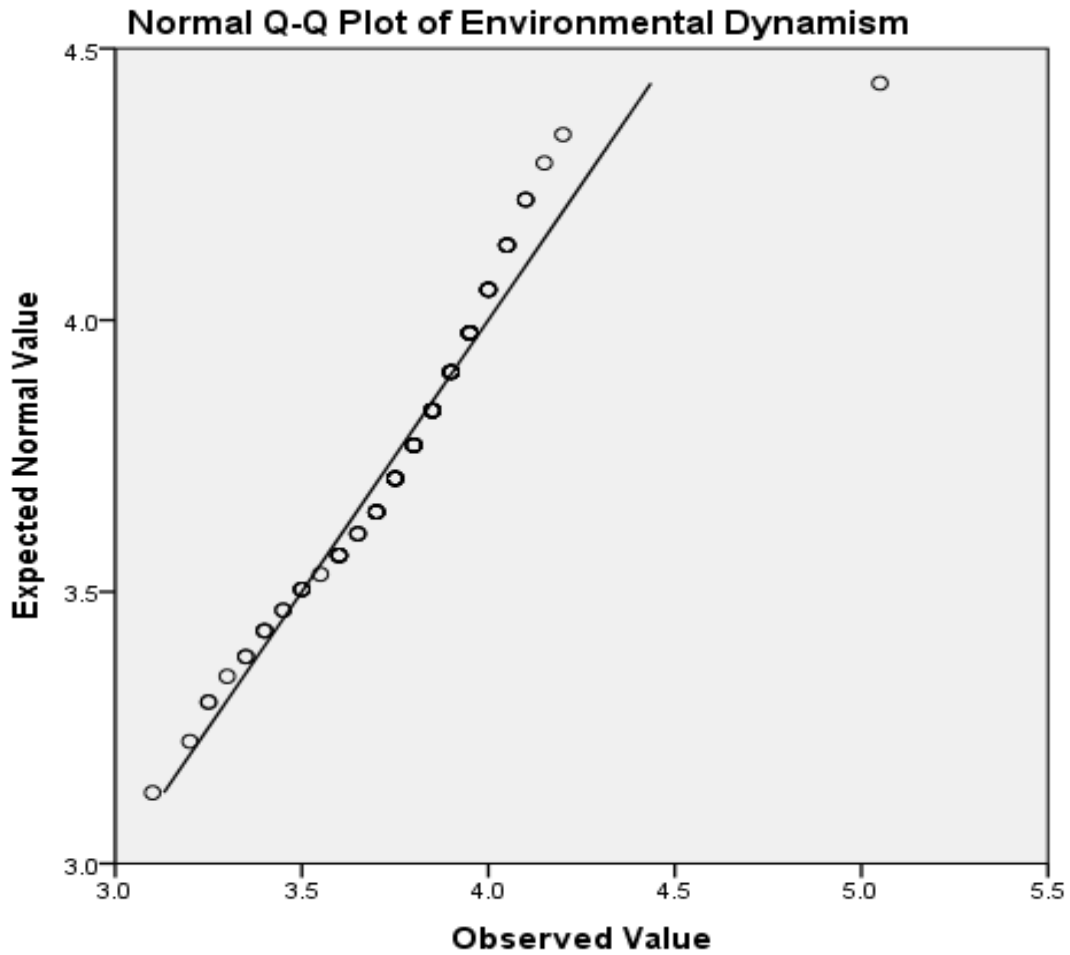
Figure 4.3: Normal Q-Q Plot of Environmental Dynamism

Source: Research Data (2019)

Environmental dynamism observed values data was plotted against the expected values for the variable. The resultant Q-Q plot for environmental dynamism is shown in Figure 4.3. The Q-Q plot shows a normal environmental dynamism Q-Q plot with most data points proximity to the idyllic diagonal line; an indicative of normal distribution of the environmental dynamism data.
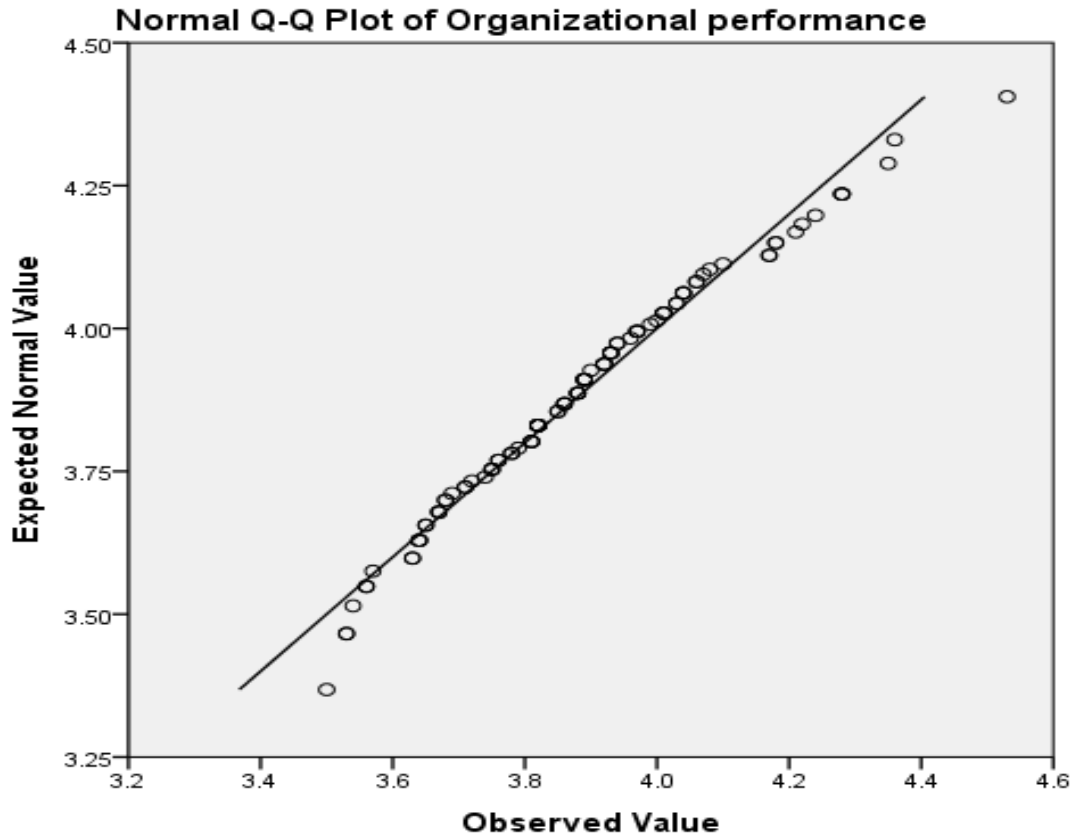
Figure 4.4: Normal Q-Q Plot of Organizational Performance

Source: Research Data (2019)

Figure 4.4 is the organizational performance data normal Q-Q plot. This is the outcome of the plotting of the expected vales data against the observed values. As shown, most data points proximity to the idyllic diagonal line in the normal Q-Q plot of organizational performance is an indication that the data is normally distributed.

4.5.3 Multicollinearity Tests

Collinearity is the study of the relationships among predictor variables (Saunders et al., 2012). In multiple regression models, the state of high linear relationship within two or more explanatory variables is multicollinearity. The independent variable effect on the criterion variable is adversely affected by multicollinearity.

Multicollinearity weakens the analysis by inflating the error term size (Hair et al. 2010). However, some relationship is expected among independent variables given their measuring of same study dimension, hence, regression analysis tolerance for some moderate correlation among them (Field, 2009).

Variance inflation factor (VIF) and tolerance value were applied in the study multicollinearity testing, involving examination of correlation coefficients among variables. VIF value of below 10(Hair et al., 2010) and tolerance of more than 0.10(Menard, 1995) confirm the desired non-multicollinearity between model variables. Multicollinearity test outcome is presented in Table 4.18.

Table 4.18: Tolerance and Variation Inflation Factor Statistics

Variable	Multi-Collinearity Statistics	
	Tolerance	VIF
Organizational Ambidexterity	.802	1.246
Organizational Design	.811	1.233
Environmental Dynamism	.984	1.016

Source: Research Data (2019)

The outcome indicates that all variables have a VIF value of below 10 and tolerance of above 0.10. Organizational ambidexterity has the highest VIF of 1.246 and the lowest tolerance value of 0.802 while Environmental dynamism has the lowest VIF value of 1.016 and the highest tolerance value of 0.984. Within the mid-range is Organizational design with a VIF value of 1.233 and a tolerance value of 0.811. The findings indicate no multicollinearity among the independent variables.

4.5.4 Homogeneity Tests

Homogeneity of variance is a vital test if t-tests and F- tests in regression analysis are to be applied. In these tests, the population variances are considered equal (Hair et al., 2010). Heteroscedasticity occurs in the undesired event of the variances being unequal, and this complicates the regression analysis with the defilement of the fundamental equality of variances assumption. Homogeneity of variance violation increases the possibility of falsely rejecting the null hypothesis.

In this study, homogeneity of variances was tested through the tests for homoscedasticity and heteroscedasticity using the Levene test. The study adopted Hair, et al. (2010) Levene value larger - than 0.05 criterion to confirm homogeneity of variances assumption support. Field (2009) however observed that in large samples greater than 30, a significant Levene test can be produced by small group variance differences. Thus, their recommendation and which this study applied of variance ratio to double-check the results. Accordingly, the ratio is computed by dividing the highest group variance by the lowest group variance; and the outcome should range between two (2) to three (3) or below. Table 4.19 shows homoscedasticity test outcome. In this study, the threshold for homogeneity is a ratio of variances of 2 to 3.

Table 4.19: Levene's Statistic Test for Homogeneity

	Levene Statistic	df1	df2	Sig.
Organizational Ambidexterity	2.296	27	50	.005
Organizational design	2.256	27	50	.006
Environmental Dynamism	4.702	27	50	.000

Source: Research Data (2019)

As per output in Table 4.19, the highest variance is 4.702 while the lowest variance is 2.256. The computed ratio of the two variances is 2.084. It is therefore concluded from the results that the study variable variances do not deviate much from the ratio of the expected variance of 2 to 3. Hence, this study interpretation that the variances are equal, hence homogeneity of variances assumption upheld. Ndegwa (2015) used a similar approach.

4.6 Demographics of Respondents

The questionnaire was delivered to the Managing Directors/Chief Executive Officers (MDs/CEOs). In the cases where the MDs/CEOs of the firms were not available and permitted to engage their respective department/functional heads, the General Managers (GMs) or Heads of department (HODs) of Finance, Sales and Marketing, Human Resources and Production were engaged as advised. The questionnaires were delivered and picked later upon prior arrangement with the respondents. Included in the questionnaire was information regarding the respondent's position in the firm and also the period worked in the position in the current firm. The information was considered important as a confirmation of the credibility of the responses and therefore the credibility of the information gathered. Details of the findings are presented and discussed in sub-sections 4.6.1 and 4.6.2.

4.6.1 Respondent's Position in the Organization

The participants were required to specify their current designation in the firm. This was considered important in ensuring that only the targeted senior management staff responded. The summary of the respondents' position held in the firm is in Table 4.20.

Table 4.20: Respondents by Designation.

Position held	No.of firms	%
Chief Executive Officer/Managing Director	10	10
General Manager	14	14
Head of Finance	22	23
Head of Human Resources	17	17
Head of Production	12	12
Head of Sales & Marketing	23	24
Total	**98**	**100**

Source: Research Data (2019)

From the outcome in Table 4.20, there is uniformity in the senior managers who responded with the highest being 24% by Head of Sales and Marketing and lowest being Managing Director/Chief Executive Officer at 10%. The findings confirm that only the targeted senior managers responded. Also, the uniformity of response across the functions has implications of bias minimization, therefore enhancing the collected information credibility.

4.6.2 Work Experience of Respondents in the same Organization

Participants submitted their period worked in the position in the current firm. This was in terms of the period worked in the position. This information was considered useful in discerning the knowledge level of the respondent about the organization. It is considered that longer experience/duration translate to higher amount of knowledge one has on the firm's business. This, therefore, has implications on the reliability of the information provided. The respondents' experience analysis is in Table 4.21.

Table 4.21: Respondents' Number of Years worked for Organization.

Years	Frequency	%
Less than 5 years	10	10
5-10 Years	35	36
11-15 Years	38	39
16-20 Years	14	14
Over 20 Years	1	1
Total	**98**	**100**

Source: Research Data (2019)

Employee tenure is a useful indicator of the level of knowledge the employee has accumulated on the business operations of the employer firm. The results in Table 4.21 show that the respondent employees had sound knowledge of the business operations in their respective firms. A total of 38 respondents (over 39%) had worked in their firms for 11-15 years, while 35 employees (over 36%) had worked for 5-10 years and 14 employees (over 14%) had worked for 16-20 years. This implies that cumulatively, a total of 87 employees (over 89%) had worked in their firms for 5-20 years. They are therefore reliably placed to provide the requested-for information about their firms. This adds to the credibility of the data collected for the study.

4.7 Organizational Demographics

The researcher sought to obtain some background information on the respondent firms. The information included the firm name, years of operation and country of incorporation. Also included as background information was the firm's operations scope, and ownership structure. The participants provided the employees establishment as well as annual sales revenue data for the year 2018. The details are discussed in sub-sections 4.7.1 to 4.7.6.

4.7.1 Firm Age

Respondents were required to provide data on the firm's age. This is as defined by the duration of business operations; as indicated by period since incorporation. The computed firms' ages are in Table 4.22.

Table 4.22: Firms' Years of Operation

Age	No.of firms	%
Less than 20 years	12	12
20-40 years	23	23
41-60 years	33	34
61-80 years	17	17
81-100 years	11	11
Over 100 years	2	2
Total	**98**	**100**

Source: Research Data (2019)

The longer the period of operation, the better the market knowledge and also the more informed about the environment and strategy. The findings show that more than 86 firms (over 88%) have been in operations for over 20 years. More specifically, 33 firms (over 34%) have been in operation for 41-60 years, and 23 firms (23%) have been in operation for 20-40 years. The period these firms have been in operation is long enough for a sound knowledge of their market and are expected to be well informed about the macro-environment dynamics. They are expected to have a well-tested and stable strategy.

4.7.2 Respondent Firm's Country of Incorporation

The study sought information on the domicile of the respondent firm. This was on the basis of the firm's incorporation country. The output summary is in Table 4.23.

Table 4.23: Firm's Country of Incorporation

Country of incorporation	No.of firms	%
Kenya	91	93
UK	4	4
USA	3	3
Total	**98**	**100**

Source: Research Data (2019)

The firm's country of incorporation defines the firm's domain and therefore focus. The findings show that 91 firms (over 93%) are domiciled in Kenya. Companies domicile is a good indicator of focus and therefore the 93% is an indicator that the large manufacturing firms are focused to succeed in Kenya. The remaining seven firms (7%) are multinationals with subsidiaries operating in Kenya. It is curious to note that no firm was recorded as incorporated in China. This implies that what we are currently experiencing is a tendency of most companies in China to bring finished goods into the Kenyan market.

4.7.3 Firm's Scope of Operations

The firms' business focus was considered useful. This is defined and indicated by the firms' scope of operations whose information the study sought. The output is in Table 4.24.

Table 4.24: Firm Scope of Operations

Scope	No. of Firms	%
National (within Kenya)	76	78
Regional (within East Africa)	10	11
Continental (within Africa)	-	-
Global (within Africa and Beyond	12	12
Total	**98**	**100**

Source: Research Data (2019)

The firms' scope of operations defines strategic focus. The wider the scope the wider and larger is the expected region of strategic focus. The findings indicate that more than 86(over 89%) firms have operations within Kenya and the region (that is, within East Africa); with 76(78%) being the highest number operating within Kenya and 10(11%) within East Africa. About 12 firms (that is, over 12%) have global operations (within Africa and beyond. The results are indicative that the firm's strategies have significant breadth and therefore worth studying.

4.7.4 Respondent Firm Ownership Structure

The study sought information on the firm's ownership. This was based on the firm's shareholding structure. Details are summarized and shown in Table 4.25.

Table 4.25: Firms' Ownership Structure

Ownership structure	No. of firms	%
Both local and Foreign	21	21
Fully foreign	-	-
Fully local	77	79
Total	**98**	**100**

Source: Research Data (2019)

The ownership structure is an indicator of investor stakes. Over 79% are fully locally owned with 21% being multi-nationals with both local and foreign investors. For the 21% multi-nationals, local ownership (shareholding) formed the minority. This is a fairly good mix and therefore credible output expected from the diversity of interests.

4.7.5 Respondent Firm Number of Employees

The employee establishment is one of the determinants of firm size. KAM categorized as LMFs with 50 and above employees (KAM, 2018). This is confirmed as per the study results in Table 4.26.

Table 4.26: Number of Employees

No. of Employees	Frequency	%
Less than 100	-	-
101-200	36	37
201-300	39	40
Over 300	23	23
Total	**98**	**100**

Source: Research Data (2019)

The outcome shows that most firms have over 100 employees with the highest being 39 firms (over 40%) with 201-300 employees and the lowest 23 firms (23%) with over 300 employees. The average is 201-300 employees. All the firms have over 50 employees and therefore confirm the KAM classification as per their 2018 listing of LMFs as those with over 50 employees, among other criteria.

4.7.6 Sales Turnover (Year 2018) in Kshs Millions

Kenya Association of Manufacturers used sales revenue as an indicator of firm size (KAM, 2018). This study sought information on the firms' annual sales revenue in 2018. The output is in Table 4.27.

Table 4.27: Year 2018 Annual Sales/Turnover (Kshs. Millions)

Turnover (Kshs. Millions)	No. of firms	Percentage
101-400	6	6
401-700	21	21
701-1000	37	38
Over 1000	34	35
Total	**98**	**100**

Source: Research Data (2019)

The output shows that bulk of the firms had a sales turnover of over Kshs 1 Billion in 2018 with 37 firms (over 38%) having a sales turnover of Kshs 701-1000 Million and 34 firms (over 35%) had a sales turnover of over Kshs 1000 Million. The overall average is Kshs 701-1000Million. This confirms the KAM classification in the 2018 listing of LMFs as those with annual sales turnover of Kshs 1 Billion and above, among other criteria.

4.8 Manifestation of the Study Variables

In this section, simple summaries are provided about the observations that have been made. The information provided simply describes what is and what the data shows. The data is described and summarized in ways that are meaningful and useful using frequencies, percentages, mean, standard deviation and coefficient of variation. The descriptive statistics offer necessary information in the variable dataset and point out possible associations amongst variables. The summaries are provided under various headings and are presented and discussed in subsections 4.8.1 to 4.8.5.

4.8.1 Analysis of Organizational Ambidexterity Measures

Exploration and exploitation dimensions were applied in the operationalization of organizational ambidexterity. Simultaneous exploration and exploitation undertakings/performance results in firm's being ambidextrous. The descriptive statistics on the two-dimensional measures are discussed in 4.8.1.1 and 4.8.1.2.

4.8.1.1 Exploration Measures

The participants were required to specify the task performance approach used by their firms. They were required to score the presented statements' explanation of their firm's task performance approach, guided by a Likert scale of 1 to 5. The findings concerning the exploration task performance approach are in Table 4.28.

Table 4.28: Performance of Exploration Tasks

Exploration tasks	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Seeking and searching for new knowledge (e.g. on customer demands, novel technological trends, and new opportunities).	98	3	5	3.31	0.506	15.29
Experimentation by for instance, introducing novel technological, products/services and ideas by thinking "outside the box".	98	3	5	3.68	0.652	17.72
Flexibility and readiness for variation from the norm.	98	3	5	4.26	0.678	15.92
Ready to take risks (e.g. on new ideas, technologies, and products/services).	98	3	5	4.27	0.635	14.87
Innovativeness in, for example, creating new products or satisfying its customers' needs.	98	3	5	3.62	0.634	17.51
Aggressiveness in new markets and actively targeting new customer groups.	98	2	5	3.64	0.722	19.84
Overall average				**3.80**	**0.638**	**16.79**

Likert-like scale: 1 – Not at all; 2 - Small extent; 3 - Moderate extent; 4 - Large extent; 5 - Very large extent
Source: Research Data (2019)

The lowest mean score is 3.31 for seeking new knowledge (For example, on customer demands, novel technological trends, and new opportunities and the highest score of 4.27 for ready to take risks (For example, on new ideas, technologies, and products/services). The overall average score is 3.80. The scores are all above the mid-point of 3.0. The interpretation is that there is a significant focus on the performance of exploration activities by Kenyan LMFs. They focus on seeking new knowledge and are ready and flexible in taking risks.

4.8.1.2 Exploitation Measures

Exploitation is one of the dimensions in the organizational ambidexterity measurement. The respondents were required to rate their firm's exploitation undertaking in their task performance approach. The outcome is in Table 4.29.

Table 4.29: Performance of Exploitation Tasks

Exploitation tasks	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Increases and exploits efficiencies in the current operations through continual improvement in execution.	98	2	5	3.47	0.74	21.33
Standardization and minimization of variation from standards.	98	3	5	3.80	0.61	16.05
Continual refinement, commitment to quality and reliability, improvement and cost reduction in production processes/operations.	98	3	5	4.12	0.79	19.17
Continually conducting surveys on existing customers' satisfaction.	98	3	5	3.90	0.75	19.23
Continually fine-tuning products to enhance customer satisfaction.	98	2	5	3.98	0.83	20.85
Enhancing market size through deeper penetration into existing customer base.	98	3	5	3.88	0.79	20.36
Overall average				**3.86**	**0.75**	**19.43**

Likert- like scale: 1 – Not at all; 2 - Small extent; 3 - Moderate extent; 4 - Large extent; 5 - Very large extent
Source: Research Data (2019)

From the tabulated findings the lowest mean score is 3.47 for "increases and exploits efficiencies in the current operations through continual improvement in execution" and the highest mean score was 4.12 for "Continual refinement, commitment to quality and reliability, improvement and cost reduction in production processes/operations". The overall average score was 3.86. From Likert-like scale mid-point of 3, the interpretation is that the score indicates a significant focus on the pursuance of exploitative activities by Kenyan LMFs. The results suggests firms increasingly concerned with the improvement and continuity of their current business.

From the above, the overall mean for exploration is 3.80 while for exploitation is 3.86 indicating the degree of the firm's performance of exploration and exploitation activities. Based on the overall average, the firms tend to perform more exploitation activities than exploration. The firm's capacity to concurrently pursue exploration and exploitation undertakings is organizational ambidexterity. The combined average score is 3.83; the extent that LMFs in Kenya simultaneously pursue exploration and exploitation activities. This average is above the 3 mid-point, thus implying that the firms are ambidextrous.

4.8.2 Organizational Design Measures

Organizational design is one of the study variables. The study operationalized organizational design as two bi-polar extremes with organic designs in one end and mechanistic on the other end in the scale. The organizational design characteristics described and presented in the questionnaire statements were inclined towards mechanistic designs. The opposite extreme would, therefore, imply organic designs. The mid-point of the scale signifies mixed designs. The outcome is in Table 4.30.

Table 4.30: Organizational Design Characteristics

Organizational design

	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Highly formal organizational structure.	98	2	5	3.30	0.52	15.76
Defined lines of authority.	98	3	5	3.86	0.57	14.77
Precise definition of employee responsibilities and expected deliverables and coordination relationships through detailed job descriptions.	98	3	5	4.32	0.67	15.51
Break down of the tasks to be performed and assigning these to specialized functions/departments.	98	3	5	4.12	0.63	15.29
High level of specialization in the tasks within the assigned functions/departments.	98	3	5	3.71	0.66	17.79
Hierarchical structure of control and authority.	98	2	5	3.74	0.79	21.12
Knowledge about and control of the task are located at the top of the hierarchy.	98	2	5	3.80	0.77	20.26
Vertical communication with emphasis on instructions.	98	2	5	3.83	0.67	17.49
Detailed procedures and instructions from superiors govern operations and behaviour.	98	3	5	4.00	0.75	18.75
Close adherence to the chain of command.	98	3	5	3.94	0.74	18.78
Loyalty and obedience are mandatory.	98	2	5	3.89	0.69	17.74
Greater importance and prestige attached to homegrown rather than diverse knowledge, experience and skill.	98	2	5	3.82	0.80	20.94
Complex formal control systems applied in most of the operations.	98	2	5	3.61	0.68	18.84
Greater emphasis on home-grown ideas as opposed to foreign.	98	2	5	3.87	0.73	18.86
An organization-wide standardized management style.	98	2	5	4.03	0.78	19.35
Overall average				**3.86**	**0.70**	**18.13**

Likert-like scale: 1 - Not at all; 2 - Small extent; 3 - Moderate extent; 4 - Large extent; 5 - Very large extent

Source: Research Data (2019)

From Table 4.30, the lowest mean score is 3.30 for "Highly formal organizational structure" and 4.32 on "Precise definition of employee responsibilities and expected deliverables and coordination relationships through detailed job descriptions", is the highest mean score. The overall average is 3.86. Organizational design is operationalized as two extremes in a continuum; from organic to mechanistic designs. In the Likert-like scale of 1 to 5, the lowest scale indicates organic design while the highest indicates mechanistic design, with the mid-point being mixed design. The overall average of 3.86, therefore, indicates mixed organizational designs for LMFs in Kenya but tending towards mechanistic designs, that is, with more mechanistic characteristics than organic ones.

4.8.3 Environmental Dynamism Measures

The intensity and frequency of change dimensions were used for operationalization and measurement of environmental dynamism. Participants scored the degree the characteristics presented in the questionnaire described their respective firms' external environment. The findings on the two dimensions are discussed in 4.8.3.1 and 4.8.3.2.

4.8.3.1 Intensity of Change Measures

One of the dimensions in environmental dynamism measures was the intensity of change. The participants were required to rate the presented statements' degree of description of their firms' external environment concerning the intensity of change in the said environments. Table 4.31 are the results.

Table 4.31: Measurement of Intensity of Change in the External Environment

Intensity of change

	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Intensified enforcement of taxation regulations.	98	2	5	3.31	0.65	19.64
Reduced credit available from lending institutions.	98	2	5	3.61	0.62	17.17
Increased influx of cheaper imported products.	98	3	5	4.02	0.79	19.65
Increasing cost of production inputs.	98	2	5	3.94	0.72	18.27
The technology in our industry is changing in a major way.	98	2	5	3.90	0.79	20.27
Increased trade union demands for higher wages.	98	2	5	3.83	0.81	21.15
Climatic conditions and weather patterns are unpredictable.	98	2	5	3.79	0.84	22.16
Pressure from NGOs for environmental preservation is intense.	98	2	5	3.83	0.83	21.67
Increased enforcement of consumer protection laws.	98	2	5	3.70	0.79	21.35
Intensive enforcement of health and safety laws.	98	2	5	3.88	0.79	20.36
Overall average				**3.78**	**0.76**	**20.11**

Likert-like scale: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent
Source: Research Data (2019)

The lowest mean score from the findings as per Table 4.31 was 3.31 for "Intensified enforcement of taxation regulations", with 4.02 for "Increased influx of cheaper imported products", as the highest mean score and 3.78 average mean rating. The overall composite rating is above the scale mid-point of 3. The overall average is 3.78, implying that Kenyan LMFs are operating in macro-environment characterised by high intensity of change.

4.8.3.2 Frequency of Change Measures

The external environmental dynamism was measured on basis of the said environment frequency of change. Respondents gave feedback on their judgement of how they rated such frequency in connection with their respective firms. Their responses have been analysed and shown in Table 4.32.

Table 4.32: Measurement of Frequency of Change in the External Environment

Frequency of change

	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Government policies change regularly.	98	2	5	3.12	0.46	14.74
Tax regimes are continually changing.	98	3	5	3.49	0.54	15.47
Interest rates change regularly.	98	2	5	4.03	0.84	20.84
Foreign exchange rates are continually changing.	98	2	5	3.94	0.73	18.53
Increasing frequency of inflation rate changes.	98	2	5	3.62	0.71	19.61
Fast changing job performance attitudes, especially among the youth.	98	2	5	3.77	0.73	19.36
Consumer preferences are changing fast and often.	98	2	5	3.98	0.79	19.85
Technology in our industry is changing rapidly.	98	2	5	3.85	0.72	18.70
Electioneering related political stability uncertainty is on the increase	98	2	5	3.95	0.80	20.25
Climatic conditions and weather patterns changing too often.	98	2	5	3.74	0.75	20.05
Overall average				**3.75**	**0.71**	**18.93**

Likert-like scale: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent.

Source: Research Data (2019)

The frequency of change is a key parameter in describing the external environment in which Kenyan LMFs operate in. The tabulated output in Table 4.32 indicate the lowest mean rating of 3.12 for "Government policies change regularly", and the highest mean score of 4.03 for "Interest rates change regularly", with a composite rating of 3.75. The tabulated ratings are all above the mid-point score of 3. This signifies high frequency of change in the macro - environmental factors in the area of operations for LMFs in Kenya.

The combined average mean score is 3.765; made up of the composite rating of 3.78 for the intensity of change and 3.75 for the frequency of change. The combined average mean score of 3.765 implies environmental dynamism in the operating environment for the Kenyan LMFs. This is a high-level intensity of change (3.78 average mean score) and a high frequency of change (3.75 average mean score) environment. The results affirm environmental dynamism in the external environment where LMFs in Kenya operate.

4.8.4 Organizational Performance Measurements

The organizational performance was measured using the Sustainable Balanced Scorecard (SBSC) approach. The approach considers financial, customer satisfaction, organizational processes, human factor, societal and environmental concerns in measuring organizational performance. Participants were required to specify the degree statements presented described their respective firm's performance. The findings are presented and discussed in sub-sections 4.8.4.1 to 4.8.4.6 and the overall summary in 4.8.4.7.

4.8.4.1 Financial Performance Measures

Both primary and secondary data was gathered on firm's financial performance. The questionnaire included both the primary data and secondary components. Primary data was based on responses to statements describing financial performance based on sales revenue, profitability, return on assets (ROA) and earnings per share (EPS). The statements presented described the four performance aspects (sales revenue, profitability, ROA and EPS) in increasing trend.

The requirement was for respondents to also provide secondary data on the four financial performance indicators. They were required to provide the financial performance data over the five years (2014 to 2018). The data was to be obtained from the financial statements. The analysis of the ancillary data is presented in the sub-sections below and Figures 4.5 to Figure 4.8.

The organizational performance was measured from among others the financial perspective. Respondents were required to specify their ratings relating to the four indicators of financial performance; namely sales revenue, profit before tax, ROA and EPS. The responses outcome is in Table 4.33.

Table 4.33: Descriptive Results for Financial Performance Measures

Financial performance						
	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Our Sales Revenue/Turnover has been increasing	98	3	5	3.58	0.67	18.72
Profit before tax has been increasing	98	3	5	3.77	0.57	15.12
Return on assets has been growing	98	3	5	4.16	0.77	18.51
Earning per share has been growing	98	3	5	4.13	0.68	16.46
Overall average				**3.91**	**0.67**	**17.14**

Likert-like scale: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent
Source: Research Data (2019)

The lowest mean score is 3.58 for "Our Sales Revenue/Turnover has been increasing" and 4.16 as the topmost mean rating for "Return on assets has been growing". The overall average mean score of 3.91. The results indicate an increasing trend in all four financial performance indicators. The ratings exceed the mid-point of 3.0. The trends presented in Figures 4.5 to 4.8 affirm the increasing trends.

The secondary data on the financial indicators show a positive and increasing trend for the five years (2014 to 2018). The graphical presentation of secondary data in Figures 4.5 to 4.8 below supports the incremental phrasing of the financial performance statements in the questionnaire. The trend shows a positive and increasing trend on all the selected financial indicators for Kenyan LMFs over the period 2014 to 2018. The selected financial performance indicators and the presented results are Annual sales revenue (Figure 4.5), Profit before tax (Figure 4.6), Return on assets (Figure 4.7) and Earnings per share (Figure 4.8). The results are presented and discussed in sub-sections below and Figures 4.5 to 4.8.

The submitted secondary data on sales revenue turnover for the period 2014 to 2018 was analysed. Based on the sales data submitted for each firm, averages were computed for each year. The average sales revenue/turnover data is presented graphically. The sales revenue trend as per Figure 4.5 is incremental. Sales revenue has been increasing over the period from about Kshs 3.1Billion in 2014 to about Kshs 4.6Billion in 2018. This supports the empirical questions on the sales revenue in the questionnaire which are incremental.
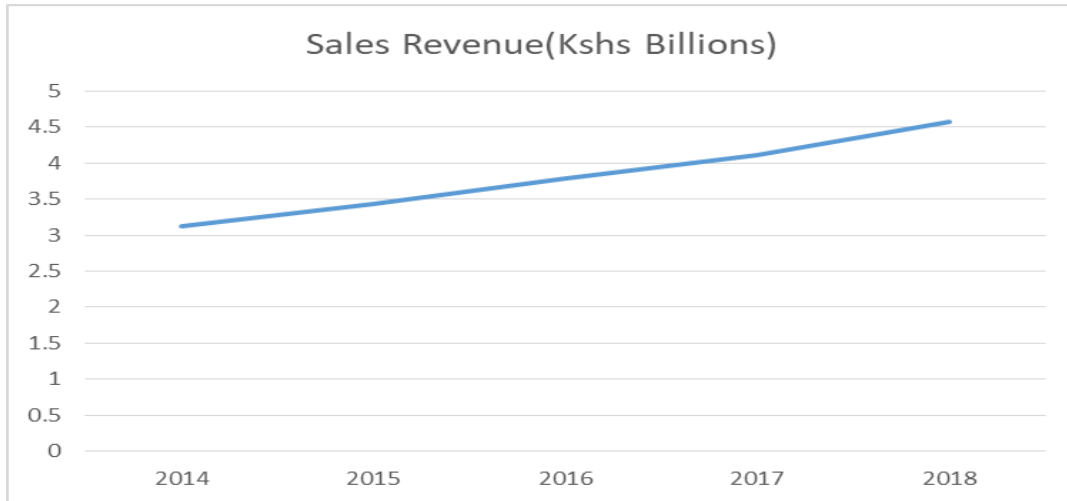
Figure 4.5: Sales Revenue Trend
Source: Research Data (2019)

Similarly, the survey requested participants to rate the degree the presented statements of profit before tax described their respective firm status. The statements were phrased in incremental form. The respondents also submitted secondary data on the firm's profitability in terms of profit before tax for the five years (2014 to 2018). The data was analysed and Figure 4.6 is the graphical presentation. As shown in the graph, profit before tax for LMFs in Kenya been rising from about Kshs 4.55 Million to Kshs 4.89 Million in 2018.
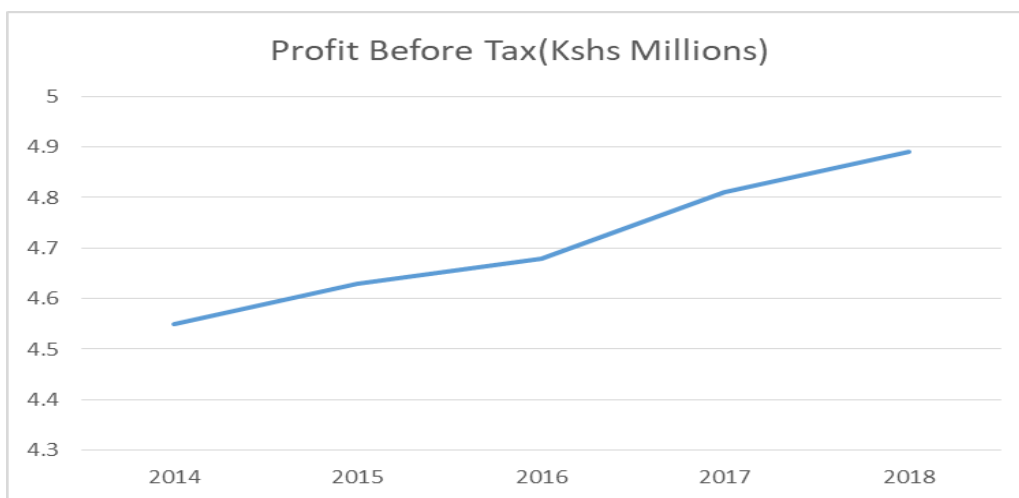
Figure 4.6: Profit before Tax Trend
Source: Research Data (2019)

Return on assets is one of the financial performance indicators. Respondents were in addition required to rate the presented data collection questionnaire statements' description of the status of their respective firms concerning return on assets. The statements were phrased in an incremental form. The incremental status of return on assets for LMFs is supported by the secondary data collected from the same firms over the five years, 2014 to 2018. The analysis of the trend of return on assets is presented in Figure 4.7. The results show an increasing trend from about 2% in 2014 to about 3.56% in 2018.
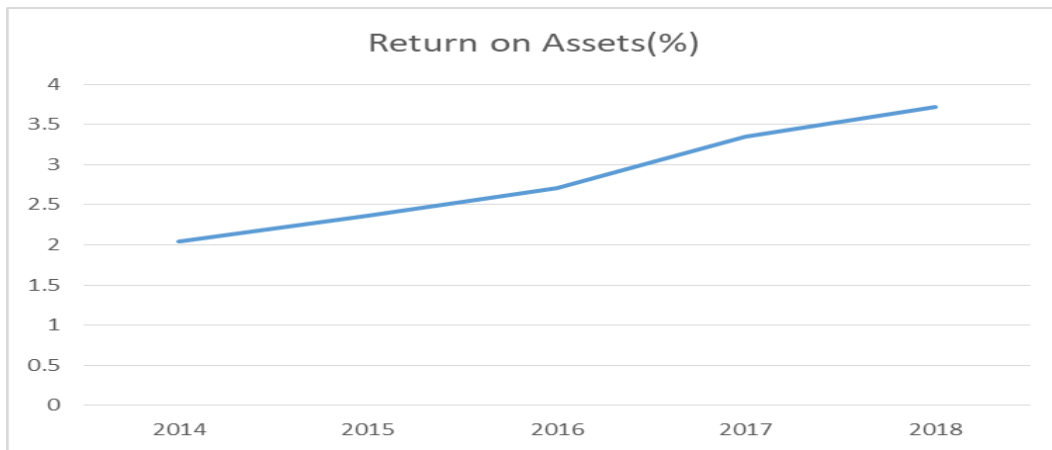
Figure 4.7: Return on Assets Trend
Source: Research Data(2019)

Further, earnings per share was one of the indicators in the financial performance perspective measures. Included in the questionnaire were statements describing organizational performance as indicated by earnings per share. The statements were phrased on incremental form. The respondents were also required to submit secondary data on financial performance, including earnings per share for five year period, 2014 to 2018. The secondary data was analysed and presented in Figure 4.8. The incremental trend is confirmed. The findings indicate an incremental trend in earnings per share from about Kshs 2.60 in 2014 to about Kshs 3.75 in 2018.
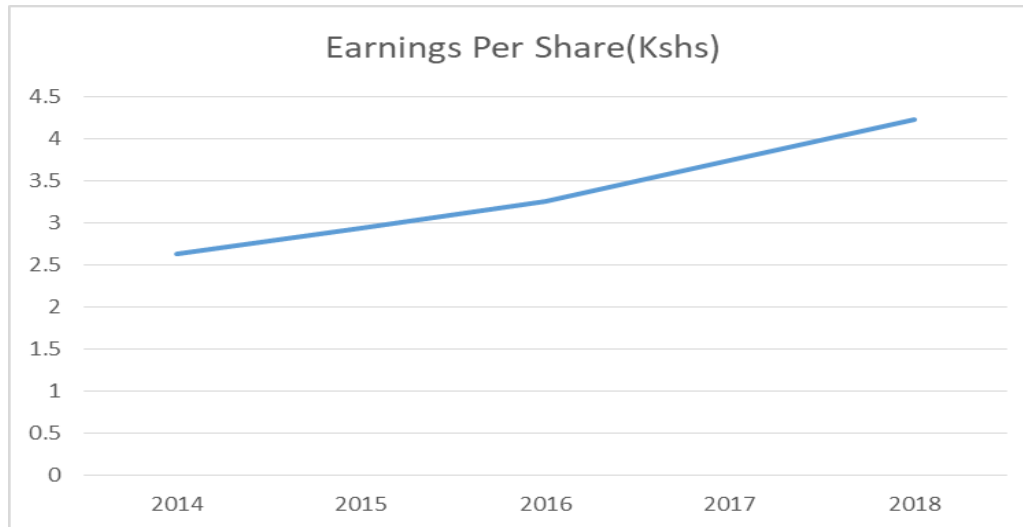
Figure 4.8: Earnings Per Share Trend
Source: Research Data (2019)

4.8.4.2 Customer Perspective Measures

The participants were required to score the questionnaire statements' description of their

firm performance in terms of customer focus. Six statements were describing various

aspects of customer perspective. The output is analyzed and presented in Table 4.34.

Table 4.34: Measurement of Customer Perspective

Customer perspective

	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Our delivery performance to customer has been improving	98	3	5	3.86	0.70	18.13
Quality of our products has been improving	98	3	5	3.84	0.67	17.45
Our customer satisfaction rate has been increasing	98	2	5	4.00	0.77	19.25
We have a growing market share	98	3	5	3.93	0.69	17.56
Customer loyalty has continued to improve	98	2	5	3.83	0.75	19.58
Number of new customers has been increasing	98	3	5	4.00	0.75	18.75
Overall average				**3.91**	**0.722**	**18.47**

Likert-like scale: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent;
5 – Very large extent
Source: Research Data (2019)

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Participants were required to score the presented statements' description of their firm's performance from a "customer focus perspective". The results indicate a significant focus on customer perspective in the performance of their respective firms. The lowest mean score was 3.83 for "Customer loyalty has continued to improve" and the highest mean score of 4.00 for: "Our customer satisfaction rate has been increasing". The overall average mean score was 3.91. All the ratings exceed 3.0 mid-point score. This implies above moderate focus on customers by Kenyan LMFs.

4.8.4.3 Internal Processes Measures

The study sought the organization's performance on the basis of efficiency and effectiveness. This was the emphasis on the internal processes perspective. The feedback was analyzed. Table 4.35 presents the output.

Table 4.35: Measurement of Internal Processes

Internal processes						
	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
We have intensified investment in process automation	98	3	5	3.84	0.71	18.49
Employee morale and productivity has been growing	98	3	5	3.83	0.64	16.71
Employee satisfaction has been increasing	98	2	5	4.11	0.82	19.95
Our production cost per unit has been decreasing	98	3	5	3.97	0.62	15.62
Working capital/sales has continued to improve	98	3	5	3.79	0.78	20.58
Utilisation of our working capacity has been increasing	98	3	5	3.98	0.69	17.34
Overall average				**3.92**	**0.71**	**18.11**

Likert-like scale: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent
Source: Research Data (2019)

The study sought information on performance by respondents rating the presented statements' description of their firms' Internal Processes performance. The results of the responses on a Likert-like scale are presented in Table 4.35. The findings show the smallest average rating of 3.79 on: "Working capital/sales have continued to improve" and the highest mean score of 4.11 on: "Employee satisfaction has been increasing". The overall average mean score was 3.92. The scores signify focus by LMFs on the internal business process in their performance. The summarised score is all above the mid-point score of 3, implying that the statements describe their performance in respect of Internal Processes to "moderate extent" and above, tending to "very large extent".

4.8.4.4 Learning and Growth Performance

The questionnaire required participants to score their firm's performance in terms of new knowledge acquisition and use. This was the performance measure in terms of learning and growth. The findings are in Table 4.36.

Table 4.36: Measurement of Learning and Growth Performance

Learning and growth						
	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Our investment in research and development has intensified	98	3	5	3.81	0.71	18.64
The number of defects has been declining	98	2	5	3.89	0.61	15.68
Employee skill development has been intensified	98	3	5	4.12	0.85	20.63
Our capacity to introduce new products has been increasing	98	3	5	3.88	0.71	18.30
There has been increase in new markets by our firm	98	2	5	4.01	0.83	20.70
Our firm develops new products frequently	98	3	5	3.27	0.47	14.37
Overall average				**3.83**	**0.70**	**18.28**

Likert-like scale: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent
Source: Research Data (2019)

Statements were presented to respondents in the questionnaire describing an organization with an increasing performance from the Learning and Growth perspective. The participants were asked to score from Likert-like scale the degree of the presented statements description of their respective firm's performance from learning and innovation perspective. The outcome in Table 4.36 indicates lowest mean score of 3.27 on "Our firm develops new products frequently" and highest mean score of 4.01 on "There has been increase in new markets by our firm". The overall average mean score is 3.83. The results indicate significantly incremental performance of Kenyan LMFs; from Learning and Growth perspective as indicated by the scores which were all above the mid-point score of 3. The respondents' score indicates agreements with the statements to "moderate extent", and above, tending to "large extent".

4.8.4.5 Societal Performance

The business focus on the community in which it operates is a key measure of sustainable organizational performance. Respondents rated their respective firms' societal focus. The outcome is in Table 4.37.

Table 4.37: Measurement of Societal Performance

Societal perspective						
	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Community service budget has been increasing	98	3	5	3.60	0.64	17.78
Our firm has enhanced community relationships	98	2	5	4.07	0.72	17.69
Our firm has increased investments in philanthropy	98	3	5	4.08	0.71	17.40
We continually enhanced dedicated community- focused activities for example, open days	98	2	5	3.91	0.85	21.74
Overall average				**3.92**	**0.73**	**18.62**

Likert-like scale: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent
Source: Research Data (2019)

From the outcomes as in Table 4.37, the firms' performance from societal focus perspective has been increasing over the time. This is evidenced by the respondents' scores on the Likert-like scale. The lowest average score was 3.60 on "Community service budget has been increasing" and highest mean score of 4.08 on "Our firm has increased investments in philanthropy". The overall average mean score is 3.92. From the Likert-like scale, the scores imply agreement above a "moderate extent" and tending towards a "very large extent" with the statements. This implies an increasing performance from the societal focus perspective.

4.8.4.6 Environmental Performance

Caring for the physical environment is an important measure of sustainable balanced organizational performance. Responses were sought on the degree of manufacturing firms focus on sustainable physical environment. The results of environmental performance are in Table 4.38.

Table 4.38: Measurement of Environmental Performance

Environmental perspective						
	N	Minimum	Maximum	Mean	Std. Deviation	Cv. (%)
Our material usage per unit is decreasing	98	3	5	3.61	0.67	18.56
Water usage per in our firm is decreasing	98	3	5	3.65	0.56	15.34
Our energy efficiency has been improving	98	2	5	4.02	0.81	20.15
We prioritize environment protection in our firm	98	2	5	4.05	0.75	18.52
Overall average				**3.83**	**0.70**	**18.28**

Likert-like scale: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent
Source: Research Data (2019)

A total of four (4 no.) statements were describing an incremental and positive organizational performance on the environmental focus perspective. The statements were in a questionnaire to which participants were requested to score the description of their respective firms' performance by the presented questionnaire statements, guided by a Likert-like scale.

The results as presented in Table 4.38 suggest that the performance of Kenyan LMFs on environmental perspective is positive and on an increasing trend over time. The lowest mean score is 3.61 for "Our material usage per unit is decreasing" and highest mean score of 4.05 on "We prioritize environment protection in our firm". The overall average mean rating is 3.83; an indication that the statements describe environmental perspective performance of their firms and the rating is above mid-point of 3; therefore to a "moderate extent" and tending towards to a "very large extent".

4.8.4.7 Summary of Overall Organizational Performance

The overall summary of organizational performance was extracted. The summary with the six perspectives is in Table 4.39.

Table 4.39: Overall Organizational Performance Summary

Overall Performance Summary						
	N	Minimum	Maximum	Mean	Std. Deviation	Cv.(%)
Financial performance	98	3.00	4.75	3.91	0.67	17.14
Customer performance	98	3.33	4.67	3.91	0.722	18.47
Internal processes performance	98	3.17	4.67	3.92	0.71	18.11
Learning & Growth performance	98	3.17	4.50	3.83	0.70	18.28
Societal performance	98	3.00	5.00	3.92	0.73	18.62
Environmental performance	98	3.00	4.75	3.83	0.70	18.28
Overall average				**3.89**	**0.71**	**18.25**

Likert-like scale: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent
Source: Research Data (2019)

The organizational performance was operationalized and measured using the Sustainable Balanced Scorecard (SBSC). The questionnaire included statements describing organizations' performance in terms of the six (6 no.) perspectives in the SBSC which were stated in a positive and incremental form. The respondents indicated their agreement with the statements description of their respective firms' performance by scoring using the guiding Likert - like scale.

From the summarized tabulation of the scores in Table, 4.39, there is significant agreement among the respondents that the statements describe the performance of their respective firms. The lowest mean score was 3.83 in Learning and Growth performance with the highest mean score being 3.92 on Internal Processes. The overall average mean score is 3.89. Score agreement to a "moderate extent", tending towards to a "very large extent" is an indicator that the respondents agree that their firms' performance has been increasing over time.

4.9 Correlation Analysis

Correlation analysis was applied in measuring the amongst - variables strength relationship using Pearson product moment correlation. Correlation coefficient is the measure of this relationship. The relationship direction is indicated by the coefficient sign, where a + (positive) sign is indicative of that the relationship is positive while a − (negative) sign is an indicator of that the relationship is negative. In terms of the relationship strength, the correlation coefficient value is an indicator of the association strength and varies between -1 and +1. The coefficient closeness to +/-1 signifies perfect linearity closeness and thus, the relationship strength scale, while as the correlation coefficient value tends towards 0(zero) is indicative of weaker relationship amongst the two variables (Cohen, 1988).

A positive correlation signifies increase of both variables at the same time. A negative correlation means that one variable increase has a corresponding and proportionate decrease in the other. A 0 (Zero) score indicates no correlation or relationship between the two variables. Strong correlation among independent variables is a multicollinearity threat. According to Field (2009), coefficients above 0.90 imply inflated outcomes of individual predictive power and should be rejected. All the coefficients were, therefore, not highly correlated. The relationships that existed between the variables was determined by carrying out a correlation analysis. Table 4.40 presents the outcome.

Table 4.40: Relationship between the Variables

Variable relationships					
		Organizational Ambidexterity	Organizational Design	Environmental Dynamism	Organizational Performance
Organizational Ambidexterity	Pearson Correlation	1	.430[**]	-.107	.589[**]
	Sig. (2-tailed)		.000	.296	.000
	N	98	98	98	98
Organizational Design	Pearson Correlation	.430[**]	1	.017	.562[**]
	Sig. (2-tailed)	.000		.866	.000
	N	98	98	98	98
Environmental Dynamism	Pearson Correlation	-.107	.017	1	-.063
	Sig. (2-tailed)	.296	.866		.540
	N	98	98	98	98
Organizational Performance	Pearson Correlation	.589[**]	.562[**]	-.063	1
	Sig. (2-tailed)	.000	.000	.540	
	N	98	98	98	98

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Research Data (2019)

The outcome indicates a positive linear organizational ambidexterity-design relationship with 0.430 statistically significant correlation coefficient. The correlation coefficient of negative 0.107 indicates a weak negative linear organizational ambidexterity - environmental dynamism relationship, and which is statistically significant. The correlation coefficient of 0.589 is an indication of a statistically significant and positive linear organizational ambidexterity - performance association. The results show a statistically significant correlation coefficient of 0.017 in the organizational design and

environmental dynamism relationship, signifying weak positive linear relationship. The reported correlation coefficient of 0.562 indicate a positive and significant linear organizational design - performance association. The correlation coefficient of negative 0.063 signifies a negative and weak linear environmental dynamism - organizational performance relationship, and is insignificant.

4.10 Results of Tests of Hypotheses

The general objective of this research was to establish the role of organizational design and environmental dynamism in the organizational ambidexterity - performance relationship of LMFs in Kenya. To actualize this, specific aims and related hypotheses were formulated. The hypothesized interactions were tested by simple linear regression, multiple regression, and hierarchical regression analysis. Organizational ambidexterity - performance relationship in hypothesis 1 was tested using simple linear regression. Mediating role of organizational design in hypothesis 2 was tested using path analysis which involves three simple linear regression and one multiple linear regression model while environmental dynamism moderating effect on the organizational ambidexterity - performance relationship in hypothesis 3 was tested by employing hierarchical regression analysis. The joint effect in hypothesis 4 was tested using the multiple linear regression model.

Organizational performance was operationalized and measured using the SBSC approach. The tests for all the hypotheses were done based on organizational performance as a composite of the SBSC perspective indicators and separately with the individual SBSC perspective as a criterion variable. The dimensions comprised financial, customer, business processes, human factor, societal and environmental concerns. The tests were conducted guided by the regression models as summarized in Table 3.2.

Regression analysis yields several statistics which include R, R^2, adjusted R^2, F-ratio, Beta coefficient (β), t and p-values. The coefficient of correlation(R) indicates the study variables' relationship strength and direction. The coefficient of determination (R^2) on the other hand depicts the criterion variable variance elucidated by the predictor variable variation. The greater the R^2, the greater the model's explanatory power. The regression models' goodness of fit and overall robustness are assessed using F-ratio and p-values. A high F-statistic value indicates the model's significance. The tests are conventionally conducted at 95 percentage (p=0.05) level of significance. The null hypothesis is rejected if the p-value is less than or equal to 0.05 ($p \leq 0.05$), otherwise, fail to reject the null hypothesis. The model's coefficient, that is Beta (β) indicates the magnitude of criterion variable variation given a unit predictor variable variation. The findings are presented in sub-sections 4.10.1 to 4.10.28 and summarised in 4.10.29.

4.10.1 Organizational Ambidexterity and Organizational Performance

The study aimed to establish the influence of organizational ambidexterity on the performance of Kenyan LMFs as one of its objectives. Based on the conceptualization, it was hypothesized ($H0_1$) that organizational ambidexterity has no significant influence on performance of Kenyan LMFs. The hypothesis was verified using simple linear regression analysis. Based on performance measured as a composite of the SBSC perspectives, the findings are presented in Table 4.41. This is followed by brief commentaries on the results.

Table 4.41: Regression Output for the Influence of Organizational Ambidexterity
on Organizational Performance

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.589[a]	.347	.341	.16877			
ANOVA[a]							
Model		Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	1.455	1	1.455	51.100	.000[b]	
	Residual	2.734	96	.028			
	Total	4.190	97				
Coefficients[a]							
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
		B	Std. Error	Beta			
1	(Constant)	1.994	.265		7.537	.000	
	Organizational Ambidexterity	.494	.069	.589	7.148	.000	
a. Dependent Variable: Organizational Performance							
b. Predictors: (Constant), Organizational Ambidexterity							

Source: Research Data (2019)

From the findings in Table 4.41, there is a moderately strong positive organizational ambidexterity - performance relationship (R=0.589). The results indicate a coefficient of determination (R^2=0.347). This implies that 34.70 percent of organizational performance is accounted for by organizational ambidexterity, while the rest (65.30 percent) is accounted for by variables outside current study scope.

The F-statistic of 51.100 is significant ($p < 0.05$) and larger than the F critical value of 3.94. The significance of the F-ratio is an indication that the regression model attained goodness of fit and robustness, thus suitable for analysing the data for this study. Also, the null hypothesis is rejected, as the calculated p-value is less than 0.05($p<0.05$). Thus, the study's conclusion that organizational ambidexterity has a significant influence on

the performance of LMFs in Kenya. Further, the model Beta coefficient 0.589 provides significant (p<0.05) predictive power. The Beta of 0.589 means that a unit organizational ambidexterity variation results in 0.589 units change in organizational performance.

Organizational performance was operationalized and measured using the SBSC approach. Therefore, it was, necessary to also ascertain the organizational ambidexterity influence on the individual SBSC performance indicators; namely financial, customer, organizational processes, human factor, societal and environmental concerns. Based on the individual SBSC performance perspectives, the findings are presented and discussed in sections 4.10.2 to 4.10.7.

4.10.2 Organizational Ambidexterity and Financial Performance

Financial performance is one of the six performance perspectives in the SBSC organizational performance measurement approach. Using simple linear regression, the hypothesis ($H0_{1a}$) that organizational ambidexterity has no significant influence on financial performance of Kenyan LMFs was verified. Shown in Table 4.42 is the outcome.

Table 4.42: Regression Results for the Influence of Organizational Ambidexterity on Financial Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.342[a]	.117	.108	.34619
ANOVA[a]					
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.526	1	1.526	12.729	.001[b]
	Residual	11.506	96	.120		
	Total	13.031	97			
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.979	.543		3.647	.000
	Organizational Ambidexterity	.505	.142	.342	3.568	.001
a. Dependent Variable: Financial Performance						
b. Predictors: (Constant), Organizational Ambidexterity						

Source: Research Data (2019)

The findings in Table 4.42 show a moderately weak positive organizational ambidexterity - financial performance relationship (R=0.342). Coefficient of determination is weak but significant (R^2=0.117, F=12.729, p<0.05). This denotes that 11.70 percentage of financial performance is explained by organizational ambidexterity, and 88.30 percent is explained by variables outside current study scope.

The F-value is significant (F=12.729, p<0.05) and bigger than the F critical value of 3.94. This indicates the model attainment of goodness of fit and its robustness and therefore suitability for analysing the data for this study. Also, there is justification for the null hypothesis rejection and therefore support of the alternative hypothesis. The null

hypothesis is rejected and, hence, the study conclusion that organizational ambidexterity has a significant influence on the financial performance of Kenyan LMFs. Further, the outcome shows significant model coefficients (β =0.342, t = 3.568, p<0.05). Beta value of 0.342 implies that a one percentage variation in organizational ambidexterity results in a 34.20 percent increase in financial performance.

4.10.3 Organizational Ambidexterity and Customer Perspective

Customer perspective is about the markets. It addresses how the business has performed in terms of strategies, objectives, and activities concerning its customers. It was hypothesized ($H0_{1b}$) that organizational ambidexterity has no significant influence on customer perspective in LMFs in Kenya. This hypothesis was verified using simple linear regression technique. The outcome is shown in Table 4.43.

Table 4.43: Regression Output for the Influence of Organizational Ambidexterity on Customer Perspective

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.355[a]	.126	.117	.25241

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.880	1	.880	13.808	.000[b]
	Residual	6.116	96	.064		
	Total	6.996	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.441	.396		6.170	.000
	Organizational Ambidexterity	.384	.103	.355	3.716	.000
a. Dependent Variable: Customer Perspective						
b. Predictors: (Constant), Organizational Ambidexterity						

Source: Research Data (2019)

The outcome in Table 4.43 shows a moderately weak positive organizational ambidexterity - customer perspective relationship (R=0.355). Coefficient of determination is weak but significant (R^2=0.126, F=13.808, p<0.05), suggesting that 12.60 percentage variation in customer perspective is accounted for by organizational ambidexterity, the rest (87.40 percentage) variation is explained by variables outside the current study's scope.

A significant F-ratio of 13.808 which is larger than the F-critical value of 3.94 indicate the fit and robustness of the regression model used. The model is therefore suitable for the analysis of data for this study. Also, based on evidence from these results (p<0.05), the null hypothesis is rejected. Therefore, the study conclusion that organizational ambidexterity has a significant influence on customer perspective of Kenyan LMFs. Further, the outcome presents a significant Beta coefficient (β=0.355, t=3.716, p<0.05).This means that a one percentage organizational ambidexterity variation results in a 35.50 percent change in customer perspective.

4.10.4 Organizational Ambidexterity and Internal Processes

Internal processes is another measure of organizational performance. It is a measure of the business processes efficiency in the manufacture and/or supply of products or services. The study aimed to establish the influence of organizational ambidexterity on internal business processes of Kenyan LMFs by testing the following hypothesis; $H0_{1c}$: Organizational ambidexterity has no significant influence on internal business processes of Kenyan LMFs. The outcome is in Table 4.44.

Table 4.44: Regression Outcome for the Influence of Organizational Ambidexterity on Internal Processes

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.431[a]	.186	.178	.24753
ANOVA[a]					
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.345	1	1.345	21.960	.000[b]
	Residual	5.882	96	.061		
	Total	7.227	97			
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.104	.388		5.422	.000
	Organizational Ambidexterity	.475	.101	.431	4.686	.000
a. Dependent Variable: Internal processes						
b. Predictors: (Constant), Organizational Ambidexterity						

Source: Research Data (2019).

The outcome in Table 4.44 show a moderately weak positive organizational ambidexterity - internal processes relationship (R=0.431). Coefficient of determination is weak but significant (R^2=0.186, F=21.960, p<0.05), suggesting that 18.60 percent of the variation in internal processes is accounted for by organizational ambidexterity, the rest (81.40 percent) is explained by variables outside current study scope.

A significant F-ratio of 21.960 which is bigger than the F-critical value of 3.94 indicate the goodness of fit and robustness of the regression model used, thus its use suitability in the research's data analysis. Also, the results (p<0.05) provide adequate null hypothesis rejection justification. Accordingly, the null hypothesis is rejected, and

hence, the conclusion that organizational ambidexterity has a significant influence on internal processes of Kenyan LMFs. Further, the results present a significant Beta coefficient ($\beta=0.431$, $t=4.686$, $p<0.05$). This means that a unit variation in organizational ambidexterity results in a 43.10 percent change in internal processes.

4.10.5 Organizational Ambidexterity and Organizational Learning and Growth Performance

Learning and growth are about the infrastructure required to achieve the other SBSC perspectives. This includes people issues, information systems as well as innovation capabilities. The study also measured performance in terms of learning and growth focus. Simple linear regression model was applied in testing the hypothesis ($H0_{1d}$) that organizational ambidexterity has no significant influence on learning and growth performance of Kenyan LMFs. The findings are in Table 4.45.

Table 4.45: Regression Results for the Influence of Organizational Ambidexterity Effect on Learning and Growth Performance

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.351[a]	.123	.114	.27055		
ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.990	1	.990	13.526	.000[b]
	Residual	7.027	96	.073		
	Total	8.017	97			
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.272	.424		5.357	.000
	Organizational Ambidexterity	.407	.111	.351	3.678	.000
a. Dependent Variable: Learning & Growth performance						
b. Predictors: (Constant), Organizational Ambidexterity						

Source: Research Data (2019)

The findings in Table 4.45 indicate a 0.351 correlation coefficient(R) value, implying moderately weak positive organizational ambidexterity - learning and growth performance relationship. Coefficient of determination is weak but significant (R^2=0.123, F=13.808, p<0.05), meaning that 12.30 percentage variation in learning and growth performance is explained by organizational ambidexterity, the rest (87.70 percentage) variation is explained by variables not within the current study scope.

The regression model attained goodness of fit and robustness, thus it was suitable for analysing this study's data, as evidenced by the significance of the F-ratio (F=13.526, p<0.05) which is larger than the F critical value of 3.94. Also, it provides adequate evidence against the null hypothesis, which is rejected, thus the study conclusion that organizational ambidexterity has a significant influence on learning and growth performance of Kenyan LMFs. Further, the outcomes point predictive model with significant Beta coefficients (β=0.351, p<0.05). This means that a unit variation in organizational ambidexterity will result in 0.351 units change in learning and growth performance.

4.10.6 Organizational Ambidexterity and Societal Performance

Sustainability is critical for the lasting organizational success. One of the ways to enhance sustainability is through community focus by the organization. The hypothesis ($H0_{1e}$) that organizational ambidexterity has no significant influence on societal performance of Kenyan LMFs was verified by regressing societal perspective on organizational ambidexterity. The outcomes are in Table 4.46.

Table 4.46: Regression Outcomes for the Influence of Organizational Ambidexterity on Societal Performance

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.347[a]	.120	.111	.37372		
ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.835	1	1.835	13.139	.000[b]
	Residual	13.408	96	.140		
	Total	15.243	97			
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.797	.586		3.068	.003
	Organizational Ambidexterity	.554	.153	.347	3.625	.000
a. Dependent Variable: Societal performance						
b. Predictors: (Constant), Organizational Ambidexterity						

Source: Research Data (2019)

The outcome in Table 4.46 indicates a weak correlation coefficient (R=0.347). Coefficient of determination is weak but significant (R^2=0.12, F=13.14, p<0.05). This means that 12.00 percent of change in societal perspective is explained by organizational ambidexterity, while the rest of variation (88.00 percent) is explained by variables outside the current study scope.

The null hypothesis is rejected, based on this result (p<0.05), leading to the conclusion that organizational ambidexterity has a significant influence on organization societal perspective performance of LMFs in Kenya. Also, the significance of F-ratio (F=13.139, p<0.05) which is bigger than the F-critical value of 3.94 is an indication that the regression model attained goodness of fit and robustness, thus suitability for this study's data analysis. Further, Beta coefficient is significant (β=0.347, t=3.625, p<0.05). Beta value of 0.347 implies that a unit organizational ambidexterity variation results in a 34.70 percent change in societal perspective performance.

4.10.7 Organizational Ambidexterity and Environmental Performance

The involvement in the organization's operating environment is an important measure of its performance. Such involvement includes conservation activities to safeguard the environmental sustainability and therefore the organization's long-term success. It was hypothesized ($H0_{1f}$) that organizational ambidexterity has no significant influence on environmental performance of Kenyan LMFs. The influence of organizational ambidexterity on environmental performance was verified using simple linear regression analysis. The outcome summary is in Table 4.47.

Table 4.47: Regression Output for the Influence of Organizational Ambidexterity on Environmental Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.320[a]	.102	.093	.35521
ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.380	1	1.380	10.941	.001[b]
	Residual	12.112	96	.126		
	Total	13.493	97			
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.996	.557		3.586	.001
	Organizational Ambidexterity	.481	.145	.320	3.308	.001
a. Dependent Variable: Environmental performance						
b. Predictors: (Constant), Organizational Ambidexterity						

Source: Research Data (2019)

From Table 4.47 correlation coefficient (R) with a value of 0.320 implies a moderately weak but significant positive organizational ambidexterity - environmental performance relationship. As shown in the table, organizational ambidexterity explains 10.20 percentage environmental performance variation (R^2=0.102, F=10.94, $p<0.05$), 89.80 percentage environmental performance variation is accounted for by variables outside the current study's scope.

The regression model attained robustness and goodness of fit as evidenced by the significance of F-ratio (F=10.941, $p<0.05$) which is larger than the F critical value of 3.94. It was thus suitable for analysing the data for this study. Further, the null hypothesis is rejected, based on the outcome ($p<0.05$). Thus, it is concluded that organizational ambidexterity has a significant influence on organization environmental performance.

Regression coefficients are available in the third part of Table 4.47. As evidenced in the table, the beta coefficient is significant (β=0.320, t=3.308, $p<0.05$). This outcome suggests that 0.320 units of variance in environmental performance is due to one unit positive change in organizational ambidexterity.

4.10.8 Organizational Ambidexterity, Design and Performance

The second study aim was to determine the role of organizational design in the organizational ambidexterity - performance relationship of LMFs in Kenya. The objective was actualized by testing the hypothesis ($H0_2$) that "Organizational design has no mediating role in the influence of organizational ambidexterity on the performance of

LMFs in Kenya". Four-step path analysis suggested by Baron and Kenny (1986) was applied in the hypothesis testing. The Baron - Kenny's technique consists of four steps and related conditions that must be satisfied. Simple linear regression analysis was applied in steps one to three while step four involved the use of multiple regression analysis.

The mediation tests are conducted based on performance measured as a composite of the SBSC perspectives and also as per the individual SBSC performance indicators or dimensions. The findings are presented and discussed in sub-sections 4.10.8 to 4.10.14. The findings based on performance measured as a composite of SBSC perspective indicators are shown in Table 4.48.

Table 4.48: Regression Outcomes for the Mediation Role of Organizational Design in the Organizational Ambidexterity - Performance Relationship

Model Summary						
Model	R	R Square	Adjusted R Square			Std. Error of the Estimate
1	.589[a]	.347	.341			.16877
2	.430[a]	.185	.176			.22611
3	.562[a]	.316	.309			.17282
4	.681[a]	.464	.453			.15373

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.455	1	1.455	51.100	.000[b]
	Residual	2.734	96	.028		
	Total	4.190	97			
2	Regression	1.112	1	1.112	21.753	.000b
	Residual	4.908	96	.051		
	Total	6.020	97			
3	Regression	1.322	1	1.322	44.277	.000b
	Residual	2.867	96	.030		
	Total	4.190	97			
4	Regression	1.945	2	.972	41.139	.000b
	Residual	2.245	95	.024		
	Total	4.190	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.994	.265		7.537	.000
	Organizational Ambidexterity	.494	.069	.589	7.148	.000
2	(Constant)	2.196	.354		6.197	.000
	Organizational Ambidexterity	.432	.093	.430	4.664	.000
3	(Constant)	2.078	.271		7.657	.000
	Organizational Design	.469	.070	.562	6.654	.000
4	(Constant)	1.301	.285		4.562	.000
	Organizational Design	.357	.070	.427	5.130	.000
	Organizational Ambidexterity	.316	.069	.378	4.549	.000

Model 1: Predictors (Constant), Organizational Ambidexterity: Dependent variable Organizational Performance.
Model 2: Predictors (Constant), Organizational Ambidexterity: Dependent variable Organizational Design.
Model 3: Predictors (Constant), Organizational Design: Dependent variable Organizational Performance.
Model 4: Predictors (Constant), Organizational Ambidexterity, Organizational Design: Dependent variable Organizational Performance.

Source: Research Data (2019)

Step one in the path analysis requires the testing of the dependent - independent variable relationship. Proceeding to step two is dependent on whether or not the independent - dependent variable relationship is significant. In the current study, the organizational ambidexterity (independent variable) - organizational performance (dependent variable) relationship was assessed using simple linear regression analysis. The outcome in Table 4.48 shows significant (R^2=0.347, F=51.100, p<0.05; β=0.589, t=7.148, p<0.05) organizational ambidexterity effect on organizational performance. The outcome shows that 34.70 percent change in performance is accounted for by organizational ambidexterity (R^2=0.347), the rest (65.30 percentage) variation in performance is accounted for by variables outside the current study scope. The model beta coefficient is significant (β=0.589, p<0.05), thus evidence of the model predictive power. The first mediation condition requires that there should be a significant independent - dependent variable relationship when the mediating variable is controlled. According to the results in Table 4.48, this requirement is fulfilled.

In step two in the path analysis mediator (Organizational design) is regressed on the independent variable (Organizational ambidexterity). Simple linear regression analysis was applied in organizational ambidexterity - design relationship analysis. Shown in Table 4.48 are the findings, which indicate significant (R^2=0.185, F=21.753, p<0.05; β=0.430, t=4.664, p<0.05) effect of organizational ambidexterity on organizational design. The outcome shows that 18.50 percentage variation in organizational design can be accounted for by organizational ambidexterity (R^2=0.185), the rest (81.50 percentage) change in organizational design is accounted for by variables outside the

current study scope. The F-value significance (F=21.753, p<0.05) and which is greater than the F-critical value of 3.94 is an indication of the model goodness of fit and robustness, thus this study's data analysis suitability. The findings imply satisfaction of the second condition, which requires significant independent - mediator variable relationship.

Step three of the path analysis calls for an evaluation of the mediating - dependent variable relationship; and is only allowed if the independent - mediating variable relationship in step two is significant, otherwise, the process terminates. The results in Table 4.48 demonstrate a significant organizational ambidexterity - organizational design relationship, therefore enabling the proceeding to step three of path analysis. In step three, the mediating - dependent variable relationship was analysed using simple linear regression analysis.

Organizational design - organizational performance relationship evaluation outcome presented in Table 4.48 reveal significant (R^2=0.316, F=44.277, p<0.05; β=0.562, t=6.654, p<0.05) influence of organizational design on organizational performance. This means that 31.60 percentage of change in organizational performance is explained by organizational design, the rest (68.40 percentage) is accounted for by variables outside the current study's scope. The significance of F-ratio(F=44.277, p<0.05) and which is bigger than the F critical value of 3.94 is an indication that the regression model attained goodness of fit and thus suitable for analysing the data for this study. These results satisfy the mediator - dependent variable significant relationship which is the third mediation requirement.

The outcome of step three determines whether the process should move to the fourth and final step of path analysis. The results of step three indicate a significant organizational design - organizational performance relationship. The findings cleared the way for step four of path analysis. Step four entails analysis of the independent - dependent variable relationship when the mediator variable effect on the criterion variable is controlled. The organizational ambidexterity and organizational design joint effect on organizational performance was examined using multiple regression analysis. The outcome as in Table 4.48 reveal that the organizational ambidexterity (predictor variable) influence on organizational performance (dependent variable) was significant (R^2=0.464, F=41.139, p<0.05; β=0.378, t=4.549, p<0.05) in the presence of organizational design (mediator variable) whose influence is also significant (β=0.427, t=51.130, p<0.05). The F-ratio is significant (F=41.139, p<0.05) and larger than the F- critical value of 3.09. This indicates the model's robustness and goodness of fit attainment and thus suitability for analysing the data for this study.

Mediation can be full, partial or none at all (Baron & Kenny, 1986). Full mediation is where in addition to the success in the first three steps, the explanatory variable effect on the criterion variable in the presence of the mediating variable in step four must be insignificant. Partial mediation takes place when in addition to meeting the first three requirements as indicated in steps one to three, the independent variable has a smaller regression coefficient when both the explanatory variable and mediating variable are used for criterion variable prediction than when explanatory variable in step four is used. There is no mediation taking place if any of the conditions in steps one to four are not met.

The results in table 4.48 indicate success in the first three steps. Further the results indicate that organizational ambidexterity has a smaller regression coefficient of 0.378 when both organizational ambidexterity and organizational design are used to predict organizational performance compared to that of 0.589 when organizational ambidexterity is used to predict organizational performance. The results provide support for the organizational ambidexterity - performance relationship partial mediation by organizational design. The null hypothesis is therefore rejected. Hence, the conclusion that organizational design has a mediating role in the organizational ambidexterity influence on the performance of Kenyan LMFs.

Organizational performance was operationalized and measured using SBSC approach in this study. The mediation tests were also performed on the individual SBSC performance perspectives. The individual SBSC performance indicators are financial, customer satisfaction, organizational processes, human factor, societal and environmental performance. The outcomes are presented and discussed in sub-sections 4.10.9 to 4.10.14.

4.10.9 Organizational Ambidexterity, Design and Financial Performance

The study meant to determine the role of organizational design in the organizational ambidexterity - financial performance relationship of LMFs in Kenya. The four-step path analysis was applied in the assessment of the hypothesis ($H0_{2a}$) that organizational design has no mediating role in the influence of organizational ambidexterity on the financial performance of LMFs in Kenya. The output is in Table 4.49.

Table 4.49: Regression Output for the Mediation Role of Organizational Design in the Organizational Ambidexterity - Financial Performance Relationship

Model Summary						
Model	R	R Square	Adjusted R Square			Std. Error of the Estimate
1	.342[a]	.117	.108			.34619
2	.430[a]	.185	.176			.22611
3	.339[a]	.115	.106			.34656
4	.403[a]	.162	.145			.33895
ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.526	1	1.526	12.729	.001[b]
	Residual	11.506	96	.120		
	Total	13.031	97			
2	Regression	1.112	1	1.112	21.753	.000b
	Residual	4.908	96	.051		
	Total	6.020	97			
3	Regression	1.501	1	1.501	12.497	.001b
	Residual	11.530	96	.120		
	Total	13.031	97			
4	Regression	2.117	2	1.058	9.213	.000b
	Residual	10.914	95	.115		
	Total	13.031	97			
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.979	.543		3.647	.000
	Organizational Ambidexterity	.505	.142	.342	3.568	.001
2	(Constant)	2.196	.354		6.197	.000
	Organizational Ambidexterity	.432	.093	.430	4.664	.000
3	(Constant)	1.990	.544		3.657	.000
	Organizational Design	.499	.141	.339	3.535	.001
4	(Constant)	1.216	.629		1.935	.056
	Organizational Ambidexterity	.356	.154	.241	2.315	.023
	Organizational Design	.347	.153	.236	2.269	.026

Model 1: Predictors (Constant), Organizational Ambidexterity: Dependent variable Financial Performance.
Model 2: Predictors (Constant), Organizational Ambidexterity: Dependent variable Organizational Design.
Model 3: Predictors (Constant), Organizational Design: Dependent variable Financial Performance.
Model 4: Predictors (Constant), Organizational Ambidexterity, Organizational Design: Dependent variable Financial Performance.

Source: Research Data (2019)

The dependent variable (financial performance) - independent variable (organizational ambidexterity) relationship was tested in step one. In the current study, the organizational ambidexterity (independent variable) - financial performance (dependent variable) relationship was assessed using simple linear regression analysis. The output in Table 4.49 shows significant (R^2=0.117, F=12.729, p<0.05; β=0.342, t=3.568, p<0.05) influence of organizational ambidexterity on financial performance in step one. This implies that 11.70 percent change in financial performance is attributed to organizational ambidexterity (R^2=0.117), the rest (88.30 percentage) variation in performance is accounted for by variables outside the current study scope. Also, the significance of F-ratio (F=12,729, p<0.05) which is bigger than the F critical value of 3.94 is an indication of model robustness and goodness of fit and therefore useful in the data analysis for this study. Further, the results show significant organizational ambidexterity (independent variable) - financial performance (the dependent variable) relationship when organizational design (the mediating variable) is controlled. The first mediation condition is thus satisfied.

Step two in the path analysis involves regressing the mediating variable on the predictor variable. Simple linear regression analysis was used in the organizational ambidexterity - design relationship assessment. The outcome in Table 4.49 reveal a significant organizational ambidexterity - organizational design relationship (R^2=0.185, F=21.753, p<0.05: β=0.430, t=4.664, p<0.05). This means that 18.50 percentage of variation in organizational design is elucidated by organizational ambidexterity (R^2=0.185), the rest (81.50 percentage) of the change in organizational design is accounted for by variables outside the current study's scope. The F-ratio significance (F=21.753, p<0.05) which is

larger than the F-critical value of 3.94 is an indication of model goodness of fit and robustness, thus suitable for analysing the data for this study. The second condition in mediation requires significant independent - mediator variable relationship. The results in Table 4.49 revealed a significant organizational ambidexterity - organizational design relationship. The second requirement for mediation was satisfied. This enabled the process to move to step three of path analysis.

Step three of the path analysis calls for the mediating - dependent variable relationship assessment. In step three of this test, the mediating - dependent variable relationship was analysed using simple linear regression analysis. The regression output for the organizational design - financial performance relationship is shown in Table 4.49. The output reveals that the organizational design influence on the financial performance of Kenyan LMFs was significant (R^2=0.115, F=12.497, p<0.05; β=0.339, t=3.535, p<0.05). In terms of explanatory power, the results indicate an R^2 of 0.115, meaning that 11.50 percentage variation in financial performance is elucidated by organizational design, the rest (88.50 percentage) is accounted for by variables outside the current study's span. The F-ratio significance(F=12.497, p<0.05) which is bigger than the F-critical value of 3.94 is an indication that the regression model attained goodness of fit and robustness, thus suitable for analysing the data for this study. From these results, the third condition which requires that there should be a significant mediator - dependent variable relationship is satisfied. The findings in step three cleared the way for step four of path analysis.

Step four entails analysis of the independent - criterion variable association when the mediator variable is controlled. The effect of organizational ambidexterity and organizational design together on the financial performance of Kenyan LMFs was evaluated with multiple regression analysis. The findings in Table 4.49 reveal significant (R^2=0.162, F=9.213, p<0.05; β=0.241, t=2.315, p<0.05) organizational ambidexterity influence on financial performance in the presence of organizational design, whose effect was also significant (β=0.236, t=2.269, p<0.05). The R^2 = 0.162, which means that 16.20 percentage variance in financial performance is accounted for by organizational ambidexterity and organizational design together, while the rest (83.80 percentage) is accounted for by variables outside the current study's scope. The F-ratio is significant (F=9.213, p<0.05) and larger than the F critical value of 3.09. This implies the model's robustness and goodness of fit attainment and thus its suitability for analysing the data for this study.

Baron and Kenny (1986) categorized mediation test outcomes into full, partial or no mediation at all. For full mediation to be confirmed, in addition to the success in the first three steps, when the mediator variable is controlled in step four, the predictor variable effect on the criterion variable should be insignificant. In situations where the independent variable has a smaller regression coefficient when both the predictor variable and the mediator variable are used in the criterion variable prediction than when independent variable in step four is used, in addition to meeting the first three requirements as indicated in steps one to three, then partial mediation is established. Finally, if any of the conditions in steps one to four are not met, then there is no mediation taking place.

The output in table 4.49 signify success in the first three steps. Further the results indicate that organizational ambidexterity has a smaller regression coefficient of 0.241 when both organizational ambidexterity and organizational design are used to predict financial performance compared to that of 0.342 when organizational ambidexterity is used to predict financial performance. The output affords support that the organizational ambidexterity - financial performance relationship is partially mediated by organizational design. The null hypothesis is rejected, hence, the study's conclusion that organizational design has a mediating role in the influence of organizational ambidexterity on the financial performance of LMFs in Kenya.

4.10.10 Organizational Ambidexterity, Design and Customer Relationship Perspective

The study aimed to determine the role of organizational design in the organizational ambidexterity - customer perspective relationship of Kenyan LMFs. Hypothesis ($H0_{2b}$) that "Organizational design has no mediating role in the influence of organizational ambidexterity on the customer perspective of LMFs in Kenya" was formulated and tested to satisfy this objective. The four - step path analysis (Baron & Kenny, 1986) was applied to assess the mediation role. Simple linear regression analysis was applied in steps one to three, while step four applied multiple regression analysis. The outcomes are shown in Table 4.50.

Table 4.50:   Regression Results for the Mediation Role of Organizational Design in the Relationship between Organizational Ambidexterity and Customer Perspective

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.355[a]	.126	.117	.25241
2	.430[a]	.185	.176	.22611
3	.515[a]	.265	.257	.23145
4	.535[a]	.287	.272	.22919

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.880	1	.880	13.808	.000[b]
	Residual	6.116	96	.064		
	Total	6.996	97			
2	Regression	1.112	1	1.112	21.753	.000[b]
	Residual	4.908	96	.051		
	Total	6.020	97			
3	Regression	1.853	1	1.853	34.595	.000[b]
	Residual	5.143	96	.054		
	Total	6.996	97			
4	Regression	2.006	2	1.003	19.094	.000[b]
	Residual	4.990	95	.053		
	Total	6.996	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.441	.396		6.170	.000
	Organizational Ambidexterity	.384	.103	.355	3.716	.000
2	(Constant)	2.196	.354		6.197	.000
	Organizational Ambidexterity	.432	.093	.430	4.664	.000
3	(Constant)	1.775	.364		4.881	.000
	Organizational Design	.555	.094	.515	5.882	.000
4	(Constant)	1.389	.425		3.268	.002
	Organizational Ambidexterity	.177	.104	.164	1.705	.091
	Organizational Design	.479	.103	.444	4.630	.000

Model 1: Predictors (Constant), Organizational Ambidexterity: Dependent variable Customer Perspective.
Model 2: Predictors (Constant), Organizational Ambidexterity: Dependent variable Organizational Design.
Model 3: Predictors (Constant), Organizational Design: Dependent variable Customer Perspective.
Model 4: Predictors (Constant), Organizational Ambidexterity, Organizational Design: Dependent variable Customer Perspective.

Source: Research Data (2019)

Step one in the path analysis entails the testing of the criterion - independent variable relationship. In the current study, the organizational ambidexterity (independent variable) - customer perspective (dependent variable) relationship was assessed using simple linear regression analysis. The outcome of whether or not there is a significant independent - dependent variable relationship determines whether or not to proceed to step two. The results in Table 4.50 indicate that organizational ambidexterity influence on the customer perspective of Kenyan LMFs is significant (R^2=0.126, F=13.808, $p<0.05$; β=0.355, t=3.716, $p<0.05$). The results reveal that a 12.60 percent change in customer perspective is attributable to organizational ambidexterity (R^2=0.126), the rest (87.40 percentage) performance variation is accounted for by variables outside the current study. Also, F-ratio is significant (F=13.808, $p<0.05$) and bigger than the F-critical value of 3.94. This indicates the model's attainment of the desired robustness and fit and therefore suitability for this study's data analysis. Further, the results show support for the step one requirement of a significant independent - dependent variable relationship when the mediating variable is controlled.

Undertaking step two is justified by the outcome of step one analysis. Step two involves the regressing of the mediating variable (organizational design) on the independent variable (organizational ambidexterity). Simple linear regression analysis was applied in the organizational ambidexterity - design relationship examination. The output of step two as in Table 4.50 indicate significant (R^2=0.185, F=21.753, $p<0.05$; β=0.430, t=4.664, $p<0.05$) influence of organizational ambidexterity on organizational design. This implies that 18.50 percentage variation in organizational design is accounted for by

organizational ambidexterity (R^2 =0.185), while the rest (81.50 percent) of the change in organizational design is accounted for by variables outside the current study's scope. Also, the model's goodness of fit and robustness is ascertained, as indicated by the significance of F-value (F=21.753, p<0.05) which is larger than the F critical value of 3.94, thus implying regression model's suitability for analysing the data for this study. The second condition in mediation states that there should be a significant independent variable effect on the mediator variable. From the results, this condition is fulfilled. The fulfilment of the second condition enabled the analysis to proceed to step three of the path analysis.

Step three of the path analysis calls for the mediating - dependent variable relationship assessment. In step three of hypothesis two, the effect of organizational design on performance was analysed. The outcome in Table 4.50 reveal significant (R^2=0.265, F=34.595, p<0.05; β=0.515, t=5.882, p<0.05) influence of organizational design on customer perspective of Kenyan LMFs. The results indicate R^2 of 0.265, meaning that 26.50 percentage of change in customer perspective can be explained by organizational design, the rest (73.50 percent) is explained by variables outside the current study scope. Also, the significance of F-ratio (F=34.595, p<0.05) which is bigger than the F-critical value of 3.94 is an indication that the regression model attained robustness and goodness of fit and thus suitable for analysing the data for this study. The findings indicate a significant organizational design - organizational performance relationship, thus clearing the way to step four of the path analysis.

The fourth and final step of path analysis entails evaluation of the predictor - criterion variable relationship when the mediator variable effect on the criterion variable is controlled. Multiple regression analysis was applied in evaluating the organizational ambidexterity and organizational design combined effect on customer outcomes. The fourth step outcome in Table 4.50 revealed insignificant influence of organizational ambidexterity on customer perspective (R^2=0.287, F=19.094, p<0.05; β=0.164, t=1.705, p>0.05) in the presence of organizational design which was significant (β=0.444, t=4.630, p<0.05). Also, the significance of F-ratio (F=19.094, p<0.05) which is bigger than the F- critical value of 3.09 indicates the model attainment of robustness and goodness of fit and thus suitability for the analysing the data for this study.

Baron and Kenny (1986) classified mediation test outcomes as full mediation, partial or none at all. Accordingly when in addition to the success in the first three steps the explanatory variable effect on the criterion variable when the mediator variable is present in step four is insignificant, full mediation is established. However, where the independent variable has a smaller regression coefficient when both the predictor variable and the mediator variable are used in the criterion variable prediction than when independent variable in step four is used, in addition to meeting the first three requirements as indicated in steps one to three, the partial mediation is confirmed. Further, there is no mediation taking place if any of the conditions in steps one to four are not met.

The results in Table 4.50 indicate success in the first three steps. Further the results indicate that organizational ambidexterity has a smaller regression coefficient of 0.164 when both organizational ambidexterity and organizational design are used to predict customer perspective compared to that of 0.355 when organizational ambidexterity is used to predict customer perspective. The results provide evidence for the organizational design partial mediation in the organizational ambidexterity - customer perspective relationship, thus the null hypothesis is rejected. Therefore, the conclusion that organizational design has a mediating role in the organizational ambidexterity influence on the customer perspective of LMFs in Kenya.

4.10.11 Organizational Ambidexterity, Design and Internal Processes

The research meant to determine the role of organizational design in the organizational ambidexterity - internal processes relationship of LMFs in Kenya. The hypothesis ($H0_{2c}$) that organizational design has no mediating role in the influence of organizational ambidexterity on the internal processes of Kenyan LMFs was tested by applying the four-step path analysis. The output is in Table 4.51.

Table 4.51: Regression Output for the Mediation Role of Organizational Design in the Organizational Ambidexterity - Internal Processes Relationship

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.431[a]	.186	.178	.24753
2	.430[a]	.185	.176	.22611
3	.355[a]	.126	.117	.25655
4	.470[a]	.221	.205	.24340

ANOVA[a]						
Model	Sum of Squares	Df		Mean Square	F	Sig.
1	Regression	1.345	1	1.345	21.960	.000[b]
	Residual	5.882	96	.061		
	Total	7.227	97			
2	Regression	1.112	1	1.112	21.753	.000[b]
	Residual	4.908	96	.051		
	Total	6.020	97			
3	Regression	.909	1	.909	13.811	.000[b]
	Residual	6.318	96	.066		
	Total	7.227	97			
4	Regression	1.599	2	.800	13.497	.000[b]
	Residual	5.628	95	.059		
	Total	7.227	97			

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1	(Constant)	2.104	.388		5.422	.000
	Organizational Ambidexterity	.475	.101	.431	4.686	.000
2	(Constant)	2.196	.354		6.197	.000
	Organizational Ambidexterity	.432	.093	.430	4.664	.000
	(Constant)	2.424	.403		6.015	.000
	Organizational Design	.389	.105	.355	3.716	.000
4	(Constant)	1.604	.451		3.554	.001
	Organizational Ambidexterity	.377	.110	.342	3.413	.001
	Organizational Design	.227	.110	.208	2.070	.041

Model 1: Predictors (Constant), Organizational Ambidexterity: Dependent variable Internal Processes.
Model 2: Predictors (Constant), Organizational Ambidexterity: Dependent variable Organizational Design.
Model 3: Predictors (Constant), Organizational Design: Dependent variable Internal Processes.
Model 4: Predictors (Constant), Organizational Ambidexterity, Organizational Design: Dependent variable Internal Processes.

Source: Research Data(2019)

Step one in the path analysis requires the testing of the criterion - independent variable relationship. Proceeding to step two is dependent on whether or not there is a significant independent - dependent variable relationship. In the current study, simple linear regression analysis was applied in assessing the association between organizational ambidexterity (independent variable) and internal processes (dependent variable). As presented in Table 4.51, the organizational ambidexterity influence on internal processes in step one is significant (R^2=0.186, F=21.960, p<0.05; β=0.431, t=4.686, p<0.05). This means that 18.60 percentage change in internal processes can be attributed to organizational ambidexterity (R^2=0.186), the rest (81.40 percentage) of the change in internal processes is accounted for by variables outside the current study's scope. Also, F-ratio significance (F=21.960, p<0.05) which is larger than the F critical value of 3.94 indicates the model's robustness and goodness of fit, thus its study data analysis usefulness. The first mediation condition is satisfied with the significant independent variable (organizational ambidexterity) - the dependent variable (internal processes) relationship in the absence of the mediating variable (organizational design). Satisfaction of the first condition paves way for proceeding with step two in the path analysis.

In step two in the path analysis, the organizational ambidexterity - organizational design relationship was analyzed. Mediating variable (organizational design) is regressed on the explanatory variable (Organizational ambidexterity) using simple linear regression analysis. From the outcome in Table 4.40, there is a significant (R^2=0.185, F=21.753, p<0.05: β=0.430, t=4.664, p<0.05) organizational ambidexterity - organizational design relationship. The results show that 18.50 percentage organizational design variance can be accounted for by organizational ambidexterity (R^2=0.185), the rest (81.50 percentage)

of the change in organizational design is accounted for by variables outside the current study scope. The F-value is significant (F=21.753, p<0.05) and bigger than the F critical value of 3.94. This indicates the model's robustness and goodness of fit and thus was suitable for analysing this study's data. From the outcome in Table 4.51, the second condition of significant independent - mediating variable relationship has been satisfied.

Step three of the path analysis involves the evaluation of the mediating - dependent variable relationship. This is only allowed if the independent - mediating variable relationship in step two is significant, otherwise, the process terminates. The results in Table 4.51 demonstrate a significant organizational ambidexterity - organizational design relationship, therefore enabling the proceeding to step three of path analysis. In step three, the mediating - dependent variable relationship was analysed using simple linear regression analysis. The evaluation outcome of organizational design - internal processes relationship is presented in Table 4.51. The output revealed a significant (R^2=0.126, F=13.811, p<0.05; β=0.355, t=3.716, p<0.05) organizational design influence on internal processes. In terms of explanatory power, the results of R^2= 0.126, which implies that 12.60 percentage variation in internal processes can be explained by organizational design, the rest (87.40 percentage) is explained by variables outside the current study's scope. The significance of F-ratio (F=13.811, p<0.05) which is larger than the F- critical value of 3.94 is an indication that the regression model attained goodness of fit and thus suitable for analysing the data for this study. From these results, the third requirement of significant mediator - dependent variable relationship is satisfied.

The findings in step three cleared the way to enable pursuance of step four of path analysis. Step four entails evaluating the predictor - criterion variable relationship when the mediator variable effect on the criterion variable is controlled. Multiple regression analysis was applied in evaluating the effect of organizational ambidexterity and organizational design together on internal processes of Kenyan LMFs. The output as presented in Table 4.51 revealed significant (R^2=0.221, F=13.497, p<0.05; β=0.342, t=3.413, p<0.05) organizational ambidexterity influence on internal processes in the presence of organizational design, whose effect was also significant (β=0.208, t=2.070, p<0.05). The R^2 = 0.221, implying that 22.10 percentage variation in internal processes is explained by organizational ambidexterity and organizational design together, the rest (77.90 percent) is accounted for by variables outside the current study's scope. The F-ratio is significant (F=13.497, p<0.05) and bigger than the F critical value of 3.09. This indicates regression model's robustness and goodness of fit attainment and thus suitability for analysing the data for this study.

Mediation test outcomes are either, full mediation or partial or no mediation at all (Baron & Kenny, 1986). Accordingly, there is full mediation when, in addition to the success in the first three steps, the explanatory variable effect on the criterion variable when the mediator variable is present, in step four, is insignificant. On the other hand, where the independent variable has a smaller regression coefficient when both the predictor variable and the mediator variable are used in the criterion variable prediction than when independent variable in step four is used, in addition to meeting the first three requirements as indicated in steps one to three, the partial mediation is confirmed. Further, there is no mediation taking place if any of the conditions in steps one to four are not met.

The output in table 4.51 implies success in the first three steps. Further the results indicate that organizational ambidexterity has a smaller regression coefficient of 0.342 when both organizational ambidexterity and organizational design are used to predict internal processes compared to that of 0.431 when organizational ambidexterity is used to predict internal processes. The results provide evidence of organizational design partial mediation in the organizational ambidexterity - internal processes relationship. The null hypothesis is rejected, hence the conclusion that organizational design has a mediating role in the organizational ambidexterity influence on the internal processes of Kenyan LMFs.

4.10.12 Organizational Ambidexterity. Design and Learning and Growth Performance

The research aimed to determine the role of organizational design in the organizational ambidexterity - learning and growth performance relationship of LMFs in Kenya. To actualize this objective, the hypothesis ($H0_{2d}$) that: "Organizational design has no mediating role in the influence of organizational ambidexterity on the learning and growth performance of LMFs in Kenya". The mediation role was assessed by applying the four-step path analysis (Baron & Kenny, 1986). Simple linear regression analysis was applied in steps one to three, whereas step four applied multiple regression analysis. The outcome is in Table 4.52.

Table 4.52: Regression Outcome for the Mediation Role of Organizational Design in the Organizational Ambidexterity - Learning and Growth Performance Relationship

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.351a	.123	.114	.27055
2	.430[a]	.185	.176	.22611
3	.327[a]	.107	.098	.27307
4	.402[a]	.162	.144	.26599

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.990	1	.990	13.526	.000[b]
	Residual	7.027	96	.073		
	Total	8.017	97			
2	Regression	1.112	1	1.112	21.753	.000[b]
	Residual	4.908	96	.051		
	Total	6.020	97			
3	Regression	.859	1	.859	11.514	.001[b]
	Residual	7.158	96	.075		
	Total	8.017	97			
4	Regression	1.295	2	.648	9.154	.000[b]
	Residual	6.722	95	.071		
	Total	8.017	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.272	.424		5.357	.000
	Organizational Ambidexterity	.407	.111	.351	3.678	.000
2	(Constant)	2.196	.354		6.197	.000
	Organizational Ambidexterity	.432	.093	.430	4.664	.000
3	(Constant)	2.376	.429		5.539	.000
	Organizational Design	.378	.111	.327	3.393	.001
4	(Constant)	1.724	.493		3.495	.001
	Organizational Ambidexterity	.300	.121	.259	2.485	.015
	Organizational Design	.249	.120	.216	2.077	.040

Model 1: Predictors (Constant), Organizational Ambidexterity: Dependent variable Learning and Growth Performance.

Model 2: Predictors (Constant), Organizational Ambidexterity: Dependent variable Organizational Design.

Model 3: Predictors (Constant), Organizational Design: Dependent variable Learning and Growth Performance.

Model 4: Predictors (Constant), Organizational Ambidexterity, Organizational Design: Dependent variable Learning and Growth Performance.

Source: Research Data (2019)

Step one in the path analysis requires the testing of the criterion - predictor variable relationship. Proceeding to step two is dependent on whether or not there is a significant predictor - dependent variable relationship. In the current study, the organizational ambidexterity (predictor variable) and learning and growth performance (dependent variable) relationship was assessed using simple linear regression analysis. The outcome in Table 4.52 implies that organizational ambidexterity influence on learning and growth performance of Kenyan LMFs is significant (R^2=0.123, F=13.526, p<0.05; β=0.351, t=3.678, p<0.05). This denotes that a 12.30 percentage learning and growth performance variation is attributable to organizational ambidexterity (R^2=0.123), the rest (87.70 percentage) variation in performance is accounted for by variables outside the current study's scope. Further, the F-value is significant (F=13.526, p<0.05) and larger than the F critical value of 3.94 which is an indication of the model's attainment of the desired robustness and fit and therefore suitability for this study's data analysis. The results also show support for the first mediation requirement that there should be a significant predictor variable - dependent variable relationship when the mediating variable is not present.

The outcome of step one justified pursuance of step two of the path analysis. Step two in the path analysis entails mediator (Organizational design) regression on the predictor variable (Organizational ambidexterity). Simple linear regression analysis was applied in the organizational ambidexterity - organizational design relationship evaluation. The outcome of step two in Table 4.52 indicates significant (R^2=0.185, F=21.753, p<0.05; β=0.430, t=4.664, p<0.05) influence of organizational ambidexterity on organizational design. This implies that 18.50 percentage organizational design variation can be

accounted for by organizational ambidexterity (R^2=0.185), the rest (81.50 percentage) change in organizational design is accounted for by variables outside this study's scope. Also, the F-value significance (F=21.753, p<0.05) which is bigger than the F critical value of 3.94 indicates the model goodness of fit and robustness, thus its suitability for analysing the data for this study. The second mediation requirement is that there should be significant predictor - mediator variable relationship. From the results, this condition is fulfilled.

Step three of the path analysis calls for an evaluation of the mediating - dependent variable relationship. This is only allowed if the predictor - mediating variable relationship in step two is significant, otherwise, the process terminates. The results in Table 4.52 demonstrate a significant organizational ambidexterity - organizational design relationship, therefore enabling the proceeding to step three of path analysis. In step three, the mediating - dependent variable relationship was analysed. The results of the evaluation of organizational design - learning and growth performance relationship are presented in Table 4.52. The outcome of step three as presented in Table 4.52 revealed significant (R^2=0.107, F=11.514, p<0.05; β=0.327, t=3.393, p<0.05) influence of organizational design on learning and growth performance of Kenyan LMFs. The results of R^2=0.107, means that 10.70 percentage of change in learning and growth performance can be accounted for by organizational design, the rest (89.30 percentage) is explained by variables outside the current study's scope. Also, the F-ratio significance (F=11.514, p<0.05) and which is larger than the F critical value of 3.94 indicates the regression model's attainment of goodness of fit and robustness, thus suitability for this study's data analysis.

Step three outcome determines the pursuance of the fourth and final step of path analysis. The results of step three indicate a significant organizational design - learning and growth performance relationship. The findings cleared the way to enable pursuance of step four of path analysis. Step four entails assessment of the predictor - criterion variable relationship when the mediator variable effect on the criterion variable is controlled. Multiple regression analysis was applied in assessing the organizational ambidexterity and organizational design combined effect on learning and growth performance. The fourth step as presented in Table 4.52 revealed significant (R^2=0.162, F=9.154, p<0.05; β=0.259, t=2.485, p<0.05) influence of organizational ambidexterity on learning and growth in the presence of organizational design which was significant (β=0.216, t=2.077, p<0.05). The F-ratio is significant (F=9.154, p<0.05) and bigger than the F critical value of 3.09. This indicates regression model's robustness and goodness of fit attainment and thus suitability for analysing the data for this study.

Mediation test outcomes are either, full mediation or partial or no mediation at all (Baron & Kenny, 1986). Accordingly, when, in addition to the success in the first three steps, the explanatory variable effect on the criterion variable when the mediator variable is present in step four is insignificant, full mediation is taking place. On the other hand, where the independent variable has a smaller regression coefficient when both the predictor variable and the mediator variable are used in the criterion variable prediction than when independent variable in step four is used, in addition to meeting the first three requirements as indicated in steps one to three, the partial mediation is confirmed. Further, there is no mediation taking place if any of the conditions in steps one to four are not met.

The results in table 4.52 indicate success in the first three steps. Further the results indicate that organizational ambidexterity has a smaller regression coefficient of 0.259 when both organizational ambidexterity and organizational design are used to predict learning and growth performance compared to that of 0.351 when organizational ambidexterity is used to predict learning and growth performance. The results provide evidence that the organizational ambidexterity - learning and growth performance relationship is partially mediated by organizational design. The null hypothesis is rejected, hence the conclusion that organizational design has a mediating role in the organizational ambidexterity influence on the learning and growth performance of Kenyan LMFs.

4.10.13 Organizational Ambidexterity, Design and Societal Performance

The research aimed to determine the role of organizational design in the organizational ambidexterity - societal performance relationship of LMFs in Kenya. This was actualized by formulating and testing the hypotheses ($H0_{2e}$) that: "Organizational design has no mediating role in the influence of organizational ambidexterity on the societal performance of LMFs in Kenya". The mediation role was assessed by applying the four-step path analysis (Baron & Kenny, 1986). Simple linear regression analysis was applied in steps one to three, whereas step four applied multiple regression analysis. The outcome is shown in Table 4.53.

Table 4.53: Regression Results for the Mediation Role of Organizational Design in the Organizational Ambidexterity - Societal Performance Relationship

Model Summary						
Model	R	R Square	Adjusted R Square			Std. Error of the Estimate
1	.347[a]	.120	.111			.37372
2	.430[a]	.185	.176			.22611
3	.282[a]	.079	.070			.38235
4	.377[a]	.142	.124			.37106

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.835	1	1.835	13.139	.000[b]
	Residual	13.408	96	.140		
	Total	15.243	97			
2	Regression	1.112	1	1.112	21.753	.000[b]
	Residual	4.908	96	.051		
	Total	6.020	97			
3	Regression	1.209	1	1.209	8.268	.005[b]
	Residual	14.034	96	.146		
	Total	15.243	97			
4	Regression	2.163	2	1.082	7.855	.001[b]
	Residual	13.080	95	.138		
	Total	15.243	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.797	.586		3.068	.003
	Organizational Ambidexterity	.554	.153	.347	3.625	.000
2	(Constant)	2.196	.354		6.197	.000
	Organizational Ambidexterity	.432	.093	.430	4.664	.000
3	(Constant)	2.193	.601		3.651	.000
	Organizational Design	.448	.156	.282	2.875	.005
4	(Constant)	1.229	.688		1.786	.077
	Organizational Ambidexterity	.443	.168	.277	2.633	.010
	Organizational Design	.259	.167	.162	1.544	.126

Model 1: Predictors (Constant), Organizational Ambidexterity: Dependent variable Societal Performance.
Model 2: Predictors (Constant), Organizational Ambidexterity: Dependent variable Organizational Design.
Model 3: Predictors (Constant), Organizational Design: Dependent variable Societal Performance.
Model 4: Predictors (Constant), Organizational Ambidexterity, Organizational Design: Dependent variable Societal Performance.

Source: Research Data (2019)

Step one in the path analysis requires the testing of the criterion - predictor variable relationship. Proceeding to step two is dependent on whether or not there is a significant predictor - dependent variable relationship. In the current study, the organizational ambidexterity (predictor variable) and societal performance (dependent variable) relationship was assessed using simple linear regression analysis. The outcome in Table 4.53 indicates significant (R^2=0.120, F=13.139, p<0.05; β=0.347, t=3.625, p<0.05) organizational ambidexterity influence on societal performance of Kenyan LMFs in step one. The results show that a 12.00 percent change in societal performance can be accounted for by organizational ambidexterity (R^2=0.120), the rest (88.00 percentage) variation in societal performance is accounted for by variables outside the current study's scope. Further, the F-value is significant (F=13.139, p<0.05) and larger than the F critical value of 3.94 which is an indication of the model's attainment of the desired robustness and fit and therefore suitability for this study's data analysis. The results also show support for the first mediation requirement that there should be a significant predictor - criterion variable relationship when the mediating variable is absent.

The outcome of step one justified pursuance of step two of the path analysis. Step two in the path analysis involves regression of the mediator (Organizational design) on the predictor variable (Organizational ambidexterity). Simple linear regression analysis was applied in the organizational ambidexterity - organizational design relationship assessment. The outcome of step 2 as presented in Table 4.53 indicate significant (R^2=0.185, F=21.753, p<0.05; β=0.430, t=4.664, p<0.05) organizational ambidexterity influence on organizational design. This implies that 18.50 percentage variation in organizational design can be accounted for by organizational ambidexterity (R^2=0.185),

the rest (81.50 percentage) variation in organizational design is accounted for by variables outside the present study's span. Further, the F-value (F=21.753, p<0.05) significance and bigger than the F critical value of 3.94 indicates the model goodness of fit and robustness, thus suitability for analysing the data for this study. The second mediation requirement is that there should be significant predictor - mediator variable relationship. From the results, this condition is fulfilled.

Step three of the path analysis calls for the evaluation of the mediating - criterion variable relationship. This is only allowed if the predictor - mediator variable relationship in step two is significant, otherwise, the process terminates. The results in Table 4.53 demonstrate a significant organizational ambidexterity - organizational design relationship, therefore enabling the proceeding to step three of path analysis. In step three, the mediating - dependent variable relationship was analysed. The results of the evaluation of organizational design - societal performance relationship are presented in Table 4.53. The results of step three as presented in Table 4.53 revealed significant (R^2=0.079, F=8.268, p<0.05; β=0.252, t=2.875, p<0.05) organizational design influence on societal performance of Kenyan LMFs. In terms of explanatory power, the results indicate an R^2 of 0.079, meaning that 7.90 percentage of change in societal performance can be accounted for by organizational design, the rest (92.10 percentage) is explained by variables outside the current study's scope. Further, the significance of F-ratio(F=8.268, p<0.05) and which is larger than the F critical value of 3.94 is an indication that the regression model attained goodness of fit and thus suitable for analysing the data for this study.

The outcome of step three determines the pursuance of the fourth and final step of path analysis. The results of step three indicate a significant organizational design - societal performance relationship. The findings cleared the way to enable pursuance of step four of path analysis. Step four entails analysis of the predictor - dependent variable relationship when mediator variable effect on the criterion variable is controlled. The joint effect of organizational ambidexterity and organizational design on societal performance was evaluated using multiple regression analysis. Step four as presented in Table 4.53 revealed that the organizational ambidexterity influence on societal performance was significant (R^2=0.142, F=7.855, p<0.05; β=0.277, t=2.633, p<0.05) when organizational design is present which was insignificant (β=0.162, t=1.544, p>0.05). The F-ratio is significant (F=7.855, p<0.05) and bigger than the F critical value of 3.09. This indicates regression model's robustness and goodness of fit attainment and thus suitability for analysing the data for this study.

Full mediation, partial or none at all are the mediation (Baron & Kenny, 1986). Full mediation is confirmed where the predictor variable influence on the criterion variable in the presence of the mediating variable in step four is insignificant, in addition to the success in the first three steps. Where the independent variable has a smaller regression coefficient when both the predictor variable and the mediator variable are used in the criterion variable prediction than when predictor variable in step four is used, in addition to meeting the first three requirements as indicated in steps one to three, partial mediation is confirmed. Further, in cases of failure to meet any of the conditions in steps one to four, no mediation is taking place.

The outcome in Table 4.53 indicates success in the first three steps. Further the results indicate that organizational ambidexterity has a smaller regression coefficient of 0.277 when both organizational ambidexterity and organizational design are used to predict societal performance compared to that of 0.347 when organizational ambidexterity is used to predict societal performance. The results provide evidence that the organizational ambidexterity - societal performance association is partially mediated by organizational design. The null hypothesis is rejected. The study concludes that organizational design has a mediating role in the organizational ambidexterity influence on the societal performance of Kenyan LMFs.

4.10.14 Organizational Ambidexterity, Design and Environmental Performance

The study meant to determine the role of organizational design in the organizational ambidexterity - environmental performance relationship of LMFs in Kenya. This was actualized by formulating and testing the hypotheses ($H0_{2f}$) that: Organizational design has no mediating role in the influence of organizational ambidexterity on the environmental performance of Kenyan LMFs. The mediation role was assessed by applying the four-step path analysis (Baron & Kenny, 1986). Simple linear regression analysis was applied in steps one to three, while step four applied multiple regression analysis. The output is shown in Table 4.54.

Table 4.54: Regression Output for the Mediation Role of Organizational Design in Organizational Ambidexterity - Environmental Performance Relationship

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.353[a]	.125	.115	.35077
2	.430[a]	.185	.176	.22611
3	.353[a]	.125	.115	.35077
4	.399[a]	.159	.142	.34556

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.681	1	1.681	13.663	.000[b]
	Residual	11.812	96	.123		
	Total	13.493	97			
2	Regression	1.112	1	1.112	21.753	.000[b]
	Residual	4.908	96	.051		
	Total	6.020	97			
3	Regression	1.681	1	1.681	13.663	.000[b]
	Residual	11.812	96	.123		
	Total	13.493	97			
4	Regression	2.149	2	1.075	8.999	.000[b]
	Residual	11.344	95	.119		
	Total	13.493	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.802	.551		3.271	.001
	Organizational Ambidexterity	.528	.143	.353	3.696	.000
2	(Constant)	2.196	.354		6.197	.000
	Organizational Ambidexterity	.432	.093	.430	4.664	.000
3	(Constant)	1.802	.551		3.271	.001
	Organizational Design	.528	.143	.353	3.696	.000
4	(Constant)	1.127	.641		1.759	.082
	Organizational Ambidexterity	.310	.157	.206	1.980	.051
	Organizational Design	.396	.156	.264	2.537	.013

Model 1: Predictors (Constant), Organizational Ambidexterity: Dependent variable Environmental Performance.
Model 2: Predictors (Constant), Organizational Ambidexterity: Dependent variable Organizational Design.
Model 3: Predictors (Constant), Organizational Design: Dependent variable Environmental Performance.
Model 4: Predictors (Constant), Organizational Ambidexterity, Organizational Design: Dependent variable Environmental Performance.

Source: Research Data (2019)

Step one in the path analysis requires the testing of the dependent - predictor variable relationship. Proceeding to step two is dependent on whether or not there is a significant predictor - criterion variable relationship. In the current study, the organizational ambidexterity (predictor variable) - environmental performance (dependent variable) relationship was assessed using simple linear regression analysis. The output in Table 4.54 indicates significant (R^2=0.125, F=13.663, p<0.05; β=0.353, t=3.696, p<0.05) organizational ambidexterity influence on environmental performance of Kenyan LMFs. The outcome shows that a 12.50 percent change in environmental performance is attributable to organizational ambidexterity (R^2=0.125), the rest (87.50 percentage) in performance variation is accounted for by variables outside the current study's scope. Further, the F-value of 13.663 is larger than the F critical value of 3.94 and significant at p<0.05) which signifies the model's attainment of the desired robustness and fit and therefore suitability for this study's data analysis. The results also support the first mediation requirement of a significant predictor - criterion variable relationship when the mediating variable is not present.

The outcome of step one justified pursuance of step two of the path analysis. Step two in the path analysis involves the mediator (Organizational design) regression on the predictor variable (Organizational ambidexterity). Simple linear regression analysis was applied in the organizational ambidexterity - organizational design relationship evaluation. The outputs of step two in Table 4.54 indicates significant (R^2=0.185, F=21.753, p<0.05; β=0.430, t=4.664, p<0.05) influence of organizational ambidexterity on organizational design. This implies that 18.50 percentage variation in organizational design can be accounted for by organizational ambidexterity (R^2=0.185), the rest (81.50

percentage) change in organizational design is accounted for by variables outside the current study. Further, the F-value (F=21.753, p<0.05) significance and which is larger than the F critical value of 3.94 indicates the model goodness of fit and robustness, thus its suitability for analysing the data for this study. The second mediation requirement is that there should be significant predictor - mediator variable relationship. From the results, this condition is fulfilled.

Step three of the path analysis calls for an evaluation of the mediator - dependent variable relationship. This is only allowed if the predictor - mediator variable relationship in step two is significant, otherwise, the process terminates. The results in Table 4.54 demonstrate a significant organizational ambidexterity - organizational design relationship, therefore enabling the proceeding to step three of path analysis. In step three, the mediator - dependent variable relationship was analysed. The results of the evaluation of organizational design - environmental performance relationship are presented in Table 4.54. The results of step three as presented in Table 4.54 revealed significant (R^2=0.125, F=3.663, p<0.05; β=0.353, t=3.696, p<0.05) organizational design influence on environmental performance of Kenyan LMFs. In terms of explanatory power, the results indicate an R^2 of 0.125, meaning that 12.5 percent percentage of change in environmental performance is explained by organizational design, the rest (87.50 percent) is explained by variables outside the current study's scope. Further, the significance of F-ratio is an indication that the regression model attained goodness of fit and thus suitable for analysing the data for this study (F=13.663, p<0.05 and bigger than the F critical value of 3.94).

The outcome of step three determines the pursuance of the fourth and final step of path analysis. The results of step three indicate a significant organizational design - environmental performance relationship. The findings cleared the way to enable pursuance of step four of path analysis. Step four entails analysis of the predictor - dependent variable relationship when the mediator variable effect on the criterion variable is controlled. Evaluation of the joint effect of organizational ambidexterity and organizational design on environmental performance was done using multiple regression analysis. Step four as presented in Table 4.54 disclosed insignificant (R^2=0.159, F=8.999, p<0.05; β=0.206, t=1.980, p>0.05) organizational ambidexterity influence on environmental performance in the presence of organizational design which was significant (β=0.264, t=2.537, p<0.05). The F-ratio is significant (F=8.999, p<0.05) and larger than the F critical value of 3.09. This indicates regression model's robustness and goodness of fit attainment and thus suitability for analysing the data for this study.

Full mediation, partial or none at all, are the mediation test outcomes (Baron & Kenny, 1986). Full mediation is confirmed where the explanatory variable effect on the criterion variable when the mediator variable is present in step four is insignificant, in addition to the success in the first three steps. Where the independent variable has a smaller regression coefficient when both the predictor variable and the mediator variable are used in the criterion variable prediction than when independent variable in step four, in addition to meeting the first three requirements as indicated in steps one to three, partial mediation is confirmed. Further, in cases of failure to meet any of the conditions in steps one to four, no mediation is taking place.

The results in Table 4.54 indicate success in the first three steps. Further the results indicate that organizational ambidexterity has a smaller regression coefficient of 0.206 when both organizational ambidexterity and organizational design are used to predict environmental performance compared to that of 0.353 when organizational ambidexterity is used to predict environmental performance. The results provide evidence that organizational ambidexterity - environmental performance relationship is partially mediated by organizational design. The null hypothesis is rejected. Hence, the conclusion that organizational design has mediating role in the organizational ambidexterity influence on the environmental performance of Kenyan LMFs.

4.10.15 Organizational Ambidexterity, Environmental Dynamism and Performance

In objective three, the research aimed to assess the environmental dynamism effect on the organizational ambidexterity - organizational performance association. A corresponding hypothesis was formulated and tested. The hypotheses ($H0_3$) is: "Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the performance of Kenyan LMFs". Step - wise (3-step) regression analysis was applied in the hypothesis testing. The first step entailed testing the organizational ambidexterity influence on organizational performance. Step two involved testing the combined effect of organizational ambidexterity (predictor variable) and moderating variable (environmental dynamism) on the criterion variable (organizational performance). An interaction variable was introduced and its significance on criterion variable (organizational performance) tested, in step three.

The interaction term is computed as the product of standardized values for explanatory variable (organizational ambidexterity) and moderating variable (environmental dynamism). The tests were done both on performance measured as a composite of the SBSC perspectives and based on the individual SBSC performance indicators. The results are presented and discussed in sub-sections 4.10.15 to 4.10.21. The findings based on performance measured as a composite of the SBSC indicators are in Table 4.55.

Table 4.55: Regression Results for the Moderating Effect of Environmental Dynamism in Organizational Ambidexterity and Performance Relationship

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.589[a]	.347	.341	.16877
2	.589[a]	.347	.334	.16965
3	.592[a]	.351	.330	.17014

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.455	1	1.455	51.100	.000[b]
	Residual	2.734	96	.028		
	Total	4.190	97			
2	Regression	1.455	2	.728	25.284	.000[b]
	Residual	2.734	95	.029		
	Total	4.190	97			
3	Regression	1.469	3	.490	16.910	.000[b]
	Residual	2.721	94	.029		
	Total	4.190	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.994	.265		7.537	.000
	Organizational Ambidexterity	.494	.069	.589	7.148	.000
2	(Constant)	1.993	.396		5.038	.000
	Organizational Ambidexterity	.494	.070	.589	7.071	.000
	Environmental Dynamism	.000	.070	.000	.002	.999
3	(Constant)	4.817	4.213		1.143	.256
	Organizational Ambidexterity	-.231	1.079	-.276	-.214	.831
	Environmental Dynamism	-.753	1.121	-.897	-.672	.503
	Organizational Ambidexterity, Environmental Dynamism Interaction	.193	.287	1.180	.673	.503

Model 1: Predictors (Constant), Organizational Ambidexterity.
Model 2: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism.
Model 3: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism and Interaction term.
Criterion Variable: Organizational Performance.

Source: Research Data (2019)

In step one organizational ambidexterity was regressed on organizational performance. The outcome in Table 4.55 indicates R^2 of 0.347, meaning that 34.70 per cent of organizational performance is explained by organizational ambidexterity, the rest (65.30 percentage) is accounted for variables not in the current study's scope. The F-value (F= 51.100) significance ($p < 0.05$) and larger than the F critical value of 3.94 indicates the model attainment of the desired robustness and fit, therefore suitability for use in the data analysis for this study. Further, the beta coefficient was statistically significant ($\beta=0.589$, $t=7.148$, $p<0.05$) and therefore the model's predictive power significance. The results of step one are significant.

The step two in evaluating the moderating effect involves entry of the moderating variable in the regression. The results of entering environmental dynamism in the regression model are shown in Table 4.55. When the moderator variable was introduced in step two, there was no significant improvement in the organizational ambidexterity influence on organizational performance which remained the same $R^2=0.347$ meaning that 34.70 per cent of organizational performance is explained by organizational ambidexterity and environmental dynamism together, the rest (65.30 per cent) is accounted for by variables outside the current study's scope. Also the general model was statistically significant ($F=25.284$, $p<0.05$) and bigger than the F critical value of 3.09. The variation in F-value from 51.100 to 25.284 with the introduction of environmental dynamism (moderator variable) was significant. Equally, the beta coefficients were statistically significant ($\beta=0.589$, $t=7.071$, $p<0.05$) for organizational ambidexterity effect with the introduction of environmental dynamism whose effect was insignificant ($\beta=0.000$, $t=0.002$, $p>0.05$).

The third and final step of the moderation effect testing entails the interaction term entry in the regression model. The product of organizational ambidexterity and environmental dynamism (organizational ambidexterity * environmental dynamism) is the interaction term. All the variables (independent variable, moderating and the interaction term) are entered into the regression model, one after the other. Multiple regression analysis was used in the interaction outcome evaluation. Table 4.55 presents the output of entering the interaction term in the regression model. The step three general model outcome shows statistically significant (F=16.910, p<0.05 and larger than the F critical value of 2.70) interaction, an indication of the models robustness and fit, therefore usefulness in the analysis of data for this study.

The results revealed a minimal R^2 improvement of 0.004(that is from R^2=0.347 in step two to R^2 =0.351 in step three). The minimal R^2 change of 0.40 per cent implies that there was no significant influence on organizational performance (dependent variable) from the organizational ambidexterity (independent variable) interaction with environmental dynamism (moderating variable). The beta coefficients revealed no improvement. The results indicate (β=0.589, t=7.071, p>0.05) before introduction of the interaction term to (β=-0.276, t=-0.214, p>0.05) with the interaction term insertion in the regression model. The outcome, therefore, did not provide adequate evidence to justify the null hypothesis rejection. Hence, the study failed to reject the null hypothesis and concludes that environmental dynamism has no significant moderating effect on the organizational ambidexterity influence on the performance of Kenyan LMFs.

Organizational performance was operationalized and measured using SBSC approach. Accordingly, the moderation tests were also conducted for the individual SBSC perspectives; namely financial, customer satisfaction, organizational processes, human factor, societal and environmental performance. The findings are presented and discussed in sub-sections 4.10.16 to 4.10.21.

4.10.16 Organizational Ambidexterity, Environmental Dynamism and Financial Performance

The study aimed to assess the environmental dynamism effect on the organizational ambidexterity - financial performance association. A corresponding hypothesis ($H0_{3a}$) was formulated that: environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the financial performance of LMFs in Kenya. Step-wise (3-step) regression analysis was applied in the hypothesis testing. Step one entailed analysing the organizational ambidexterity influence on financial performance. Step two involved analysing the effect of organizational ambidexterity (predictor variable) and moderator variable (environmental dynamism) together on the dependent variable (financial performance). An interaction variable was introduced and tested for its significance on dependent variable (financial performance), in step three. The interaction term is calculated as the product of standardized values for independent variable (organizational ambidexterity) and moderator variable (environmental dynamism). The findings are in Table 4.56.

Table 4.56: Regression Output for the Moderating Effect of Environmental Dynamism in the Organizational Ambidexterity and Financial Performance Relationship

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.342[a]	.117	.108	.34619
2	.348[a]	.121	.103	.34722
3	.366[a]	.134	.106	.34654

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.526	1	1.526	12.729	.001[b]
	Residual	11.506	96	.120		
	Total	13.031	97			
2	Regression	1.578	2	.789	6.542	.002[b]
	Residual	11.454	95	.121		
	Total	13.031	97			
3	Regression	1.743	3	.581	4.837	.004[b]
	Residual	11.288	94	.120		
	Total	13.031	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.979	.543		3.647	.000
	Organizational Ambidexterity	.505	.142	.342	3.568	.001
2	(Constant)	1.585	.810		1.957	.053
	Organizational Ambidexterity	.515	.143	.349	3.607	.000
	Environmental Dynamism	.094	.143	.064	.657	.513
3	(Constant)	11.604	8.581		1.352	.179
	Organizational Ambidexterity	-2.057	2.198	-1.393	-.936	.352
	Environmental Dynamism	-2.579	2.283	-1.742	-1.129	.262
	Organizational Ambidexterity, Environmental Dynamism Interaction	.687	.585	2.374	1.173	.244

Model 1: Predictors (Constant), Organizational Ambidexterity.
Model 2: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism.
Model 3: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism and Interaction term.
Criterion Variable: Financial Performance.

Source: Research Data (2019)

In step one, simple linear regression was applied in regressing organizational ambidexterity on financial performance. The outcome in Table 4.56 indicates $R^2= 0.117$. This means that 11.70 per cent of financial performance is explained by organizational ambidexterity, the rest (88.30 per cent) is accounted for by variables outside the current study's scope. The F-ratio significance (F=12.729, p<0.05) and which is larger than the F critical value of 3.94 indicates the model's attainment of the desired robustness and goodness fit, therefore suitability for use in the data analysis for this study. Further, the beta coefficient was statistically significant (β=0.342, t=3.568, p<0.05) and thus the significance of the model predictive power. The results of step one are significant.

The step two involves the evaluation of the moderating effect. In step two, the moderating variable is entered in the regression. The results of entering environmental dynamism in the regression model are shown in Table 4.56. When the moderator variable was introduced in step two, minimal improvement of 0.40 per cent in the organizational ambidexterity influence on financial performance was reported. The influence improved from R^2=0.117 to R^2=0.121, meaning that 12.10 per cent of financial performance is explained by organizational ambidexterity and environmental dynamism together, the rest (87.90 per cent) is accounted for by variables outside the current study's scope. Also the overall model was statistically significant (F=6.542, p<0.05) and bigger than the F critical value of 3.09. Also, there is significant variation in F-value from 12.729 to 6.542 with the introduction of environmental dynamism (moderator variable). Further, the beta coefficients were statistically significant (β=0.349, t=3.607, p<0.05) for organizational ambidexterity effect with the introduction of environmental dynamism whose effect was insignificant (β=0.064, t=0.657, p>0.05).

The interaction term is added in the regression model in third and final step in testing for moderation effect. The product of organizational ambidexterity and environmental dynamism (organizational ambidexterity * environmental dynamism) gives the interaction term. All the variables (predictor variable, moderating and the interaction term) are sequentially added in the regression model. Evaluation of the interaction outcome was achieved using multiple regression analysis. The outcome in entering the interaction term in the regression model is presented in Table 4.56. Step three overall model indicates that the interaction was statistically significant (F=4.837, p<0.05 and larger than the F critical value of 2.70), an indication of the model's robustness and fit, therefore usefulness in this study's data analysis.

The results revealed an improvement of $R^2 = 0.013$ (that is from R^2=0.121 in step two to R^2 =0.134 in step three). The minimal R^2 change of 1.30 per cent implies insignificant financial performance (dependent variable) influence from the organizational ambidexterity (independent variable) - environmental dynamism (moderating variable) interaction. The beta coefficients revealed minimal improvement. The results indicate (β=0.349, t=3.607, p>0.05) before introduction of the interaction term to (β= -1.393, t = -0.936, p>0.05) with the interaction term inclusion in the regression model. There lacks adequate evidence to justify rejection of the null hypothesis. Thus, the study failed to reject the null hypothesis, hence the conclusion that environmental dynamism has no significant moderating effect on the organizational ambidexterity influence on the financial performance of Kenyan LMFs.

4.10.17 Organizational Ambidexterity, Environmental Dynamism and Customer Perspective

The objective of the research meant to assess the environmental dynamism effect on the organizational ambidexterity - customer perspective relationship. A corresponding hypothesis (H0$_{3b}$) stated in the null form was formulated and tested that, "environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the customer perspective of LMFs in Kenya". Step-wise (3-step) regression analysis was applied in testing the hypothesis. The organizational ambidexterity influence on customer perspective of LMFs in Kenya was tested in the first step. Step two involved evaluating the effect of organizational ambidexterity (independent variable) and moderator variable (environmental dynamism) together on the dependent variable (customer perspective). An interaction variable was added and its significance on the criterion variable (customer perspective) tested, in step three. The interaction term is computed as the product of standardized values for the explanatory variable (organizational ambidexterity) and moderating variable (environmental dynamism). Table 4.57 shows the outcome.

Table 4.57: Regression Outcome for the Moderating Effect of Environmental Dynamism in the Organizational Ambidexterity and Customer Perspective Relationship of LMFs in Kenya

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.355[a]	.126	.117	.25241
2	.355[a]	.126	.107	.25373
3	.363[a]	.132	.104	.25416

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.880	1	.880	13.808	.000[b]
	Residual	6.116	96	.064		
	Total	6.996	97			
2	Regression	.880	2	.440	6.833	.002[b]
	Residual	6.116	95	.064		
	Total	6.996	97			
3	Regression	.924	3	.308	4.766	.004[b]
	Residual	6.072	94	.065		
	Total	6.996	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.441	.396		6.170	.000
	Organizational Ambidexterity	.384	.103	.355	3.716	.000
2	(Constant)	2.424	.592		4.097	.000
	Organizational Ambidexterity	.384	.104	.355	3.680	.000
	Environmental Dynamism	.004	.105	.004	.039	.969
3	(Constant)	7.587	6.293		1.206	.231
	Organizational Ambidexterity	-.941	1.612	-.870	-.584	.561
	Environmental Dynamism	-1.373	1.675	-1.266	-.820	.414
	Organizational Ambidexterity, Environmental Dynamism Interaction	.354	.429	1.670	.824	.412

Model 1: Predictors (Constant), Organizational Ambidexterity.
Model 2: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism.
Model 3: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism, and Interaction term.
Criterion Variable: Customer Perspective.

Source: Research Data (2019)

In step one organizational ambidexterity was regressed on customer perspective. The output in Table 4.57 indicate R^2 of 0.126, meaning that 12.60 percent of customer perspective is explained by organizational ambidexterity, the rest (87.40 percent) is elucidated by variables outside the current study's scope. The F-value of 13.808 is larger

than the F critical value of 3.94 and significant with $p<0.05$, an indication of the model's attainment of the desired robustness and goodness of fit, therefore suitability for use in the data analysis for this study. Further, the beta coefficient was statistically significant ($\beta=0.355$, $t=3.716$, $p<0.05$) and therefore the significance of the model predictive power. The results of step one are significant.

The moderating effect was undertaken in step two and involves entry of the moderating variable in the regression. The results of entering environmental dynamism (moderating variable) in the regression model are shown in Table 4.57. When the moderator variable was introduced in step two, there was no improvement in the influence of organizational ambidexterity on customer perspective which remained the same $R^2=0.126$. This means that 12.60 percent of customer perspective is explained by organizational ambidexterity and environmental dynamism together, the rest (87.40 percent) is accounted for by variables outside the current study's scope. Also, the general model was statistically significant ($F=6.833$, $p<0.05$) and bigger than the F critical value of 3.09. The variation in F-value from 6.833 to 4.766 with the introduction of environmental dynamism (moderator variable) was significant. Likewise, the beta coefficients were statistically significant ($\beta=0.355$, $t=3.680$, $p<0.05$) for organizational ambidexterity effect with the introduction of environmental dynamism whose effect was insignificant ($\beta=0.004$, $t=0.039$, $p>0.05$).

The third and final step of the moderation effect testing entails the interaction term entry in the regression model. The product (organizational ambidexterity * environmental dynamism) is the interaction term. All the variables (independent variable, moderating and the interaction term) are introduced into the regression model, one after the other. The interaction outcome was evaluated using multiple regression analysis. The outcome in entering the interaction term in the model is in Table 4.57.

The step three general model outcome signifies statistically significant (F=4.766, p<0.05 and larger than the F critical value of 2.70) interaction, an indication of the model's robustness and goodness of fit, therefore usefulness in this study's data analysis. The results revealed minimal R^2 improvement of 0.006(that is from R^2=0.126 in step two to R^2 = 0.132 in step three). The minimal R^2 (0.60 percentage) change implies that the interaction of organizational ambidexterity (predictor variable) and environmental dynamism (moderator variable) had insignificant influence on customer perspective (criterion variable). The beta coefficients revealed no improvement. The results indicate (β=0.355, t=3.680, p<0.05) before introduction of the interaction term to (β= - 0.870, t=-0.584, p>0.05) with the interaction term inclusion in the regression model. There is no adequate evidence from the results to justify the null hypothesis rejection. Therefore, the study failed to reject the null hypothesis and, hence, conclusion that environmental dynamism has no significant moderating effect on the organizational ambidexterity influence on the customer perspective of Kenyan LMFs.

4.10.18 Organizational Ambidexterity, Environmental Dynamism and Internal Processes

In objective three, the study aimed to assess the effect of environmental dynamism on the organizational ambidexterity and internal processes relationship. A corresponding hypothesis($H0_{3c}$) stated in the null form was formulated that environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the internal processes of LMFs in Kenya. Step-wise (3-step) regression analysis was applied in the hypothesis testing. Step one involved testing the influence of organizational ambidexterity on internal processes. Step two involved testing the effect of organizational ambidexterity (predictor variable) and moderator variable (environmental dynamism) together on the dependent variable (internal processes). An interaction variable was entered and its significance on the criterion variable (internal processes) tested, in step three. The interaction term is computed as the product of standardized values for the independent variable (organizational ambidexterity) and moderating variable (environmental dynamism). The output is in Table 4.58.

Table 4.58: Regression Output for the Moderating Effect of Environmental Dynamism in the Organizational Ambidexterity and Internal Processes Relationship

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.431[a]	.186	.178	.24753
2	.438[a]	.192	.175	.24799
3	.440[a]	.193	.168	.24905

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.345	1	1.345	21.960	.000[b]
	Residual	5.882	96	.061		
	Total	7.227	97			
2	Regression	1.385	2	.692	11.260	.000[b]
	Residual	5.842	95	.061		
	Total	7.227	97			
3	Regression	1.397	3	.466	7.507	.000[b]
	Residual	5.830	94	.062		
	Total	7.227	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.104	.388		5.422	.000
	Organizational Ambidexterity	.475	.101	.431	4.686	.000
2	(Constant)	2.447	.578		4.230	.000
	Organizational Ambidexterity	.466	.102	.424	4.565	.000
	Environmental Dynamism	-.082	.102	-.074	-.801	.425
3	(Constant)	5.132	6.167		.832	.407
	Organizational Ambidexterity	-.224	1.580	-.203	-.141	.888
	Environmental Dynamism	-.798	1.641	-.724	-.486	.628
	Organizational Ambidexterity, Environmental Dynamism Interaction	.184	.421	.854	.437	.663

Model 1: Predictors (Constant), Organizational Ambidexterity.
Model 2: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism.
Model 3: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism, and Interaction term.
Criterion Variable: Internal Processes.

Source: Research Data(2019)

In step one organizational ambidexterity was regressed on internal processes. The results in Table 4.58 indicate R^2 of 0.186, meaning that 18.60 percent of internal processes is explained by organizational ambidexterity, the rest (81.40 percent) is accounted for by variables outside the current study's scope. The F-value of 21.960 is larger than the F critical value of 3.94 and significant with $p<0.05$, an indication of the model's attainment of the desired robustness and fit, therefore suitability for use in the data analysis for this study. Further, the beta coefficient was statistically significant ($\beta=0.431$, $t=4.686$, $p<0.05$) and therefore the significance of the model predictive power. The output of step one are significant.

In step two, the moderating effect was evaluated by the entry of the moderating variable in the regression. The results of entering environmental dynamism in the regression model are shown in Table 4.58. Minimal improvement on internal processes from $R^2=0.186$ to $R^2=0.192$ was realized when the moderator variable was introduced in step two. This means that 19.20 percentage of internal processes is elucidated by organizational ambidexterity and environmental dynamism together, the rest (80.80 percent) is explained by variables outside the current study's scope. Also, the general model was statistically significant (F=11.260, $p<0.05$ and bigger than the F critical value of 3.09). The F-value variation from 21.960 to 11.260 with the introduction of environmental dynamism (moderator variable) was significant. Equally statistically significant ($\beta=0.424$, $t=4.565$, $p<0.05$), were the beta coefficients for organizational ambidexterity effect with the introduction of environmental dynamism, whose effect was insignificant ($\beta=-0.070$, $t=-0.801$, $p>0.05$).

The third and final step of the moderation effect testing entails interaction term entry in the regression model. The product of organizational ambidexterity and environmental dynamism (organizational ambidexterity * environmental dynamism) is the interaction term. All the variables (independent variable, moderating and the interaction term) are sequentially added in the regression model, and Table 4.58 shows the interaction outcome evaluation using multiple regression analysis. The overall model in step three signifies statistically significant (F=7.507, p<0.05 and larger than the F critical value of 2.70) interaction, an indication of the model's robustness and fit, therefore usefulness in the analysis of data for this study. The results revealed a minimal R^2 improvement of 0.001(that is from R^2=0.192 in step two to R^2 = 0.193 in step three). The minimal R^2 change of 0.10 percent implies that the interaction of organizational ambidexterity (predictor variable) and environmental dynamism (moderator variable) had insignificant influence on internal processes (criterion variable).

The beta coefficients revealed no improvement. The results indicate (β=0.424, t=4.565, p< 0.05) before introduction of the interaction term to (β= -0.203, t = -0.141, p>0.05) with the interaction term inclusion in the regression model. There is no adequate evidence from the results to justify the rejection of the null hypothesis. Therefore, the study failed to reject the null hypothesis and hence, conclusion that environmental dynamism has no significant moderating effect on the organizational ambidexterity influence on the internal processes of Kenyan LMFs.

4.10.19 Organizational Ambidexterity, Environmental Dynamism and Learning and Growth Performance

In third objective, the research aimed to assess the environmental dynamism effect on the organizational ambidexterity - learning and growth performance association. A corresponding hypothesis ($H0_{3d}$) was formulated that: environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the learning and growth performance of LMFs in Kenya. Step-wise (3-step) regression analysis was applied in the hypothesis testing. Step one entailed testing the influence of organizational ambidexterity on learning and growth performance. Step two involved testing the effect of organizational ambidexterity (predictor variable) and moderator variable (environmental dynamism) together on the dependent variable (learning and growth performance). An interaction variable was entered and its significance on the dependent variable (learning and growth performance) tested, in step three. The interaction term is computed as the product of standardized values for the predictor variable (organizational ambidexterity) and moderating variable (environmental dynamism). The outcome is in Table 4.59.

Table 4.59: **Regression Outcome for the Moderating Effect of Environmental Dynamism in the Organizational Ambidexterity - Learning and Growth Performance Relationship**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.351[a]	.123	.114	.27055
2	.371[a]	.138	.120	.26971
3	.417[a]	.174	.148	.26544

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.990	1	.990	13.526	.000[b]
	Residual	7.027	96	.073		
	Total	8.017	97			
2	Regression	1.106	2	.553	7.605	.001[b]
	Residual	6.911	95	.073		
	Total	8.017	97			
3	Regression	1.394	3	.465	6.595	.000[b]
	Residual	6.623	94	.070		
	Total	8.017	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.272	.424		5.357	.000
	Organizational Ambidexterity	.407	.111	.351	3.678	.000
2	(Constant)	2.861	.629		4.548	.000
	Organizational Ambidexterity	.392	.111	.339	3.533	.001
	Environmental Dynamism	-.141	.111	-.121	-.265	.209
3	(Constant)	16.082	6.572		2.447	.016
	Organizational Ambidexterity	-3.003	1.684	-2.591	-1.783	.078
	Environmental Dynamism	-3.667	1.749	-3.159	-2.097	.039
	Organizational Ambidexterity, Environmental Dynamism Interaction	.906	.448	3.994	2.021	.046

Model 1: Predictors (Constant), Organizational Ambidexterity.
Model 2: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism.
Model 3: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism, and Interaction term.
Criterion Variable: Learning and Growth Performance.

Source: Research Data (2019)

In step one organizational ambidexterity was regressed on learning and growth performance. The outcome in Table 4.59 indicate R^2 of 0.123, meaning that 12.30 percent of learning and growth performance is explained by organizational ambidexterity, the rest (87.70 percent) is accounted for by variables outside the current study's scope. The F- ratio significance (F=13.526), p<0.05) and bigger than the F critical value of 3.94 indicates the model's attainment of the desired robustness and fit, therefore suitability for use in the data analysis for this study. Further, the beta coefficient was statistically significant (β=0.351, t=3.678, p<0.05), thus the significance of the model predictive power. The results of step one are significant.

Step two in evaluating the moderating effect involves the entry of the moderating variable in the regression. The results of entering environmental dynamism in the regression model are shown in Table 4.59. When the moderator variable was introduced in step two, there was minimal improvement in the organizational ambidexterity influence on learning and growth performance from R^2=0.123 to R^2=0.138 meaning that 13.80 percent of learning and growth performance is explained by organizational ambidexterity and environmental dynamism together, the rest (86.20 percent) is explained by variables outside the current study's scope. Also, the general model was statistically significant (F=7.605, p<0.05 and larger than the F critical value of 3.09). The F-value variation from 13.526 to 7.605 with the introduction of environmental dynamism (moderator variable) was significant. Equally statistically significant (β=0.339, t=3.533, p<0.05), were the beta coefficients for the organizational ambidexterity effect with the introduction of environmental dynamism, whose effect was insignificant (β=-0.121, t=-0.265, p>0.05).

The third and final step of the moderation effect testing entails the interaction term entry in the regression model. The product of organizational ambidexterity and environmental dynamism (organizational ambidexterity * environmental dynamism) is the interaction term. All the variables (independent variable, moderating and the interaction term) are sequentially added in the regression model, with the interaction outcome being evaluated using multiple regression analysis. The outcome in entering the interaction term in the regression model is shown in Table 4.59.

Step three general model outcome signifies statistically significant (F=6.595, p<0.05 and bigger than the F critical value of 2.70) interaction, which indicates the model's robustness and fit, therefore usefulness in the analysis of data for this study. The results revealed a minimal R^2 improvement of 0.036(that is from R^2=0.138 in step two to R^2 =0.174 in step three). The minimal R^2 change of 3.60 percent implies that the interaction of organizational ambidexterity (predictor variable) and environmental dynamism (moderator variable) had insignificant influence on learning and growth performance (dependent variable).

The beta coefficients revealed no improvement. The results indicate (β=0.339, t=3.533, p<0.05) before introduction of the interaction term to (β=-2.591, t=-1.783, p>0.05) with the interaction term inclusion in the regression model. There is, therefore, no adequate evidence from the results to justify the rejection of the null hypothesis. The study failed to reject the null hypothesis and concludes that environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the learning and growth performance of LMFs in Kenya.

4.10.20 Organizational Ambidexterity, Environmental Dynamism and Societal Performance

In objective three, the study aimed to assess the environmental dynamism effect on the organizational ambidexterity - societal performance association. A corresponding hypothesis($H0_{3e}$) stated in the null form was formulated that environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the societal performance of LMFs in Kenya. Step-wise (3-step) regression analysis was applied in the hypothesis testing. Step one involved evaluating the influence of organizational ambidexterity on societal performance. Step two involved testing the effect of organizational ambidexterity (predictor variable) and moderator variable (environmental dynamism) together on the dependent variable (societal performance).

An interaction variable was entered and its significance on the criterion variable (societal performance) tested, in step three. The interaction term is computed as the product of standardized values for the predictor variable (organizational ambidexterity) and moderator variable (environmental dynamism). The output is shown in Table 4.60.

Table 4.60: Regression Results for the Moderating Effect of Environmental Dynamism in the Organizational Ambidexterity and Societal Performance Relationship

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.347[a]	.120	.111	.37372
2	.369[a]	.136	.118	.37231
3	.394[a]	.155	.128	.37008

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.835	1	1.835	13.139	.000[b]
	Residual	13.408	96	.140		
	Total	15.243	97			
2	Regression	2.075	2	1.037	7.483	.001[b]
	Residual	13.168	95	.139		
	Total	15.243	97			
3	Regression	2.369	3	.790	5.765	.001[b]
	Residual	12.874	94	.137		
	Total	15.243	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.797	.586		3.068	.003
	Organizational Ambidexterity	.554	.153	.347	3.625	.000
2	(Constant)	.952	.868		1.096	.276
	Organizational Ambidexterity	.576	.153	.360	3.758	.000
	Environmental Dynamism	.202	.154	.126	1.314	.192
3	(Constant)	-12.420	9.164		-1.355	.179
	Organizational Ambidexterity	4.010	2.348	2.510	1.708	.091
	Environmental Dynamism	3.769	2.438	2.354	1.546	.126
	Organizational Ambidexterity, Environmental Dynamism Interaction	-.917	.625	-2.930	-1.466	.146

Model 1: Predictors (Constant), Organizational Ambidexterity.
Model 2: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism.
Model 3: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism, and Interaction term.
Criterion Variable: Societal Performance.

Source: Research Data (2019)

In step one organizational ambidexterity was regressed on societal performance. The outcome in Table 4.60 indicates R^2 of 0.120, meaning that 12.00 percent of societal performance is explained by organizational ambidexterity, the rest (88.00 percent) is accounted for by variables outside the current study's scope. The F-value bigger than the F critical value of 3.94 and significance (F=13.139, p<0.05) indicates the model's attainment of the desired robustness and fit, therefore suitability for use in the data analysis for this study. Further, the beta coefficient was statistically significant (β=0.347, t=3.625, p<0.05), hence the significance of the model predictive power. The results of step one are significant.

Step two in evaluating the moderating effect involves the entry of the moderating variable in the regression. The results of entering environmental dynamism in the regression model are shown in Table 4.60. When the moderator variable was introduced in step two, there was minimal increase in the organizational ambidexterity influence on societal performance which improved from R^2=0.120 to R^2=0.136 meaning that 13.60 percent of societal performance is explained by organizational ambidexterity and environmental dynamism together, the rest (86.40 percent) is accounted for by variables outside the current study's scope. Also, the general model was statistically significant (F=7.483, p<0.05 and larger than the F critical value of 3.09). The F-value variation from 13.139 to 7.483 with the introduction of environmental dynamism (moderator variable) was significant. Likewise statistically significant (β=0.360, t=3.758, p<0.05) were the beta coefficients for the organizational ambidexterity effect with the introduction of environmental dynamism, whose effect was insignificant (β=0.126, t=1.314, p>0.05).

The interaction term is added in the regression model, in the third and final step in the moderation effect testing. The product of organizational ambidexterity and environmental dynamism (organizational ambidexterity * environmental dynamism) is the interaction term. All the variables (predictor variable, moderating and the interaction term) are sequentially entered into the regression model. The interaction outcome was evaluated using multiple regression analysis. The outcome in entering the interaction term in the regression model is presented in Table 4.60. Step three general model result signifies statistically significant (F=5.765, p<0.05 and bigger than the F critical value of 2.70) interaction, which indicates the model's robustness and fit, therefore usefulness in the analysis of data for this study. The results revealed a minimal R^2 improvement of 0.019(that is from R^2=0.136 in step two to R^2 =0.155 in step three). The minimal R^2 change of 1.90 percent implies insignificant influence on societal performance (dependent variable) from the organizational ambidexterity (independent variable) interaction with environmental dynamism (moderating variable).

The beta coefficients revealed some minimal improvement. The results indicate (β=0.360, t=3.758, p<0.05) before introduction of the interaction term to (β = 2.510, t=1.708, p>0.05) with the interaction term inclusion in the regression model. The outcome, therefore, did not provide adequate evidence to justify the null hypothesis rejection. The study thus failed to reject the null hypothesis, hence, the conclusion that environmental dynamism has no significant moderating effect on the organizational ambidexterity influence on the societal performance of Kenyan LMFs.

4.10.21 Organizational Ambidexterity, Environmental Dynamism and Environmental Performance

In objective three, the study aimed to assess the environmental dynamism effect on the organizational ambidexterity - environmental performance association. A corresponding hypothesis($H0_{3f}$) stated in the null form was formulated that environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the environmental performance of LMFs in Kenya. Step-wise (3-step) regression analysis was applied in testing the hypothesis. Step one involved assessing the influence of organizational ambidexterity on environmental performance. Step two involved assessing the effect of organizational ambidexterity (predictor variable) and moderator variable (environmental dynamism) together on the dependent variable (environmental performance). An interaction variable was entered and its significance on the criterion variable (environmental performance tested, in step three. The interaction term is computed as the product of standardized values for the predictor variable (organizational ambidexterity) and moderating variable (environmental dynamism). The output is in Table 4.61.

Table 4.61: Regression Output for the Moderating Effect of Environmental Dynamism in the Organizational Ambidexterity - Environmental Performance Relationship

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.320[a]	.102	.093	.35521
2	.332[a]	.110	.091	.35556
3	.333[a]	.111	.083	.35721

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.380	1	1.380	10.941	.001[b]
	Residual	12.112	96	.126		
	Total	13.493	97			
2	Regression	1.483	2	.741	5.864	.004[b]
	Residual	12.010	95	.126		
	Total	13.493	97			
3	Regression	1.499	3	.500	3.915	.011[b]
	Residual	11.994	94	.128		
	Total	13.493	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.996	.557		3.586	.001
	Organizational Ambidexterity	.481	.145	.320	3.308	.001
2	(Constant)	1.444	.829		1.741	.085
	Organizational Ambidexterity	.495	.146	.329	3.382	.001
	Environmental Dynamism	.132	.147	.088	.900	.371
3	(Constant)	-1.660	8.845		-.188	.851
	Organizational Ambidexterity	1.292	2.266	.859	.570	.570
	Environmental Dynamism	.960	2.353	.637	.408	.684
	Organizational Ambidexterity, Environmental Dynamism Interaction	-.213	.604	-.723	-.353	.725

Model 1: Predictors (Constant), Organizational Ambidexterity.
Model 2: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism.
Model 3: Predictors (Constant), Organizational Ambidexterity, Environmental Dynamism, and Interaction term.
Criterion Variable: Environmental Performance.

Source: Research Data (2019)

In step one organizational ambidexterity was regressed on environmental performance. The output in Table 4.61 indicates R^2 of 0.102, meaning that 10.20 percent of environmental performance is explained by organizational ambidexterity, the rest (89.80 percent) is accounted for by variables outside the current study's scope. The F-ratio

significance (F=10.94, p<0.05) and larger than the F critical value of 3.94 indicates the model's attainment of the desired robustness and fit, therefore suitability for use in the data analysis for this study. Further, the beta coefficient was statistically significant (β=0.320, t=3.308, p<0.05) and thus the significance of the model predictive power. The results of step one are significant.

Step two in evaluating the moderating effect involves the entry of the moderating variable in the regression. The results of entering environmental dynamism in the regression model are shown in Table 4.61. When the moderator variable was introduced in step two, there was minimal increase in the organizational ambidexterity influence on environmental performance which improved from R^2=0.102 to R^2=0.111 meaning that 11.10 percent of environmental performance is explained by organizational ambidexterity and environmental dynamism together, the rest (88.90 percent) is explained by variables outside the current study's scope. Also, the general model was statistically significant (F=5.864, p<0.05 and bigger than the F critical value of 3.09). The F-value variation from 5.864 to 3.915 with the introduction of environmental dynamism (moderator variable) was significant. Equally statistically significant (β=0.329, t=3.382, p<0.05) were the beta coefficients for the organizational ambidexterity effect with the introduction of environmental dynamism, whose effect was insignificant (β=0.859, t=0.570, p>0.05).

The third and final step for the moderation effect testing entails the interaction term entry in the regression model. The product of organizational ambidexterity and environmental dynamism (organizational ambidexterity * environmental dynamism) is

the interaction term. All the variables (independent variable, moderating and the interaction term) are entered into the regression model, one after the other. Multiple regression analysis was applied in evaluating the interaction outcome. The outcome in entering the interaction term in the regression model is presented in Table 4.61.

Step three overall model output signifies statistically significant (F=3.915, p<0.05 and larger than the F critical value of 2.70) interaction, which indicates the model's robustness and fit, therefore usefulness in the analysis of data for this study. The results revealed a minimal R^2 improvement of 0.001(that is from R^2=0.110 in step two to R^2 =0.111 in step three). The minimal R^2 change of 0.10 percent implies insignificant environmental performance (dependent variable) influence from the organizational ambidexterity (independent variable) - environmental dynamism (moderating variable) interaction.

The beta coefficients revealed no improvement. The results indicate (β=0.329, t=3.382, p>0.05) before the introduction of the interaction term to (β= -0.859, t=-0.570, p>0.05) with the interaction term inclusion in the regression model. There is no adequate evidence from the results to justify the rejection of the null hypothesis. Thus, the study failed to reject the null hypothesis and therefore the conclusion that environmental dynamism has no significant moderating effect on the organizational ambidexterity influence on the environmental performance of Kenyan LMFs.

4.10.22 The Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Organizational Performance

The fourth objective aimed at evaluating the organizational ambidexterity, organizational design, and environmental dynamism joint effect on performance of LMFs in Kenya. The following hypothesis was formulated and tested: $H0_4$: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on performance of Kenyan LMFs. The joint effect was assessed using multiple regression analysis. In the analysis, organizational performance was measured both as a composite of SBSC perspectives and also based on the individual SBSC perspective indicators. The findings with performance measured as a composite of SBSC perspectives are summarized in Table 4.62.

Table 4.62: Regression Output for the Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Organizational Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.682[a]	.465	.448	.15447

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.947	3	.649	27.199	.000[b]
	Residual	2.243	94	.024		
	Total	4.190	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.382	.385		3.593	.001
	Organizational Ambidexterity	.355	.071	.423	5.025	.000
	Organizational Design	.317	.070	.380	4.539	.000
	Environmental Dynamism	-.020	.064	-.024	-.317	.752

Model 1: Predictors: (Constant), Joint variables - Organizational Ambidexterity, Organizational Design, Environmental Dynamism.
Dependent Variable: Organizational Performance

Source: Research Data (2019)

A test was conducted for the joint effect of organizational ambidexterity, organizational design and environmental dynamism on organizational performance. The regression output in Table 4.62 reveals the joint effect of organizational ambidexterity, organizational design, and environmental dynamism account for 46.50 percentage variation in the Kenyan LMFs performance (R^2=0.465, $p<0.05$). The F-ratio shows that the regression of organizational ambidexterity, organizational design and environmental dynamism together on organizational performance is positive and statistically significant (F=27.199, $p<0.05$ and larger than the F critical value of 2.70). This indicates the model's fit and robustness attainment for use in analysing this study's data.

The organizational ambidexterity, organizational design, and environmental dynamism joint effect is statistically significant (R^2=0.465, F=27.199, p<0.05) on performance of LMFs in Kenya. This outcome imply that the organizational ambidexterity, organizational design and environmental dynamism joint effect when regressed on organizational performance was positive and significant. The null hypothesis is rejected.

The study concludes that the organizational ambidexterity, organizational design, and environmental dynamism joint effect on the performance of LMFs in Kenya is positive and significantly significant. Organizational performance was operationalized and measured using SBSC approach. Accordingly, the study progressed and analyzed the joint influence of organizational ambidexterity, organizational design and environmental dynamism on the individual SBSC perspectives; namely financial, customer satisfaction, organizational processes, human factor, societal and environmental performance. The findings are presented and discussed in sub-sections 4.10.23 to 4.10.28.

4.10.23 The Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Financial Performance

The fourth objective aimed at establishing the organizational ambidexterity, organizational design, and environmental dynamism joint effect on the financial performance. The following hypothesis ($H0_{4a}$) was formulated and tested: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on the financial performance of Kenyan LMFs. Multiple regression analysis was applied for joint effect assessment. The outcomes are summarized in Table 4.63.

Table 4.63: Regression Results for the Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Financial Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.406[a]	.165	.138	.34027

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.147	3	.716	6.182	.001[b]
	Residual	10.884	94	.116		
	Total	13.031	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.927	.847		1.094	.277
	Organizational Ambidexterity	.366	.155	.248	2.352	.021
	Organizational Design	.342	.154	.232	2.218	.029
	Environmental Dynamism	.072	.141	.049	.513	.609

Model 1: Predictors: (Constant), Joint variables - Organizational Ambidexterity, Organizational Design, Environmental Dynamism.

Dependent Variable: Financial Performance

Source: Research Data (2019)

A test was undertaken for the joint effect of organizational ambidexterity, organizational design and environmental dynamism on financial performance. The regression output in Table 4.63 indicates that the joint effect of organizational ambidexterity, organizational design, and environmental dynamism account for 16.50 percentage variation in the financial performance (R^2=0.165, $p<0.05$). The F-ratio shows that the regression of organizational ambidexterity, organizational design and environmental dynamism together on financial performance is positive and statistically significant (F=6.182, $p<0.05$ and bigger than the F critical value of 2.70). This denotes the model's attainment of fit and robustness for use in analysing the data for this study.

The organizational ambidexterity, organizational design, and environmental dynamism joint effect on financial performance is positive and statistically significant (R^2=0.165, F=6.182, $p<0.05$). These results imply that the organizational ambidexterity, organizational design

and environmental dynamism joint effect when regressed on financial performance was positive and statistically significant. The null hypothesis is rejected. Hence the study conclusion that the organizational ambidexterity, organizational design, and environmental dynamism joint effect on the financial performance of Kenyan LMFs is positive and statistically significant.

4.10.24 The Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Customer Perspective

The fourth objective aimed at evaluating the organizational ambidexterity, organizational design, and environmental dynamism joint effect on customer perspective of LMFs in Kenya. Hypothesis ($H0_{4b}$) was formulated and tested: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on customer perspective of LMFs in Kenya. Multiple regression analysis was applied for joint effect evaluation. The findings are summarized in Table 4.64.

Table 4.64: Regression Outcome for the Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Customer Perspective

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.536[a]	.287	.265	.23031

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.010	3	.670	12.633	.000[b]
	Residual	4.986	94	.053		
	Total	6.996	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.497	.573		2.610	.011
	Organizational Ambidexterity	.173	.105	.160	1.647	.103
	Organizational Design	.481	.104	.446	4.616	.000
	Environmental Dynamism	-.027	.095	-.025	-.282	.779

Model 1: Predictors: (Constant), Joint variables - Organizational Ambidexterity, Organizational Design, Environmental Dynamism.
Dependent Variable: Customer Perspective

source: Research Data (2019)

A test was conducted for the joint effect of organizational ambidexterity, organizational design and environmental dynamism on customer perspective of LMFs in Kenya. The regression outcome in Table 4.64 indicate that the organizational ambidexterity, organizational design and environmental dynamism joint effect account for 28.70 percentage variation in the customer perspective (R^2=0.287, $p<0.05$). The F-ratio shows that the regression of organizational ambidexterity, organizational design and environmental dynamism together on customer perspective is positive and statistically significant (F=12.633, $p<0.05$ and larger than the F critical value of 2.70). This indicates the model's attainment of the desired fit and robustness for use in this study's data analysis.

The organizational ambidexterity, organizational design, and environmental dynamism joint effect on customer perspective of LMFs in Kenya is positive and statistically significant (R^2=0.287, F=12.633, p<0.05). These results imply that the organizational ambidexterity, organizational design and environmental dynamism joint effect when regressed on customer perspective was positive and statistically significant. The null hypothesis is rejected. The study concludes that the organizational ambidexterity, organizational design, and environmental dynamism joint effect on customer perspective of LMFs in Kenya is positive and statistically significant.

4.10.25 The Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Internal Processes

The fourth objective intention was to evaluate the organizational ambidexterity, organizational design, and environmental dynamism joint effect on internal processes. The following hypothesis ($H0_{4c}$) was formulated and tested: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on internal processes of Kenyan LMFs. Multiple regression analysis was applied for joint effect assessment. The output is in Table 4.65.

Table 4.65: Regression Output of the Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Internal Processes

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.478[a]	.229	.204	.24349

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.654	3	.551	9.301	.000[b]
	Residual	5.573	94	.059		
	Total	7.227	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.994	.606		3.289	.001
	Organizational Ambidexterity	.363	.111	.330	3.263	.002
	Organizational Design	.235	.110	.214	2.131	.036
	Environmental Dynamism	-.097	.101	-.088	-.964	.338

Model 1: Predictors: (Constant), Joint variables - Organizational Ambidexterity, Organizational Design, Environmental Dynamism.
Dependent Variable: Internal Processes

Source: Research Data (2019)

A test was undertaken for the joint effect of organizational ambidexterity, organizational design and environmental dynamism on internal processes of LMFs in Kenya. The regression output in Table 4.65 show that the organizational ambidexterity, organizational design and environmental dynamism joint effect account for 22.90 percentage variation in the internal processes of LMFs in Kenya (R^2=0.229, p<0.05). The F-ratio shows that the regression of organizational ambidexterity, organizational design and environmental dynamism together on internal processes is positive and statistically significant (F=9.301, p<0.05 and bigger than the F critical value of 2.70). This indicates the model's attainment of the desired fit and robustness for use in analysing the data for this study.

The organizational ambidexterity, organizational design, and environmental dynamism joint effect on internal processes of LMFs in Kenya is positive and statistically significant (R^2=0.229, F=9.301, p<0.05). These results imply that the organizational ambidexterity, organizational design and environmental dynamism joint effect when regressed on internal processes was positive and statistically significant. The null hypothesis is rejected. The study concludes that the organizational ambidexterity, organizational design, and environmental dynamism joint effect on internal processes of LMFs in Kenya is positive and statistically significant.

4.10.26 The Joint effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Learning and Growth Performance

The fourth objective intention was evaluating the organizational ambidexterity, organizational design, and environmental dynamism joint effect on the learning and growth performance. The following hypothesis ($H0_{4d}$) was formulated and tested: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on learning and growth performance of LMFs in Kenya. Multiple regression analysis was applied for joint effect assessment. The output is in Table 4.66.

Table 4.66: Regression Output for the Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Learning and Growth Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.424[a]	.180	.153	.26451

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.440	3	.480	6.863	.000[b]
	Residual	6.577	94	.070		
	Total	8.017	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.357	.659		3.578	.001
	Organizational Ambidexterity	.278	.121	.240	2.297	.024
	Organizational Design	.262	.120	.227	2.185	.031
	Environmental Dynamism	-.157	.109	-.136	-1.440	.153

Model 1: Predictors: (Constant), Joint variables-Organizational Ambidexterity, Organizational Design, Environmental Dynamism.

Dependent Variable: Learning and Growth Performance

Source: Research Data (2019)

A test was conducted for the joint effect of organizational ambidexterity, organizational design and environmental dynamism on learning and growth performance. The regression output in Table 4.66 show that the joint effect of organizational ambidexterity, organizational design and environmental dynamism account for 18.00 percentage variation in the learning and growth performance of LMFs in Kenya (R^2=0.180, $p<0.05$). The F-ratio shows that the regression of organizational ambidexterity, organizational design and environmental dynamism together on learning and growth is positive and statistically significant (F=6.863, $p<0.05$ and larger than the F critical value of 2.70). This indicates the model's attainment of the desired fit and robustness for this study's data analysis use.

The organizational ambidexterity, organizational design and environmental dynamism joint effect on learning and growth performance of LMFs in Kenya is positive and statistically significant (R^2=0.180, F=6.863, p<0.05). These results imply that the organizational ambidexterity, organizational design and environmental dynamism joint effect when regressed on learning and growth performance was positive and statistically significant. The null hypothesis is rejected. The study concludes that the organizational ambidexterity, organizational design and environmental dynamism joint effect on learning and growth performance of Kenyan LMFs is positive and statistically significant.

4.10.27 The Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism Together on Societal Performance

The fourth objective aimed at evaluating the organizational ambidexterity, organizational design, and environmental dynamism joint effect on the societal performance. The following hypothesis (H0$_{4e}$) was formulated and tested: Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on the societal performance of Kenyan LMFs. Multiple regression analysis was applied for joint effect evaluation. The outcomes are summarized in Table 4.67.

Table 4.67: Regression Outcome for the Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Societal Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.394[a]	.155	.128	.37012

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.366	3	.789	5.757	.001[b]
	Residual	12.877	94	.137		
	Total	15.243	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.481	.922		.522	.603
	Organizational Ambidexterity	.469	.169	.293	2.772	.007
	Organizational Design	.244	.167	.153	1.458	.148
	Environmental Dynamism	.186	.153	.116	1.216	.227

Model 1: Predictors: (Constant), Joint variables - Organizational Ambidexterity, Organizational Design, Environmental Dynamism.
Dependent Variable: Societal Performance

Source: Research Data (2019)

A test was done for the joint effect of organizational ambidexterity, organizational design and environmental dynamism on the societal performance. The regression outcome in Table 4.67 indicates that the organizational ambidexterity, organizational design and environmental dynamism joint effect account for 15.50 percentage variation in the societal performance of LMFs in Kenya (R^2=0.155, $p<0.05$). The F-ratio shows that the regression of organizational ambidexterity, organizational design and environmental dynamism together on societal performance is positive and statistically significant (F=5.757, $p<0.05$ and bigger than the F critical value of 2.70). This indicates the model's attainment of the desired fit and robustness for this study's data analysis use.

The organizational ambidexterity, organizational design, and environmental dynamism joint effect on the societal performance is positive and statistically significant (R^2=0.155, F=5.757, p<0.05). The outcome implies that the organizational ambidexterity, organizational design and environmental dynamism joint effect when regressed on societal performance was positive and statistically significant. The null hypothesis is rejected. The study concludes that the organizational ambidexterity, organizational design, and environmental dynamism joint effect on the societal performance of LMFs in Kenya is positive and statistically significant.

4.10.28 The Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Environmental Performance

The fourth objective aimed at evaluating the organizational ambidexterity, organizational design, and environmental dynamism joint effect on environmental performance. The following hypothesis (H0$_{4f}$) was formulated and tested: Organizational ambidexterity, organizational design, and environmental dynamism have no significant joint effect on the environmental performance of Kenyan LMFs. Multiple regression analysis was applied for joint effect assessment. The output is in Table 4.68.

Table 4.68: Regression Results for the Joint Effect of Organizational Ambidexterity, Organizational Design and Environmental Dynamism on Environmental Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.405[a]	.164	.138	.34636

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.216	3	.739	6.158	.001[b]
	Residual	11.277	94	.120		
	Total	13.493	97			

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.697	.862		.808	.421
	Organizational Ambidexterity	.325	.158	.216	2.054	.043
	Organizational Design	.387	.157	.259	2.47	.015
	Environmental Dynamism	.107	.143	.071	.748	.457
Model 1: Predictors: (Constant), Joint variables-Organizational Ambidexterity, Organizational Design, Environmental Dynamism.						
Dependent Variable: Environmental Performance						

Source: Research Data (2019)

A test was done for the organizational ambidexterity, organizational design and environmental dynamism joint effect on environmental performance of LMFs in Kenya. The regression output in Table 4.68 indicate that the joint effect of organizational ambidexterity, organizational design and environmental dynamism explain 16.40 percentage variation in the environmental performance of LMFs in Kenya (R^2=0.164, p<0.05). The F-ratio shows that the regression of organizational ambidexterity, organizational design and environmental dynamism together on environmental performance is positive and statistically significant (F=6.158, p<0.05 and larger than the F critical value of 2.70). This indicates the model's attainment of desired fit and robustness for use in analysing the data for this study.

The organizational ambidexterity, organizational design and environmental dynamism joint effect on environmental performance of LMFs in Kenya is positive and statistically significant (R^2=0.164, F=6.158, p<0.05). These results imply that the organizational ambidexterity, organizational design and environmental dynamism joint effect when regressed on environmental performance was positive and statistically significant. The null hypothesis is rejected. The study concludes that the organizational ambidexterity, organizational design and environmental dynamism joint effect is on the environmental performance of LMFs in Kenya is positive and statistically significant.

4.10.29 Summary of the Results and Tests of Hypotheses

Part one of this chapter dealt with preliminary data analysis. Presented in the chapter was validity and reliability tests for the data collection instruments. This was followed by tests of regression assumptions, namely linearity using correlation coefficients, normality using shapiro-wilk test and Q-Q plots, tests of multicollinearity using variance inflation factor (VIF) and tolerance while Levene test and variance ratio were applied in the homogeneity of variance/homoscedasticity testing. Also presented was response rate showing the number of respondents from the LMFs in Kenya. The respondents profile as well as respondents firms' characteristics were presented in the chapter. Descriptive statistics on study variables were summarized in terms of mean, standard deviations and coefficient of variation. Also provided in the chapter are the results of correlation tests.

In this study, all the hypotheses were stated and tested in the null form. The analysis and results presentation were organized according to the specific objectives and corresponding hypotheses of the study. The first hypothesis testing the direct effect of

organizational ambidexterity on organizational performance was done using simple
regression and the outcomes presented. Also presented are the results of the second
hypothesis that: "organizational design has no mediating role in the influence of
organizational ambidexterity on performance of LMFs in Kenya", which was tested
using path analysis. Further, step-wise regression analysis was used in testing the
moderating effect of environmental dynamism in the third hypothesis and the results
presented. Finally, the organizational ambidexterity, design and environmental
dynamism joint effect on organizational performance was also tested through multiple
linear regression and the results presented.

The second part of the chapter presented tests of hypotheses. The study had four specific
objectives with corresponding hypotheses. A summary of the outcomes and findings of
the tests of these hypotheses is highlighted in Table 4.69.

Table 4.69: Summary of Objectives, Hypotheses, Outcomes and Findings

Objective 1. Establish the influence of organizational ambidexterity on the performance of large manufacturing firms in Kenya.		
Hypothesis	Outcome	Finding
$H0_1$: Organizational ambidexterity has no significant influence on organizational performance	The null hypothesis is rejected	Organizational ambidexterity has significant influence on the performance of LMFs in Kenya
$H0_{1a}$: Organizational ambidexterity has no significant influence on organization financial performance	The null hypothesis is rejected	Organizational ambidexterity has significant influence on financial performance of LMFs in Kenya
$H0_{1b}$: Organizational ambidexterity has no significant influence on organizational customer perspective	The null hypothesis is rejected	Organizational ambidexterity has significant influence on customer perspective of LMFs in Kenya.
$H0_{1c}$: Organizational ambidexterity has no significant influence on organizational internal processes	The null hypothesis is rejected	Organizational ambidexterity has significant influence on internal processes of LMFs in Kenya
$H0_{1d}$: Organizational ambidexterity has no significant influence on organization learning and growth	The null hypothesis is rejected	Organizational ambidexterity has significant influence on learning and growth

performance		performance of LMFs in Kenya
H0$_{1e}$: Organizational ambidexterity has no significant influence on organization societal performance	The null hypothesis is rejected	Organizational ambidexterity has significant influence on societal performance of LMFs in Kenya
H0$_{1f}$: Organizational ambidexterity has no significant influence on organization environmental performance	The null hypothesis is rejected	Organizational ambidexterity has significant influence on environmental performance of LMFs in Kenya
Objective 2. Determine the role of organizational design in the relationship between organizational ambidexterity and performance of LMFs in Kenya.		
Hypothesis	Outcome	Finding
H0$_2$: Organizational design has no mediating role in the influence of organizational ambidexterity and organizational performance	The null hypothesis is rejected	Organizational design has partial mediating role in the influence of organizational ambidexterity and performance of LMFs in Kenya
H0$_{2a}$: Organizational design has no mediating role in the influence of organizational ambidexterity and organization financial performance.	The null hypothesis is rejected	Organizational design has partial mediating role in the influence of organizational ambidexterity and financial performance of LMFs in Kenya
H0$_{2b}$: Organizational design has no mediating role in the influence of organizational ambidexterity and organizational customer perspective	The null hypothesis is rejected	Organizational design has partial mediating role in the influence of organizational ambidexterity and customer perspective of LMFs in Kenya
H0$_{2c}$: Organizational design has no mediating role in the influence of organizational ambidexterity and organizational internal processes	The null hypothesis is rejected	Organizational design has partial mediating role in the influence of organizational ambidexterity and internal processes of LMFs in Kenya
H0$_{2d}$: Organizational design has no mediating role in the influence of organizational ambidexterity and organization learning and growth performance	The null hypothesis is rejected	Organizational design has partial mediating role in the influence of organizational ambidexterity and learning and growth performance of LMFs in Kenya
H0$_{2e}$: Organizational design has no mediating role in the influence of organizational ambidexterity and organization societal performance	The null hypothesis is rejected	Organizational design has partial mediating role in the influence of organizational ambidexterity and societal performance of LMFs in Kenya
H0$_{2f}$: Organizational design has no mediating role in the influence of organizational ambidexterity and organization environmental performance	The null hypothesis is rejected	Organizational design has partial mediating role in the influence of organizational ambidexterity and environmental performance of LMFs in Kenya
Objective 3. Assess the effect of environmental dynamism in the relationship between organizational ambidexterity and performance of LMFs in Kenya.		
Hypothesis	Outcome	Finding
H0$_3$: Environmental dynamism has no significant moderating effect on the	Failed to reject the null hypothesis	Environmental dynamism has no significant moderating effect on

influence of organizational ambidexterity on organizational performance		the influence of organizational ambidexterity on performance of LMFs in Kenya
H0$_{3a}$: Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on organization financial performance	Failed to reject the null hypothesis	Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on financial performance of LMFs in Kenya
H0$_{3b}$: Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on organizational customer perspective	Failed to reject the null hypothesis	Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on customer perspective of LMFs in Kenya
H0$_{3c}$: Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on organizational internal processes	Failed to reject the null hypothesis	Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on internal processes of LMFs in Kenya
H0$_{3d}$: Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on organization learning and growth performance	Failed to reject the null hypothesis	Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on learning and growth performance of LMFs in Kenya
H0$_{3e}$: Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on organization societal performance	Failed to reject the null hypothesis	Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on societal performance of LMFs in Kenya
H0$_{3f}$: Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on organization environmental performance	Failed to reject the null hypothesis	Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on environmental performance of LMFs in Kenya
Objective 4. Evaluate the joint effect of organizational ambidexterity, organizational design and environmental dynamism on the performance of LMFs in Kenya.		
Hypothesis	Outcome	Finding
H0$_4$ Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on organizational performance	The null hypothesis is rejected.	The joint effect of organizational ambidexterity, organizational design and environmental dynamism on performance of LMFs in Kenya is statistically significant.
H0$_{4a}$ Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on organization financial performance.	The null hypothesis is rejected.	The joint effect of organizational ambidexterity, organizational design and environmental dynamism on financial performance of large manufacturing firms in Kenya is statistically significant.
H0$_{4b}$ Organizational ambidexterity, organizational design and environmental dynamism have no	The null hypothesis is rejected.	The joint effect of organizational ambidexterity, organizational

significant joint effect on organizational customer perspective.		design and environmental dynamism on customer perspective of LMFs in Kenya is statistically significant.
$H0_{4c}$ Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on organizational internal processes performance.	The null hypothesis is rejected.	The joint effect of organizational ambidexterity, organizational design and environmental dynamism on internal processes of LMFs in Kenya is statistically significant.
$H0_{4d}$ Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect of on organization learning and growth performance.	The null hypothesis is rejected.	The joint effect of organizational ambidexterity, organizational design and environmental dynamism on learning and growth performance of large manufacturing firms in Kenya is statistically significant
$H0_{4e}$ Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on organization societal performance.	The null hypothesis is rejected.	The joint effect of organizational ambidexterity, organizational design and environmental dynamism on societal performance of LMFs in Kenya is statistically significant.
$H0_{4f}$ Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on organization environmental performance.	The null hypothesis is rejected.	The joint effect of organizational ambidexterity, organizational design and environmental dynamism on environmental performance of LMFs in Kenya is statistically significant

Source: Data (2019)

The results of each tested hypothesis were tabulated as the model summary, analysis of variance (ANOVA) and model coefficients. The chapter showed the results of the effect of predictor variables on the criterion variable and whether or not the effect was statistically significant. This guided the decision on whether to reject or fail to reject the null hypothesis. Based on the results, the null hypotheses 1, 2 and 4 were all rejected and failed to reject the null hypothesis 3. The results in this chapter informed the discussion, summary of findings, conclusions and the recommendations made in the subsequent chapters.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This study had four specific objectives with corresponding hypotheses. The hypotheses testing results were discussed in comparison with similar studies findings in the literature. The comparison identified the resultant status, whether the results affirm prior studies or there are inconsistencies with extant knowledge. Discussion also considered theoretical foundation.

The discussion is organized systematically following the four study objectives. The first objective was to establish the organizational ambidexterity influence on performance of Kenyan LMFs. The second study aim was to determine the organizational design role in the organizational ambidexterity - performance association of Kenyan LMFs. Thirdly, the study aimed to assess the environmental dynamism effect in the organizational ambidexterity - performance relationship of LMFs in Kenya. Fourth and finally the research aimed to evaluate the organizational ambidexterity, organizational design, and environmental dynamism joint effect on the performance of LMFs in Kenya.

5.2 Organizational Ambidexterity and Organizational Performance

The first study aim was intended to establish the organizational ambidexterity influence on performance of Kenyan LMFs. Based on this objective, the hypothesis that "Organizational ambidexterity has no significant influence on performance of LMFs in Kenya" was formulated and tested. Statistical tests were done to establish the direction and the organizational ambidexterity - performance relationship strength and the amount of organizational performance change caused by the variation in organizational ambidexterity.

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The research findings provided sufficient evidence against the null hypothesis. The hypothesis that organizational ambidexterity has no significant influence on the performance of Kenyan LMFs is therefore rejected. The study findings confirm a significant organizational ambidexterity influence on the Kenyan LMFs performance. The organizational ambidexterity influence on the six individual performance perspectives in the SBSC was also analysed.

The resultant correlation coefficients(R) demonstrate the organizational ambidexterity relationship with each individual performance perspective. The resultant coefficient of determination (R^2) shows that variations in the individual performance perspectives is significantly explained by organizational ambidexterity. Overall, the results provide sufficient evidence of a significant organizational ambidexterity influence on the Kenyan LMFs performance.

The results are comparable with the results of similar studies conducted on the organizational ambidexterity and its linkage with performance. Hill and Birkinshaw (2014) research on the effect of ambidexterity on the survival of business units found a positive effect. Their study tested the hypothesis that higher ambidexterity in venturing results in higher survival rates of the corporate venture unit. They established that adopting ambidextrous orientation by the corporate venture units enhanced their survival. This is comparable with the current study finding that organizational ambidexterity has significant influence on the performance of Kenyan LMFs.

Also, Fu et al. (2016) studied the effect of organizational ambidexterity on firm performance and reported a positive effect. Their research involved investigation of the organizational ambidexterity effect on professional firm performance. They tested the proposition of organizational ambidexterity positive association with the professional service firms (PSFs) performance. Their research reported positive organizational ambidexterity linkage to the firm's revenue growth; which is consistent with the current study finding of a significant organizational ambidexterity influence on the Kenyan LMFs performance.

Further, the current research compares well with Tamayo-Torres et al. (2017) study of organizational ambidexterity - manufacturing performance relationship. Their study aimed to establish the association between organizational ambidexterity and manufacturing performance. Using a sample of 231 Spanish manufacturing firms, the findings established that ambidexterity pursuance led to enhanced manufacturing performance, as evidenced by their reported positive and significant organizational ambidexterity effect on manufacturing performance.

The results contrast some past studies on the ambidexterity - firm performance association. Popadic et al. (2015) study on organizational ambidexterity, exploration, exploitation and firms' innovation performance reported contrasting findings. In their study, organizational ambidexterity was operationalized as a combination of exploration and exploitation. The study established that independently, exploration and exploitation are positively linked to the firm's innovation performance. However, their joint effect on innovation performance is negative but significant.

Also, in contrast to the current study finding that organizational ambidexterity has significant influence on performance of LMFs in Kenya, Ebben and Johnson (2005) in their study, reported negative effect of simultaneous pursuance of efficiency and flexibility strategies on performance. Based on privately owned firms, their study tested the proposition that firms pursuing efficiency strategies or flexibility strategies outdid those that pursued both. They reported that the firms that simultaneously pursued efficiency and flexibility strategies underperformed, and thus concluded that there was a negative relationship between ambidexterity (concurrent pursuance of efficiency and flexibility strategies) and performance of firms.

The research contributes to DCT by establishing that organizational ambidexterity influences performance outcomes. Dynamic Capabilities Theory (DCT) proposes that a firm's capabilities give it a competitive advantage and sustained superior performance by enhancing its sensing capacity and seizing ability to adapt to external environment dynamics (Teece et al., 1997). Sensing entails scanning the environment from which opportunities or threats are identified, while the organization management seizes the opportunities and eludes any threats by formulating and implementing requisite strategies, whose success may require some fundamental changes in the organization, thus restructuring and reconfiguration (Teece, 2007; Li & Liu, 2014). Scanning the environment is a major aspect of exploration while implementation is a key component in exploitation (Raisch & Birkinshaw, 2013). Organizational ambidexterity which entails the concurrent undertaking of exploration and exploitation is therefore a dynamic capability.

The results indicate that LMFs in Kenya concurrently undertake exploration and exploitation undertakings, as evidenced by the mean rating of 3.83 in the Likert-like scale, meaning that the firms to a large extent concurrently undertake exploration and exploitation undertakings. Also, the study established that organizational ambidexterity is positively and significantly associated with the performance of Kenyan LMFs. The research thus supports dynamic capabilities theory.

5.3 Organizational Ambidexterity, Organizational Design, and Organizational Performance

Secondly, the study aimed to determine the role of organizational design in the organizational ambidexterity - performance relationship of LMFs in Kenya. The related hypothesis that: $H0_2$: Organizational design does not mediate the organizational ambidexterity influence on performance of LMFs in Kenya, was rejected. Thus, the conclusion that the organizational ambidexterity - performance relationship of LMFs in Kenya is partially mediated by organizational design.

Also, the researcher sought to determine the organizational design mediation role on the association between organizational ambidexterity and the individual SBSC organizational performance perspectives; namely shareholder interests, customer satisfaction, organizational processes, human factor, societal and environmental performance. The findings indicate partial organizational design mediating role for the six individual SBSC performance measurement perspectives. The study therefore concludes that organizational design has partial mediation role in the association between organizational ambidexterity and the individual SBSC perspective performance of LMFs in Kenya.

The study findings are in tandem with earlier related studies. Hill and Birkinshaw (2014) whose study on Corporate Venture units found a positive association between structural design and ambidextrous orientation development. Also, Boumgarden et al. (2012) in their study found structural designs (spatial separation) aids organizational ambidexterity and therefore enhances performance.

Similarly, O'Reilly and Tushman (2011) reported a mediating effect of structural mechanisms linked with top management's integration on organizational ambidexterity and performance relationship. Further, Kariuki (2015) study findings established a significant impact of structure on the performance of Kenyan large manufacturing enterprises. These are in tandem with the current study finding that organizational design has a mediating role in the organizational ambidexterity influence on performance of Kenyan LMFs.

The mediation results support organizational configurations theory which posits that configuring the organization so that all these elements fit together with key strategic challenges including their environment, is critical to strategy implementation and organizational success (Mintzberg, 1979). The study findings show organizational design mediation role in the organizational ambidexterity - organizational performance relationship. Due to the appropriate alignment of organizational design and the need for simultaneous undertaking of explorative and exploitative activities, Kenyan LMFs have experienced the indirect positive organizational ambidexterity influence on their performance.

The mediation results also support the Dynamic capabilities theory which assumes that the organization's ability to configure and reconfigure (that is, design or redesign) its structure, processes and assets to create growth and adaptation within the changing environment enhances its competitive advantage and sustained superior performance (Teece et al., 1997). According to Teece (2007), transformation through configuration and reconfiguration of organizational designs (structure, processes and relationships) is a dynamic capability. Organizational ambidexterity triggers organizational design alignment through the implementation of appropriate design structures and effect on performance (Raisch & Birkinshaw, 2008). The results show that LMFs in Kenya have used mixed organizational designs, which have enabled them to benefit from the synergetic effect of organizational ambidexterity, therefore improved performance. Kenyan LMFs have therefore developed the dynamic capability through configuration and reconfiguration of their organizational designs. Accordingly, the study findings affirm Girod and Whittington (2017) who recognized the organizational ability to achieve an aligned configuration as a dynamic capability issue, thus support dynamic capabilities theory.

5.4 Organizational Ambidexterity, Environmental Dynamism and Organizational Performance

Assessing the environmental dynamism effect on the organizational ambidexterity - performance association of LMFs in Kenya was the third study objective. The hypothesis (H0$_3$) was that: "Environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on performance of LMFs in Kenya". From the outcomes, the study failed to reject the null hypothesis. The implication is that environmental dynamism does not significantly moderate the organizational ambidexterity influence on performance of LMFs in Kenya.

Also, the study went on to assess the environmental dynamism moderating effect on the association between organizational ambidexterity and individual SBSC performance measures. The outcomes indicate that environmental dynamism does not significantly moderate organizational ambidexterity influence on any of the SBSC performance indicators. The findings show an insignificant interaction term (organizational ambidexterity and environmental dynamism product) effect at p>0.05.

The study findings affirm earlier studies that reported no significant moderating effect of environmental dynamism. Tamayo-Torres et al. (2017) studied environmental dynamism and organizational ambidexterity effect on manufacturing performance and reported stronger manufacturing performance - organizational ambidexterity association in relatively dynamic environments, compared to that in steady and very dynamic environments, where the association was weaker. Girod and Whittington (2017) study of restructuring, dynamic capabilities and environmental dynamism roles on firm performance reported negative environmental dynamism moderating effect on restructuring - firm performance relationships. In his study, Mwazumbo (2016) reported that environmental dynamism does not significantly influence organizational resources - dynamic capabilities relationship of Kenyan large manufacturing companies.

The findings of this study contrast previous empirical findings by similar studies, which reported significant environmental dynamism moderating effect on organizational ambidexterity - performance association. In their study, Halevi et al. (2015), found significant environmental dynamism moderating effect on Top Management Team (TMT) behavioural integration on ambidexterity. Also, positive environmental dynamism moderating effect on reconfiguration – firm performance was established in

the study of reconfiguration, dynamic capabilities and environmental dynamism roles on firm performance by Girod and Whittington (2017). The current study reported no significant environmental dynamism moderating effect on the influence of organizational ambidexterity on performance of LMFs in Kenya. This suggests that consensus is still lacking among researchers on environmental dynamism effect on various firm-level factors.

The results support the contingency theory which stresses a no "one-fits-all" approach to strategy. Instead, organizational performance is dependent upon the internal and external situation, with emphasis on striking an optimal balance in adapting to external environment changes and satisfying the needs in its internal processes, through alignments and optimal fits (Donaldson, 2001). According to Lawrence and Lorsch (1967), external environment concept, which is postulated by environmental dynamism, among other characteristics, is supported by the contingency theory. Accordingly, the environment presents restrictions to which the firm must appropriately adapt. O'Reilly and Tushman (2013) opine that the firm's environment can be a contingent factor on the ambidexterity effects on firm performance. The study established that LMFs in Kenya are operating in a dynamic external environment. The average Likert-like scale indicates 3.78 on the intensity of change and 3.75 on the frequency of change, with a combined average score of 3.765. These indicate that "to a large extent", the external environment in which LMFs in Kenya are operating in experiences high intensity and high frequency of change. This therefore confirms dynamism in the Kenyan LMFs' external environment. Also, the study reported no significant moderating effect in the organizational ambidexterity - performance relationship of LMFs in Kenya. The study therefore supports the contingency theory.

5.5 Organizational Ambidexterity, Organizational Design, and Environmental Dynamism on Organizational Performance

The study's fourth and final objective intended to evaluate the organizational ambidexterity, organizational design, and environmental dynamism joint effect on the performance of Kenyan LMFs. The hypothesis was; $H0_4$: Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on performance of LMFs in Kenya. The results indicate positive and statistically significant organizational ambidexterity, organizational design and environmental dynamism joint effect on performance of LMFs in Kenya.

The study proceeded to evaluate the combined effect of organizational ambidexterity, organizational design and environmental dynamism on the individual SBSC performance perspectives. The findings show that the organizational ambidexterity, organizational design and environmental dynamism joint effect on all the SBSC performance indicators of LMFs in Kenya is positive and statistically significant.

The study findings support the observation by DeWaal (2004) that an organization performance variation is influenced by various factors, and that maximizing the various factors joint effect results in enhanced organizations performance. The null hypothesis was rejected; implying that organizational ambidexterity, design and environmental dynamism had statistically significant joint effect on organizational performance of LMFs in Kenya. The contingency theory assertion that performance is contingent on a combination of diverse variables is also supported by the results.

Further, the results support the dynamic capabilities theory. Dynamic capabilities theory assumes that organizations that apply dynamic capabilities experience improved performance (Teece et al., 1997). Dynamic capabilities entail the managerial activities

of sensing, seizing and transforming, whose combined effect is improved organizations performance (Teece, 2007). Organizational ambidexterity (sensing and seizing) and organizational design (transformation through redesigning /reconfiguration) are dynamic capabilities. The study results have shown that the organizational ambidexterity, design and environmental dynamism joint effect on performance of LMFs in Kenya is positive and statistically significant.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter evaluates the study's outcome. The four study aims and the corresponding hypotheses guided the presentation of the evaluation in the findings summary. The chapter also presents the key conclusions, recommendations, limitations, and the study's theory, policy, and practice implications. Finally, suggestions are offered for additional studies.

6.2 Summary of Findings

The main study objective was determination of the role of organizational design and environmental dynamism in the organizational ambidexterity - performance relationship of LMFs in Kenya. The specific objectives and the corresponding hypotheses included: first to establish the organizational ambidexterity influence on the performance of LMFs in Kenya with hypothesis $H0_1$: Organizational ambidexterity has no significant influence on performance of LMFs in Kenya. Second, to determine the organizational design role in the organizational ambidexterity and performance relationship of Kenyan LMFs with hypothesis $H0_2$: "Organizational design has no mediating role on the influence of organizational ambidexterity on performance of Kenyan LMFs".

Third: to assess the environmental dynamism effect on the organizational ambidexterity and performance relationship of Kenyan LMFs and the corresponding hypothesis $H0_3$: environmental dynamism has no significant moderating effect on the influence of organizational ambidexterity on the performance of Kenyan LMFs in Kenya. Fourth and

final was to evaluate the organizational ambidexterity, organizational design, and environmental dynamism joint effect on performance of Kenyan LMFs and the corresponding hypothesis was H0$_4$: Organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on performance of LMFs in Kenya.

The study population comprised all the 107 LMFs in Kenya that were KAM members at the time of the study. These were as listed in the KAM Directory of 2018. It was a census study. The hypotheses tests data was gotten from primary sources. Descriptive statistics, correlation and regression analysis were applied in processing the data.

The findings reveal positive and significant organizational ambidexterity influence on the performance of Kenyan LMFs. It was also established that organizational design has partial mediation role in the organizational ambidexterity - performance association of LMFs in Kenya. Further, the results show no significant environmental dynamism moderating effect on organizational ambidexterity - performance relationship of LMFs in Kenya. Finally, the study revealed positive and statistically significant joint effect of organizational ambidexterity, organizational design and environmental dynamism on performance of Kenyan LMFs.

6.3 Conclusion

The main study objective was determination of organizational design and environmental dynamism role in the organizational ambidexterity - performance relationship of Kenyan LMFs. This was achieved by first establishing positive and significant organizational ambidexterity influence on Kenyan LMFs performance. The study conclusion based on this result is that organizational ambidexterity contributes to the achievement of enhanced organizational performance.

Second, the study aimed to determine the organizational design role in the organizational ambidexterity - performance relationship of LMFs in Kenya. The objective was actualized by testing the hypothesis that organizational design has no mediation role in the organizational ambidexterity - performance relationship of Kenyan LMFs. The null hypothesis was rejected leading to the conclusion that organizational ambidexterity - performance relationship of LMFs in Kenya is partially mediated by organizational design. The study concludes that organizational design partially enables the easing of the tensions in the concurrent undertaking of exploration and exploitation activities.

The synergetic ambidexterity effect is felt, leading to the indirect positive effect on performance, partially through organizational design. Also, based on the finding, this study concludes that appropriate alignment of organizational strategy with organizational design results in improved organizational performance. Further, the study concludes that organizational design can enhance or inhibit organizational ambidexterity thus affect performance.

Third, the research sought to assess the environmental dynamism effect on the organizational ambidexterity - performance association of Kenyan LMFs. This was realized by testing hypothesis that environmental dynamism has no significant moderating effect on the organizational ambidexterity - performance association of Kenyan LMFs. There was no evidence to confirm environmental dynamism moderating effect on the organizational ambidexterity - performance association. This implies that environmental dynamism has no significant moderating effect on the organizational ambidexterity influence on performance of Kenyan LMFs. The study concludes that organizational ambidexterity influence on organizational performance is not

significantly affected by environmental dynamism. The study also concludes that organizational ambidexterity positive impact on organizational performance is not affected by environmental dynamism. Further, this leads to another conclusion that organizational ambidexterity is desirable if an organization is to attain enhanced performance, even in dynamic environments.

Fourth the study evaluated the organizational ambidexterity, organizational design, and environmental dynamism joint effect on performance through analysing the hypothesis that organizational ambidexterity, organizational design and environmental dynamism have no significant joint effect on performance of LMFs in Kenya. Organizational ambidexterity, organizational design, and environmental dynamism joint effect on organizational performance was positive and statistically significant. Based on this outcome, it is the study's conclusion that if the LMFs would have a good alignment of the organizational ambidexterity strategy with organizational design and the external environment, their performance would improve. Also, the study concludes that for greater impact and achievement of synergetic effects on LMFs, organizational ambidexterity, organizational design, and environmental dynamism need to be considered jointly.

A stakeholder centric methodology where economic, societal and environmental perspectives were considered in operationalization of organizational performance. According to Hubbard (2009), the changing expectations by stakeholders on the firm's financial, societal and environmental responsibilities have made measuring organizational performance complex. The SBSC which enhances the Kaplan and Norton (1992) balanced scorecard (BSC) by adding elements to incorporate an organization's

focus on the community and the environment within which it operates has been emphasized in today's performance management. Performance in this study was operationalized using the SBSC, which includes performance measures on; shareholder interests, organizational processes, customer satisfaction, human factor, societal, and environmental concerns (Hubbard, 2009). The study reported statistically significant results on individual SBSC performance perspectives. The study results lead to the conclusion that sustainability should be considered in organizational performance measures, by including sustainability measures of societal and environmental involvement, and not restrict to only the traditional BSC measures. This is in line with the assertions of Hubbard (2009) that SBSC should be applied in measuring organizational performance in view of the changing stakeholders' expectations.

6.4 Implication of the Study for Knowledge, Theory, Policy, and Practice

The study results have implications on knowledge, theory, policy, and managerial practice.

6.4.1 Implications for Knowledge

According to June et al. (2013), empirically tested research findings on organizational ambidexterity and performance relationship are currently scanty and inconclusive. This study adds into these studies, thus contributes to knowledge. Also, consensus is currently lacking on the ambidexterity enablers such as organizational design (Zhou & Wu, 2010). This study contributes to the debate with the findings that organizational design has mediating role on organizational ambidexterity - performance relationship.

The study enhances the literature on the association between environmental dynamism and other factors on the performance of organizations, by exploring the moderating impact on the Kenyan LMFs' organizational ambidexterity - performance relationship. This is a contribution in addressing the assertion that researchers have not adequately affirmed the nature of environmental dynamism effect on organizational ambidexterity - environmental alignment (Tamayo –Torres et al., 2017). The results indicate no significant moderating effect of environmental dynamism on the influence of organizational ambidexterity on performance of Kenyan LMFs.

This study enhances the literature on the joint effect studies, evaluating joint variable effect on organizational performance. Previous studies review shows no evidence of any study on the organizational ambidexterity, organizational design and environmental dynamism joint effect on the performance of Kenyan LMFs in a single study. This study has addressed this gap and assessed the organizational ambidexterity, organizational design and environmental dynamism joint effect on the performance of Kenyan LMFs; in a single study.

Additionally, the empirical testing of organizational ambidexterity, organizational design and environmental dynamism synergetic organizational performance effect and therefore contribution to an integrated framework and knowledge. Besides, the contextual gap of the lacking clarity of whether and how organizational ambidexterity influences the performance of Kenyan LMFs is also addressed. Furthermore, the study adds to the limited organizational ambidexterity research literature, thereby addresses the gap of limited studies conducted on organizational ambidexterity in the Kenyan manufacturing sector.

6.4.2 Theoretical and Conceptual Implications

The study outcomes have implication for the theories and concepts on whose basis it is founded. The study outcomes show positive and significant organizational ambidexterity influence on organizational performance and thus supports the DCT of strategy. The DCT argues that deployment of dynamic capabilities by firms leads to competitive advantages and sustained superior performance by enhancing the firm's sensing effectiveness and external environment dynamics adaptation seizing capability (Teece et al, .1997). Sensing entails the organization's capacity to continuously seek knowledge about new opportunities and threats by scanning the environment, while seizing involves the exploitation of the identified opportunities and eluding of threats through formulation and implementation of appropriate strategies (Teece, 2007).

Exploration involves activities such as new knowledge search (similar to sensing), while exploitation entails undertakings such as implementation (similar to seizing). Organizational ambidexterity, which entails concurrent undertaking of explorative and exploitative activities, is thus a dynamic capability. The study results established concurrent exploration and exploitation activities undertaking and its resultant positive and significant performance effect of Kenyan LMFs. Also, arising from several criticisms on the DCT, Teece et al. (1997) recommended further research to show how organizations get to improve. This study therefore contributed by the empirical analysis of organizational ambidexterity influence on performance of organizations. The study findings thus have implications on dynamic capabilities theory.

Scholars have continued to question what constitute dynamic capabilities and their source(s) (Easterby-Smith et al., 2009). The study has established organizational ambidexterity effect on performance. The affirmation provides clarification on sources of dynamic capabilities, therefore effectively contributing to the debate. Further, the findings are from LMFs and thus contributes to the recurring question of lacking clarity on industry - specific dynamic capability building processes (Gregory & Pemberton, 2011). The conceptualization of organizational ambidexterity contributes towards the building of the currently lacking consensus among researchers on its conceptualizations, measurements, and interpretation of dynamic capabilities (Peteraf et al., 2013).

The study contributes towards the development of configurations theory. Configuration theory posits that designing the organization to fit the implementation requirements of the organization's strategic initiative enhances performance (Mintzberg, 1979). It is therefore expected that the appropriate fit between configuration and context impacts performance positively. The study links organizational ambidexterity positive and significant organizational performance influence to organizational configurations by confirming that organizational design has partial mediation role in the organizational ambidexterity influence on performance of Kenyan LMFs.

Scholars hold divergent views on organizational design as an enabler to organizational ambidexterity arguing that as much as duality may allow for separate unit - level focus and alignment, intra-organizational conflicts may emerge, and may lead to low performance (Doty, Glick & Huber, 1993). The study findings that mixed designs partially mediate in the organizational ambidexterity - performance relationship of

organizations is a contribution to this debate on organizational design as an enabler of organizational ambidexterity in the association with organizational performance. Also, conceptualization and testing of organizational design contribute towards the cited limitation of instrumentation deficiency divergent research designs and analysis, and conflicting conceptualizations (Fiss, 2011), therefore aiding organizational configurations - performance impact research (Ferguson & Ketchen, 1999).

The results demonstrate mixed organizational designs by Kenyan LMFs, as indicated by an average 5-point Likert-like scale score of 3.86. The mid-point of 3.00 was operationalized as mixed design and therefore the 3.86 average indicates mixed design with more elements of mechanistic designs. According to Raisch and Zimmermann (2017), the ambidexterity complementary effect in generating high performance is undermined by negative externalities created by organizational designs, hence a paradox. Kenyan LMFs have implemented mixed organizational designs, which have enabled the partial mediation role of organizational design on the organizational ambidexterity influence on performance. Adler et al. (1999) assertion that this paradox may be resolved by combining mechanistic and organic characteristics is therefore affirmed by the study findings. Hence, the study has conceptual implications on ambidexterity and organizational design concepts.

The contingency theory supports the external environment concept (Lawrence & Lorsch, 1967) and its related characteristics, including environmental dynamism (Dess & Beard, 1984). The theory key highlighting is that there exists no stand-alone explanation for commercial outcomes but rather that these are contingent on other

internal or external factors. The theory recommends that contingency factors should be considered in strategic management. Further, according to Van De Ven, Ganco and Hinings (2013), any proposition that contains a moderating variable (for example environmental dynamism in the current study), is a contingency theory. The study outcome showed that environmental dynamism had no significant moderating effect in organizational ambidexterity - performance relationship.

Also, the study results support the conceptual assertion by O'Reilly and Tushman (2013) that the firm's environment can be a contingent factor on ambidexterity effects on firm performance, with ambidexterity effect being more favourable under uncertainty environments. Similarly, the study findings support the conceptual arguments by Lewin, Long and Carroll (1999), that the firm's exploitation and exploration effectiveness is contingent on different contextual conditions. Likewise, the study established that organizational performance is product combination of different causes; namely, organizational ambidexterity, design and environmental dynamism. Overall, the study findings support the contingency theory.

6.4.3 Implications for Policy

The study outcomes are significant in influencing policy in the manufacturing sector. The policymakers will benefit in formulating policy on the manufacturing sector from the understanding of organizational ambidexterity effects on organizational performance. The study established positive and significant influence of the concurrent exploration and exploitation undertakings (organizational ambidexterity) on

performance of Kenyan LMFs. Policymakers are therefore ably guided and advised to formulate policies that encourage duality in the manufacturing sector. The sector players should be inspired and supported to simultaneously pursue exploration and exploitation as opposed to focus on only one of either activity.

The research established that organizational design has partial mediation role in the organizational ambidexterity - performance relationship of LMFs in Kenya. This is useful as policymakers are well guided on the organizational designs to ensure the benefits of organizational ambidexterity are realized. The study established that LMFs in Kenya have mixed organizational designs; which the findings reported partially aid the concurrent performance of exploration and exploitation undertakings (organizational ambidexterity) resulting in positive and significant effect on performance. The manufacturing sector policymakers could therefore put in place mechanisms to ensure strategy -organizational design alignment for the manufacturing sector.

The study results indicate no significant environmental dynamism moderating effect on organizational ambidexterity - performance association in Kenyan LMFs. This means that the desired enhanced performance effect of organizational ambidexterity is not significantly affected by environmental dynamism. This non - moderating effect implies that organizational ambidexterity is itself a mitigation against environmental dynamism negative effect on organizational performance. Nonetheless, the finding still remains important as a reminder that manufacturing firms must always take the external environment into account in their strategy and related execution.

Policymakers are advised to ensure continual environmental scanning and appropriate measures in place to have alignment with the environmental changes at all times. Organizational ambidexterity must be aligned to the environmental demands and ensure appropriate organizational designs. The study finding that the joint effect of organizational ambidexterity, organizational design, and environmental dynamism is positive and significant is useful for policymakers to ensure maximization of the joint effect. Continuous scanning and alignment will enable policymakers in the formulation of policies relevant to the contemporary manufacturing sector requirements.

6.4.4 Implications for Management and Practice

The research outcomes have management and practice implications. The study findings established positive and significant organizational ambidexterity - performance association on Kenyan LMFs. Management and practitioners are now enabled in simultaneously exploiting current competencies while exploring future opportunities, thus achieve the organization's enhanced performance.

The research findings indicate mixed organizational designs by the Kenyan LMFs. The study reported partial organizational design mediating role in the organizational ambidexterity - performance association. This implies that mixed organizational designs effectively reduce the related tensions of ambidexterity, including intra - organizational tensions and conflict. Management and practitioners are therefore empowered on the requisite organizational design put in place for effective ambidexterity execution.

The study findings established no significant environmental dynamism moderating effect on the organizational ambidexterity - performance association, hence an implication that organizational ambidexterity enables the minimizing of negative

environmental dynamism effects. Company leadership and practitioners will be enabled to consider the environmental dynamism effect in their planning and execution to minimize the negative effects, therefore performance enhancement. This is achieved through the continual environmental scanning and alignment of the strategic plans with the environmental status.

6.5 Recommendations of the Study

The research established that organizational ambidexterity contributes to the performance of Kenyan LMFs. The research recommends that LMFs need to formulate adequate strategies to ensure success in simultaneous pursuance of exploration and exploitation activities that would therefore contribute to new innovation as well as efficiency and effectiveness enhancement in the current business. The study therefore recommends that policymakers should embrace organizational ambidexterity for the attainment of Kenya's Vision 2030.

The study findings revealed no significant environmental dynamism moderating effect on the organizational ambidexterity - performance association. This implies that organizational ambidexterity minimizes impact of environmental changes, including dynamism. This signifies that there is need to ensure continual alignment with external environment changes through continual environmental scanning to identify the changes and ensure timely alignment with strategy and therefore enhanced organizational performance. The research also established that the organizational ambidexterity, organizational design and environmental dynamism joint effect on performance was positive and statistically significant. It is therefore recommended that Kenyan LMFs' management should ensure appropriate balance in the variable combinations to attain the desired improved performance.

Also recommended is balance in the amount of explorative as well as exploitative activities together with well aligned supportive organizational design. These should be in consideration of the external environment fluctuations and accordingly ensure alignment of the ambidexterity strategy and the organizational design. This will ensure the effectiveness of organizational design in easing the emerging tensions in concurrent performance of explorative and exploitative activities whose synergetic impact will lead to higher performance.

The study further justifies the significance of sustainability measures of performance in response to changing stakeholder demands for sustainability reporting. The research thus recommends that LMFs should not only focus on financial, customer perspective, internal processes, learning and growth measures, but also societal and environmental perspectives, which are the recommended sustainability measures of performance. Embracing SBSC enhances focus on sustainability and alignment with changes in stakeholder expectations in measuring organizational performance.

6.6 Limitations of the Study

Several limitations were encountered while conducting the research. However, the study included mitigation measures, thus no compromise to the results quality. This study was guided by positivist paradigm which is rooted in atomism, quantification and operationalization. Positivism has been criticized for failing to acknowledge that the world is fragmented with disorganized units that are distinct from each other and can only be critically understood through interactions. The positivist aim of measuring variables of social phenomena through quantification has also been criticized. Limitations of positivist's paradigm have no doubt crept into the study and its findings.

The study was quantitative in nature, narrowing the research to focus on only measures that are quantifiable yet a qualitative study or a combination of both would have provided a richer array of variables to be studied, making the research more robust and less biased. Also, the study outcomes are based on observations at a specific point time with no monitoring of variable changes through their observation over time, as would be the case with longitudinal study design, thus limiting the study which used cross-sectional design.

Data was collected mainly using a questionnaire in which participants were requested to score, based on their opinions, statements on a Likert-like scale. There was only one respondent per firm. Although the use of only senior managers (CEOs/GMs/HODs) to respond to the questionnaires was expected to enhance objectivity, the limitation of single source bias as well as possibility of subjectivity and personal bias cannot be completely eliminated. Also, the generalization of the results is limited by the collection of data only from senior managers. Although expected to be most objective, the fact that the respondents were all at management level may have presented in the study the issue of social desirability bias and other self-presentational concerns which may have reduced the predictive power of the variables

In context, the study was done in Kenyan manufacturing firms only. The study was limited to LMFs that were members of KAM and excludes small, medium size manufacturing firms, large manufacturing firms who were not KAM members, as well as firms not in manufacturing sector. The context focus of the study therefore confines

the research results generalization possibility. Although the sector/industry focus improves internal validity, care should be exercised in the results generalization to other sectors/industries. It should be kept in mind that findings in LMFs sub-sector context may not necessarily translate into another sector context(s); for example financial services, telecommunication, transport, etc.

6.7 Suggestions for Further Research

The data in this research was collected from a single source. One senior manager (General Manager or Head of department) provided the data by responding to the questionnaire which covered the various variables of the research. Relying on a response from one person in a big organization may have some limitations; such as single source and social desirability bias. Future researchers should involve more people across the management hierarchy and in different settings such as focus groups.

Future research should consider incorporating the use of several types of data collection methods and techniques. This research was restricted by the use of questionnaire only. As such, other means of data collection; including interviews, observations and case studies would be recommended. Longitudinal design can be considered in future where the organizational ambidexterity impact on organizational performance is observed and analysed over time and to determine causal association, thus overcome the cross sectional research design limitations. This is especially considering the general dynamism and long term nature of the causality relationships.

The variables in the research may be operationalized and measured differently by diverse researchers given the significance of the condition at hand. Given the no significant environmental dynamism moderating effect in the association between organizational ambidexterity and firm performance finding, it may in future be tested as mediating variable. Also recommended is empirical testing of the joint effect with environmental dynamism as an independent variable rather than moderating variable; and also with organizational design as an independent variable rather than mediating variable. Contingent factors outside environmental dynamism should be considered in future studies. Further, research should consider research specific components of organizational ambidexterity, organizational design, environmental dynamism and organizational performance, as this may provide more distinct results in terms of specific variables that should be given more focus.

This study was based on Kenyan LMFs. Future researchers should determine similarities or differences through study replication in other African countries. Also, research should be conducted in Kenyan small and medium manufacturing enterprises. Further, a comparative study, replicating this study in a big population covering many industries should be considered. Such large population would be a useful extension of this study and would further enrich the current findings.

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APPENDICES

Appendix I: Introduction Letter

UNIVERSITY OF NAIROBI
COLLEGE OF HUMANITIES & SOCIAL SCIENCES
SCHOOL OF BUSINESS

Telephone: 4184160-5 Ext 215   P.O. Box 30197
Telegrams: "Varsity" Nairobi   Nairobi, KENYA
Telex: 22095 Varsity

13th September, 2019

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

INTRODUCTORY LETTER FOR RESEARCH
PATRICK MAKAU MUTISYA – REGISTRATION NO. D80/97068/2015

The above named is a registered PhD candidate at the University of Nairobi, School of Business. He is conducting research on *"Organizational Ambidexterity, Design, Environmental Dynamism and Performance of Large Manufacturing Firms in Kenya."*

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the thesis. The information and data required is needed for academic purposes only and will be treated in **Strict-Confidence**.

Your assistance will be highly appreciated.

Thank you.

Prof.Martin Ogutu
For: Associate Dean, Graduate Business Studies
School Of Business

MO/jkm

Appendix II: Personal Introduction Letter

Patrick Makau Mutisya

University of Nairobi

P.O Box 30197 – 00100

NAIROBI

16th September, 2019

Dear Respondent,
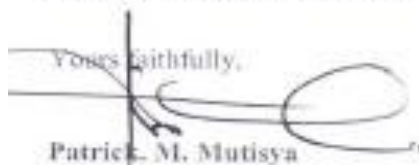
RE: REQUEST FOR ACADEMIC RESEARCH DATA

I am a PhD candidate at the University of Nairobi, School of Business. As part of the requirements for the award of this degree, one is expected to undertake a research study. To this effect, I am undertaking an academic research thesis on; **Organizational Ambidexterity, Design, Environmental Dynamism and Performance of Large Manufacturing Firms in Kenya.**

Your firm is part of the population of interest. As a result, I humbly request for your participation in the study. The information collected will be used for this academic research and will be treated with utmost confidentiality. The target respondents are senior managers in your organization. I will be very grateful if you could spare part of your time to respond to the questions in the questionnaire. I further request you to be as honest as possible. In addition to providing financial information as indicated, I humbly request you if possible to provide us with copies of the related financial statements.

I have retained **Mr. Alfred Nyawir** to assist me in collecting the data. In this regard, I politely request you to please accord him the necessary assistance.

Thank you very much for your cooperation and participation in this research.

Yours faithfully,

Patrick. M. Mutisya

PhD Candidate

Tel: 0722 - 444298

Email: pmmutisya@hotmail.com

Appendix III: NACOSTI License

National Commission for Science, Technology and Innovation

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 286435

Date of Issue: 19/September/2019

RESEARCH LICENSE

This is to Certify that Mr.. Patrick Mutisya of University of Nairobi, has been licensed to conduct research in Nairobi on the topic: ORGANIZATIONAL AMBIDEXTERITY, DESIGN, ENVIRONMENTAL DYNAMISM AND PERFORMANCE OF LARGE MANUFACTURING FIRMS IN KENYA for the period ending : 19/September/2020.

License No: NACOSTI/P/19/1615

286435

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document,
Scan the QR Code using QR scanner application.

Appendix IV: Research Questionnaire

SECTION A BACKGROUND INFORMATION

(i) Firm Name ……………………………………………………………………

(ii) Year of incorporation ……………………………………………………

(iii) Country of incorporation …………………………………………………..

(v) Scope of operation (Tick as appropriate)

(a) National (within Kenya) ☐ (c) Continental (within Africa) ☐

(b) Regional (within East Africa) ☐ (d) Global (within Africa and beyond) ☐

(vi) Ownership structure (Tick as appropriate)

(a) Fully locally owned ☐ (b) Fully Foreign owned ☐

(c) Both locally and foreign owned ☐

Give percentage of ownership

Local ………… % Foreign ……….. %

(vii) Position in the Organization……………………………………………………….

Chief Executive Officer/Managing Director (CEO/MD) ☐

General Manager ☐

Head of Department (HOD) ☐

Please specify the department……………………………………………………

Production ☐ Finance ☐ Human Resources ☐ Sales/Marketing ☐

(viii) Years worked in the organization ……………………………………………

Less than 5 ☐ 5 – 10 ☐ 11 – 15 ☐ 16 – 20 ☐ Over 20 ☐

(ix) Number of employees in the organization………………………………………..

Less than 50 ☐ 50 – 100 ☐ 101 – 200 ☐ 201 – 300 ☐ Over 300 ☐

(x) Annual Sales Revenue (Turnover) in 2018 in Kenya Shillings Millions…………..

Less than 100 ☐ 101-400 ☐ 401- 700 ☐ 701- 1,000 ☐ Over 1,000 ☐

SECTION B   ORGANIZATIONAL AMBIDEXTERITY

(a)   Exploration

In a scale of 1 to 5, indicate the extent to which the statements below explain your firm's task performance approach. Please tick as appropriate guided by: 1 – Not at all; 2 - Small extent; 3 - Moderate extent; 4 - Large extent; 5 - Very large extent

	Statements	1	2	3	4	5
(i)	Seeking and searching for new knowledge (e.g. on customer demands, novel technological trends, and new opportunities).	☐	☐	☐	☐	☐
(ii)	Experimentation by for instance, introducing novel technological, products/services and ideas by thinking "outside the box".	☐	☐	☐	☐	☐
(iii)	Flexibility and readiness for variation from the norm.	☐	☐	☐	☐	☐
(iv)	Ready to take risks (e.g. on new ideas, technologies, and products/services).	☐	☐	☐	☐	☐
(v)	Innovativeness in, for example, creating new products or satisfying its customers' needs.	☐	☐	☐	☐	☐
(vi)	Aggressiveness in new markets and actively targeting new customer groups.	☐	☐	☐	☐	☐

(b)   Exploitation

In a scale of 1 to 5, indicate the extent to which the statements below explain your firm's task performance approach. Please tick as appropriate guided by: 1 – Not at all; 2 - Small extent; 3 - Moderate extent; 4 - Large extent; 5 - Very large extent

	Statements	1	2	3	4	5
(i)	Increases and exploits efficiencies in the current operations through continual improvement in execution.	☐	☐	☐	☐	☐
(ii)	Standardization and minimization of variation from standards.	☐	☐	☐	☐	☐
(iii)	Continual refinement, commitment to quality and reliability, improvement and cost reduction in production processes/operations.	☐	☐	☐	☐	☐
(iv)	Continually conducting surveys on existing customers' satisfaction.	☐	☐	☐	☐	☐
(v)	Continually fine-tuning products to enhance customer satisfaction.	☐	☐	☐	☐	☐
(vi)	Enhancing market size through deeper penetration into existing customer base.	☐	☐	☐	☐	☐

SECTION C ORGANIZATIONAL DESIGN

In a scale of 1 to 5, indicate the extent to which the statements below best explain the organizational design characteristics of your firm. Please tick as appropriate guided by: 1 - Not at all; 2 - Small extent; 3 - Moderate extent; 4 - Large extent; 5 - Very large extent

	Statements	1	2	3	4	5
(i)	Highly formal organizational structure.	☐	☐	☐	☐	☐
(ii)	Defined lines of authority.	☐	☐	☐	☐	☐
(iii)	Precise definition of employee responsibilities and expected deliverables and coordination relationships through detailed job descriptions.	☐	☐	☐	☐	☐
(iv)	Break down of the tasks to be performed and assigning these to specialized functions/departments.	☐	☐	☐	☐	☐
(v)	High level of specialization in the tasks within the assigned functions/departments.	☐	☐	☐	☐	☐
(vi)	Hierarchical structure of contro1 and authority.	☐	☐	☐	☐	☐
(vii)	Knowledge about and control of the task are located at the top of the hierarchy.	☐	☐	☐	☐	☐
(viii)	Vertical communication with emphasis on instructions.	☐	☐	☐	☐	☐
(ix)	Detailed procedures and instructions from superiors govern operations and behaviour.	☐	☐	☐	☐	☐
(x)	Close adherence to the chain of command.	☐	☐	☐	☐	☐
(xi)	Loyalty and obedience are mandatory.	☐	☐	☐	☐	☐
(xii)	Greater importance and prestige attached to homegrown rather than diverse knowledge, experience and skill.	☐	☐	☐	☐	☐
(xiii)	Complex formal control systems applied in most of the operations.	☐	☐	☐	☐	☐
(xiv)	Greater emphasis on home-grown ideas as opposed to foreign.	☐	☐	☐	☐	☐
(xv)	An organization-wide standardized management style.	☐	☐	☐	☐	☐

SECTION D ENVIRONMENTAL DYNAMISM

(a)   Intensity of change

In your assessment and in a scale of 1 to 5 indicate the extent to which the following statements best describes the intensity of changes in the listed aspects of the external environment of your firm in the last one (1) year: Key: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent

	Statement	1	2	3	4	5
(i)	Intensified enforcement of taxation regulations.	☐	☐	☐	☐	☐
(ii)	Reduced credit available from lending institutions.	☐	☐	☐	☐	☐
(iii)	Increased influx of cheaper imported products.	☐	☐	☐	☐	☐
(iv)	Increasing cost of production inputs.	☐	☐	☐	☐	☐
(v)	The technology in our industry is changing in a major way.	☐	☐	☐	☐	☐
(vi)	Increased trade union demands for higher wages.	☐	☐	☐	☐	☐
(vii)	Climatic conditions and weather patterns are unpredictable.	☐	☐	☐	☐	☐

		1 2 3 4 5
(viii)	Pressure from NGOs for environmental preservation is intense.	☐☐☐☐☐
(ix)	Increased enforcement of consumer protection laws.	☐☐☐☐☐
(x)	Intensive enforcement of health and safety laws.	☐☐☐☐☐

(b)   Frequency of change

In your assessment and in a scale of 1 to 5 indicate the extent to which the following statements best describes the frequency of changes in the listed aspects of the external environment of your firm in the last one (1) year: Key: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent

	Statement	1 2 3 4 5
(i)	Government policies change regularly.	☐☐☐☐☐
(ii)	Tax regimes are continually changing.	☐☐☐☐☐
(iii)	Interest rates change regularly.	☐☐☐☐☐
(iv)	Foreign exchange rates are continually changing.	☐☐☐☐☐
(v)	Increasing frequency of inflation rate changes.	☐☐☐☐☐
(vi)	Fast changing job performance attitudes, especially among the youth.	☐☐☐☐☐
(vii)	Consumer preferences are changing fast and often.	☐☐☐☐☐
(viii)	Technology in our industry is changing rapidly.	☐☐☐☐☐
(ix)	Electioneering related political stability uncertainty is on the increase	☐☐☐☐☐
(x)	Climatic conditions and weather patterns changing too often.	☐☐☐☐☐

SECTION E ORGANIZATIONAL PERFORMANCE

Please indicate/rate using the key provided the extent to which the following statements best describes each aspect of your firm's performance in the last five (5) years as indicated in the statements below: Key: 1 – Not at all; 2 – Small extent; 3 – Moderate extent; 4 – Large extent; 5 – Very large extent

	Statement	1 2 3 4 5
(a)	**Financial perspective**	
(i)	Our Sales Revenue/Turnover has been increasing	☐☐☐☐☐
(ii)	Profit before tax has been increasing	☐☐☐☐☐
(iii)	Return on assets has been growing	☐☐☐☐☐
(iv)	Earning per share has been growing	☐☐☐☐☐
(b)	**Customer perspective**	
(v)	Our delivery performance to customer has been improving	☐☐☐☐☐
(vi)	Quality of our products has been improving	☐☐☐☐☐
(vii)	Our customer satisfaction rate has been increasing	☐☐☐☐☐
(viii)	We have a growing market share	☐☐☐☐☐
(ix)	Customer loyalty has continued to improve	☐☐☐☐☐
(x)	Number of new customers has been increasing	☐☐☐☐☐
(c)	**Internal processes**	
(xi)	We have intensified investment in process automation	☐☐☐☐☐
(xii)	Employee morale and productivity has been growing	☐☐☐☐☐
(xiii)	Employee satisfaction has been increasing	☐☐☐☐☐
(xiv)	Our production cost per unit has been decreasing	☐☐☐☐☐

	Statement	1 2 3 4 5
(xv)	Working capital/sales has continued to improve	☐☐☐☐☐
(xvi)	Utilisation of our working capacity has been increasing	☐☐☐☐☐
(d)	**Learning & innovation**	
(xvii)	Our investment in research and development has intensified	☐☐☐☐☐
(xviii)	The number of defects has been declining	☐☐☐☐☐
(xix)	Employee skill development has been intensified	☐☐☐☐☐
(xx)	Our capacity to introduce new products has been increasing	☐☐☐☐☐
(xxi)	There has been increase in new markets by our firm	☐☐☐☐☐
(xxii)	Our firm develops new products frequently	☐☐☐☐☐
(e)	**Societal**	
(xxiii)	Community service budget has been increasing	☐☐☐☐☐
(xxiv)	Our firm has enhanced community relationships	☐☐☐☐☐
(xxv)	Our firm has increased investments in philanthropy	☐☐☐☐☐
(xxvi)	We continually enhanced dedicated community- focused activities for example, open days	☐☐☐☐☐
(f)	**Environmental**	
(xxvii)	Our material usage per unit is decreasing	☐☐☐☐☐
(xxviii)	Water usage per in our firm is decreasing	☐☐☐☐☐
(xxix)	Our energy efficiency has been improving	☐☐☐☐☐
(xxx)	We prioritize environment protection in our firm	☐☐☐☐☐

SECTION F   SECONDARY DATA COLLECTION FORM

Please provide the following information based on your firm's financial statements and report for 5 years period 2014 to 2018. For each year/performance indicator, rate the performance, guided by the key provided.

	Financial indicator/Year (2014 to 2018)	2014	2015	2016	2017	2018
(i)	Sales Revenue/Turnover (Kshs Millions) Ratings Key: 1-Less than 100; 2 - 101 to 300; 3 - 301 to 600; 4 - 601 to 800; 5 - Over 800	☐	☐	☐	☐	☐
(ii)	Profit before tax (Kshs Millions) Ratings Key: 1 – Less than 20; 2 – 21 to 50; 3 – 51 to 80: 4 – 81 to 110; 5 – Over 110	☐	☐	☐	☐	☐
(iii)	Return on assets (%) Ratings Key: 1 - Less than 1; 2 – 1 to 10; 3 – 11 to 20; 4 – 21 to 30; 5 – Over 30	☐	☐	☐	☐	☐
(iv)	Earnings per share (Kshs) Ratings Key: 1 – Less than 20; 2 – 20 to 30; 3-31 to 40 ; 4 - 41 to 50; 5 - Over 50	☐	☐	☐	☐	☐

END

Your time and support is highly appreciated

Appendix V: List of Large Manufacturing Firms in Kenya

S/No.	Company Name	S/No	Company Name
1	Chemelil Sugar Company Ltd	55	Mount Elgon Orchards Ltd
2	Coastal Bottlers Limited	56	Mount Kenya Bottlers Ltd
3	Coca-Cola Juices (K) Ltd	57	Mumias Sugar Company Limited
4	Corrugated Sheets Limited	58	Nairobi Bottlers Limited
5	Dawa Limited	59	Nampak Kenya Limited
6	De La Rue	60	National Cement Limited
7	Del Monte Kenya Ltd	61	New Kenya Co-operative Creameries Ltd
8	Devki Steel Mills Ltd	62	Norbrook Kenya Limited
9	DPL Festive Ltd	63	Polythene Industries Ltd
10	East African Breweries Ltd	64	Premier Flour Mills Ltd
11	East African Cables Ltd	65	Pressmaster Ltd
12	East African Portland Company Limited	66	Prime Steel Limited
13	Equator Bottlers Ltd	67	Procter and Gamble East Africa Ltd
14	Flamingo Horticulture Kenya Limited	68	Proctor & Allan (E.A.) Ltd
15	Foam Mattresses Ltd	69	Pwani Oil Products Ltd
16	Fontana Limited	70	PZ Cussons EA Ltd
17	Foton East Africa Ltd	71	R.T. (East Africa) Limited
18	Frigoken Ltd	72	Rabai Power Limited
19	GE East Africa Services Ltd	73	Rai Plywoods (Kenya) Ltd
20	General Motors East Africa Ltd	74	Ramco Printing Works Ltd
21	Giloil Company Limited	75	Reckitt Benckiser (E.A.) Ltd
22	Githunguri Dairy Farmers Co-operative Society	76	Rift Valley Bottlers Ltd
23	Glacier Products Ltd	77	Sameer Africa Ltd
24	Glaxo Smithkline Kenya Ltd	78	Sameer Agriculture & Livestock (Kenya) Ltd
25	Gold Crown Foods (EPZ) Ltd	79	SC Johnson and Son Kenya
26	Golden Africa Kenya Limited	80	Schneider Electric Ltd (Formerly Power Technics East Africa)
27	Haco Tigerbrands East Africa Ltd	81	Silafrica Kenya Ltd (Formerly Sumaria Industries)
28	Ibera Africa Power (EA) Ltd	82	Simba Corporation Limited
29	Impala Glass Industries Ltd	83	South Nyanza Sugar Company
30	James Finlay Kenya Ltd	84	Spin Knit Limited
31	Juja Coffee Exporters	85	Statpack Industries Ltd
32	Kapa Oil Refineries Ltd	86	Steel Structures Limited
33	Kay Salt Ltd	87	Steelmakers Limited
34	Kenblest Limited	88	Style Industries Ltd (Formerly Strategic)
35	Kenchic Ltd	89	Sunflag Textile & Knitwear Mills Ltd
36	Kenpoly Manufacturers Ltd	90	Superfoam Ltd
37	Kenya Petroleum Refineries Ltd	91	Syngenta East Africa Ltd
38	Kenya Power Co.Ltd	92	T.S.S Grain Millers Limited
39	Kenya Seed Company Ltd	93	Tetra Pak Ltd
40	Kenya Stationers Ltd	94	Tile & Carpet Centre
41	Kenya Tea Development Agency	95	TIMSALES LIMITED
42	Kenya Tea Packers Ltd (KETEPA)	96	Tononoka Rolling Mills Ltd
43	Keroche Industries Ltd	97	Tononoka Steel Ltd
44	Kisii Bottlers Ltd	98	Toyota Kenya Ltd
45	Krystalline Salt Ltd	99	Toyota Tshusho East Africa Limited
46	Libya Oil Kenya Limited (Formerly Mobil Oil Kenya)	100	Transafrica Motors Ltd
47	Louis Dreyfus Kenya Ltd	101	Twiga Chemical Industries Limited
48	Mabati Rolling Mills Limited	102	Umoja Rubber Products Ltd
49	Malplast Industries Ltd	103	Unga Group Ltd
50	Mastermind Tobacco (K) Ltd	104	Unilever Kenya Ltd
51	Menengai Oil Refineries Ltd	105	Vivo Energy
52	Mini Bakeries (Nbi) Ltd	106	W.E.Tilley (Muthaiga) Ltd
53	Mombasa Cement Ltd	107	Wrigley Company (E.A.) Ltd
54	Mombasa Maize Millers Ltd		

Source: KAM (2018)