STRATEGIC LEADERSHIP, ORGANISATIONAL LEARNING, PERCEIVED ENVIRONMENTAL UNCERTAINTY AND FIRM COMPETITIVENESS AMONG MANUFACTURING FIRMS IN UGANDA

BY

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DECLARATION

Declaration by the Candidate

This thesis is my original work and has not been presented for a degree in any other University. No part of this thesis should be reproduced without authority of the author or/and Moi University

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DEDICATION

This thesis is dedicated to my family, my wife Cheromoi Doreen, my children Emmanuel, Patricia, Aubrey, Martha and Abraham; you are my inspiration and the force behind my determination and to my parents Mr. Sarafino Emar and Mrs. Sylivia Akullo, you laid the good foundation in education I will forever be indebted to you.

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ABSTRACT

In the current volatile business landscape, the significance of firm competitiveness has escalated significantly, as it directly impacts a firm's ability to expand, thrive, and survive. The cessation of operations of 101 manufacturing firms in Uganda from 2018 to 2020 was attributed to their inadequate competitiveness. Application of strategic leadership (SL) to improve firm competitiveness (FC) has been widely studied but its impact has yielded contrasting results in different contexts. Little is known about low-income countries like Uganda as most studies are from middle-income and developed world. Besides, there is scanty literature on the interactive effects. The overarching aim of the present investigation was to scrutinize the mediating and moderating functions of organizational learning (OL) and perceived environmental uncertainty (PEU) on the relationship between SL and FC. The study was guided by eight objectives; To examine the effect of SL, OL, and PEU on FC; SL on OL; the mediating effect of OL on the relationship between SL and FC; the moderating effect of PEU on the relationship between SL and OL; the moderating effect of PEU on the relationship between SL and FC; the moderated mediation impact of PEU on the indirect relationship between SL and FC via OL. The investigation was directed by the Porter's five forces model, Transformational leadership theory, and Organizational Learning Theories. Pragmatism research paradigm together with exploratory design was employed to obtain and analyse data. The allocation of samples was accomplished through the utilization of a multistage sampling method. Questionnaires were used to collect quantitative data while interview guide was used to collect qualitative data. From a population of 1324 manufacturing firms, a sample of 461 was determined. The study employed quantitative data analysis techniques to produce both descriptive and inferential statistics that align with the research objectives and hypotheses. The analysis of qualitative data involved the application of content analysis. The Cronbach alpha coefficient was employed to ascertain the internal consistency and reliability of the research instruments, whereas exploratory factor analysis was utilized to evaluate the construct validity. The study employed hierarchical and multiple regression models utilizing the Hayes Process Macro model 8 to analyze data and test hypotheses. The results indicate that SL (β = .526, p .000, R^2 =.233), OL (β = .340, p .000, R^2 =.281), and PEU (β = .109, p .000, R^2 =.289) have significant impact on FC. The study further noted that SL has a significant effect on OL (β = .142, p .000, R^2 =.106). The results indicate that the connection between SL and FC is partially mediated by OL (β = .5257, SE = .0327, CI = .0135, .1400). The study revealed that PEU has an antagonistic conditional effect on the relationship between SL and OL (β=.4415, SE = .0518 P=.000, CI = .3397, .5432), the relationship between SL and FC (β=.2437, SE = .0807, P=.000, CI = .0851, .4022). Further, it was discovered that the PEU played a moderating role in the indirect relationship between SL and FC via OL (0.05, CI= 0.02, 0.09). The present study contributes novel insights into the role of OL in facilitating the impact of SL on FC. Furthermore, the models of moderation and moderated mediation offer novel insights in the literature and theory, indicating that the PEU plays a moderating role in the direct associations between SL and FC. Consequently, the outcomes of this study will hold importance for various stakeholders, by aiding in the development and execution of policies that encourages application of SL, OL which would improve on the level of competitiveness of the manufacturing firms in Uganda. The present study suggests that forthcoming investigations may adopt a longitudinal perspective and diversify their focus to encompass additional sectors.

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ABBREVIATIONS/ACRONYMS

AVE	Value of Average Variance Extracted
CEOs	Chief Executive Officers
CFA	Confirmatory Factor Analysis
CKI	Cohen's Kappa Index
EFA	Exploratory Factor Analysis
FC	Firm Competitiveness
GDP	Gross Domestic product
OECD	The Organization for Economic Co-operation and Development
OL	Organizational Learning
PEU	Perceived Environmental Uncertainty
R&D	Research and Development
RBV	Resource Based View
SD	Standard Deviation
SEM	Structural equation modeling
SL	Strategic Leadership
SSPS	Statistical Package For The Social Sciences
VIF	Variance inflation factor
VRIN	Valuable, Rare, Imperfectly Imitable, Non-Substitutable

OPERATIONAL DEFINITIONS

Firm competitiveness: The firms' ability to produce the right goods and services at the right quality, at the right price, at the right time. To Henricsson *et al.,* (2004) it refers to meeting customers' needs more efficiently than other firms. The study adapted five dimensions as proposed by Li *et al,*. (2006) which include price, quality, delivery dependability, product innovation and time to market.

Manufacturing firm: Manufacturing firm in this study refers to a firm involved with extracting, smelting, recovering, developing, preparing, compounding. In this study manufacturing firms were categorized in those involved in agro processing and those involved in the processing of no agricultural related products.

Organizational learning: Organizational learning is a social process in which individuals in organizations enhance decision-making and problem-solving by improving knowledge and understanding (Miller, 1996). Further, Cummings and Whorley (2009) defined organizational learning as a change process that enhances the ability of an organization to acquire and develop new knowledge. organizational learning, the tool developed by Santos-vijande *et al*., (2012), which information acquisition, knowledge dissemination, shared interpretation and organizational memory were the dimensions used for measuring organisational learning

Perceived environmental uncertainty: Perceived environmental uncertainty (PEU) is a product of managers' perceptions of the combined complexity, instability, and unpredictability in the firms' environment (Andrews & Andrews, 2014). Three dimensions of market, technological and as proposed by Miles *et al.*, (1978) was used in this study.

Strategic leadership: This is a practice in which executives, using different styles of management, develop a vision for their organization that enables it to adapt to or remain competitive in a changing economic and technological climate (Davis 2003). Four dimensions of strategic direction, core competencies, corporate culture and strategic controls developed by Ireland & Hitt (1999) was used.

CHAPTER ONE

INTRODUCTION

1.0 Overview

This section comprises the background, the problem statement, the objectives of the study, the hypothesis, the significance, and the scope of the study.

1.1 Background

In strategic management and economics, the concept of competitiveness has been described as convoluted, multifaceted, and situationally nuanced (Chaudhuri *et al.,* 1997; Schulz & Flanigan, 2016). The notion is time and context dependent in its applicability. Many different fields of study have sought to examine the phenomenon of competition from various vantage points. The concept of firm competitiveness was still murky despite extensive research and a mountain of written material on the topic. The reason behind the elusiveness of this concept is that writers on this subject have frequently avoided defining the term precisely in their discussions, hence they have invariably left it to be interpreted by readers (Chaudhuri *et al.,* 1997).

Srivastava *et al.,* (2017) contend that the concept of firm competitiveness has become synonymous with the financial soundness of businesses, despite the fact that academicians have differing opinions regarding its meaning. Firms' existence and survival in the current uncertain business environments increasingly depend on the level of firm competitiveness (Ajitabh & Momaya, 2003). As competitiveness becomes grueling, it also becomes the strength of firms as it enables firms to generate more profits and even attain greater market share. As compared to non-competitive firms, competitive firms are expected to exhibit higher sales and revenue growth rates, higher returns on investment, a larger market share, and greater market access and distribution

control (Akben-Selcuk, 2016a). These companies have reduced production costs, resulting in higher profits, and are able to offer their products while meeting market demands. Manufacturing companies throughout the globe are increasingly focused on increasing efficiency in order to get a competitive edge over rival companies (Ajitabh & Momaya, 2003).

The ability for manufacturing to add value to a country's existing resources has led to a widespread consensus that manufacturing expansion is crucial for economic progress in developing nations (African Development Bank Group, 2014). Since there is a significant demand for manufactured products in Uganda, the country needs to increase its manufacturing capacity to meet this need. There is little evidence of manufacturing in Uganda because of the country's reliance on imports to meet its demands for manufactured products (Www.ugandainvest.go.ug, 2020). In 2020 alone, Uganda lost up to 1,122.9 million USD from importing manufactured products. Furthermore, empirical research (Clarke, 2012; Nagaaba, 2020) argue that the manufacturing sector has been a driving force in all advanced and rapidly advancing emerging nations. Many developing nations in Asia and Latin America owe much of their recent economic success and technical advancement to the manufacturing sector.

A study done by the World Economic Forum in 2013 in India found that globalization of industry is seen as a key cause of better-paying jobs and a higher standard of living for the growing middle class in developing countries. According to African Development Bank Group (2014), moving resources toward industry has at least four major benefits that are related and reinforce each other. These are economic growth, development of links and spillovers, economies of scale, and new export possibilities. Significant opportunity exists for Uganda's manufacturing industry to strengthen its

forward and backward links with other industries and to build deeper ties within the sector itself (Nagaaba, 2020). It has the ability to provide both income and employment in a variety of economic sectors. When attempting to export manufactured goods to its neighbors, Uganda benefits from its advantageous location between Eastern and Southern Africa. Uganda must rely on Kenya and Tanzania for access to the seaports necessary for her imports and exports due to her landlocked location.

Over the years, Uganda's industrial sector hasn't grown much, and its share of the country's GDP has gone down from 6.6% in 2016 to 3.4% in 2019 (Golooba-mutebi, 2019). In 2018, the growth rate of the industry was 7.1%, but in 2020, it was only 1.6%, and this is against vision 2040 which predicted that the sector would grow by 10.4%. Also, it is different in a bad way from regional economies like Kenya and Tanzania, whose sectors grew by 10.2% and 7.9%, respectively, between 2018 and 2020 (World Bank report, 2020). Golooba-mutebi, (2019) says it's not good that Uganda's industrial sector isn't as developed as its neighbors. As a result, the industry is no longer competitive on a national, regional, or international level. In addition, Uganda's development strategies to become a globally competitive and prosperous nation by 2040 require a competitive manufacturing sector (Muwanguzi *et al.,* 2018). According to Susan Wanjugu *et al.,* (2020), the development of a competitive manufacturing sector is the foundation for the growth of the manufacturing industry. Consequently, it is crucial that the manufacturing industry become competitive, efficiency-driven, and productive.

Chandra, (2016) conducted a study in India which revealed that the majority of manufacturing firms in the country are operating below the standards of their global counterparts. This is attributed to factors such as high capital costs, stringent labor

regulations, limited domestic market size, and inadequate management systems for large workforces. The manufacturing sector's lack of competitiveness in sub-Saharan Africa has been attributed to various factors, including inward-looking trade policies, insufficient labor and managerial skills, protective industrial policies, and overvalued exchange rates (Fukunishi, 2014). Several challenges have impacted the competitiveness of manufacturing firms in Uganda. The aforementioned obstacles impede individuals from fully realizing their capabilities, thereby restricting their ability to make significant contributions to the advancement of socio-economic progress. The obstacles encompass intense rivalry from bigger corporations and multinational entities, subpar output of the labor force, and restricted entry to resources and markets, among other factors (OECD Report, 2012).

According to Olaka *et al.,* (2017), a significant number of firms, including those in the manufacturing sector, have encountered a reduction in their competitive edge as a result of various challenges such as complexity, inadequate strategic leadership, and an unpredictable business environment. The aforementioned factors have been compounded by globalization, which has led to a reduction in product lifecycles, rapid technological advancements, heightened standards requirements, and evolving customer needs and preferences (Kiveu *et al.,* 2019). The challenges aforementioned have had an impact on the competitiveness of manufacturing enterprises with regards to their sustenance and expansion, ultimately resulting in the cessation or demise of numerous manufacturing firms in Uganda (Calabrese *et al.,* 2019). According to a report by Public (2020), a total of 101 manufacturing firms ceased operations in Uganda during the period of 2018-2020. The closures have been caused by rising operational expenses, restricted market opportunities, and decreasing revenues. Calabrese *et al.,* (2019) have indicated that the competitiveness of certain firms has been negatively

impacted by the inadequate work performance and lack of competitiveness exhibited by their employees in an uncertain business environment. Consequently, it is imperative for manufacturing enterprises to realign their competitive priorities in order to effectively compete in the volatile market environment.

To deal with such challenges, the government of Uganda currently is focusing huge amounts of resources so as to enable the sector become competitive. The government through her policy framework has also advocated for infrastructural improvement and provision of incentives to those individuals or firms carrying out manufacturing. Moreover to achieve high levels of firm competitiveness, scholars such as (Egwakhe & Adeoye, 2019; Shrestha, 2019; Adebayo & Mudashiru, 2019) found that strategic leadership positively influences firm competitiveness. They further asserted that certain leadership skills enhance strategic leadership thus improving competitiveness of firms. Moreover, Adebayo & Mudashiru, (2019) established that business organizations including manufacturing firms have had their levels of competitiveness at the market place decline due to challenges of complexity, poor strategic leadership, unpredictable business environment that characterizes today's business environment. Princess *et al.,* (2018) had a similar view where they stated that, the level of competitiveness and market share among Nigerian firms especially in the insurance companies have been unstable resulting from poor strategic leadership.

Individual elements of strategic leadership were also found to have significant interaction with firm competitive advantage. For example, Mahdi & Almsafir (2014) found risk-taking in the form of human capital positively influencing firm competitiveness. Further, Mung'atia (2019) in his study found a positive relationship between strategic intent and firm competitiveness moderated by organizational factors.

While Kagathi (2013) maintains that strategic decision making, strategic direction, and communication significantly influences firm level competitiveness. Likewise, Jiang *et al.,* (2020) in their study found a strong significant impact of decision making on firm competitiveness. However, the findings by Díaz-Chao *et al.,* (2016) found a negative interaction between decision making and firm competitive advantage. Tsai *et al.,* (2011) had similar findings where they found a negative linkage between ethical practices and firm competitiveness. The differences in scholarly findings on the relationship between strategic leadership and firm competitiveness was majorly as a result of methods of data analysis and contextual representation of strategic leadership (Adebayo & Mudashiru, 2019) .

Organizational learning is also the other factor which was identified as a very important factor in improving on the competitiveness of firms (Kalmuk & Acar, 2015). Organizational learning as an important factor in promoting firm competitiveness has been discussed in strategic management literature from the resource-based view of the firm. The RBV postulates that, firms can gain sustained competitive advantage through amassing and using strategic resources and capabilities, which are valuable, rare, difficult to imitate and non-substitutable (Namada, 2018a). Organizational learning is believed to be able to help firms amass and use these kinds of resources and capabilities efficiently. Kadhim *et al.,* (2018) in their finding pointed out that organizational learning enables firms to achieve continuous improvement and enhance the knowledge, skills and attitudes and thus achieve value creation, which increases the level of firm competitiveness. Bragdon & Karash (2002) also identified the organizational learning concept as a resource-oriented approach that is based on the ability of the firm to turn standard resources that are available to all into competences that are unique and cannot be easily copied by competitors. While to Singh (2016) organizational learning is one

of the most important requirement for firms to obtain and sustain firm level competitiveness.

In addition, according to Singh (2016) organizational learning is a long-term activity that contributes to the achievement of competitive advantage. There is a common belief in reviewed literature of strategic management that increasing lifespan and performance of organizations is based on ability of learning and adaptation (C. Marlene Fiol and Marjorie A. Lyles, 2006; Jerez-Gómez *et al.,* 2005). Learning organization therefore according to Slater & Narver (1995) generally react faster and more flexible than competitors in order to solve their problems for sustaining their long-term competitive advantages. Limited empirical studies have been conducted to ascertain the effects of organizational learning on firm competitiveness especially the industry specific studies (Kamya & Ntayi, 2011). This study will therefore contribute to the body of knowledge by specifically studying how organizational learning affect firm level competitiveness among manufacturing firms.

So far from the reviewed literature, it can be argued that strategic leadership can positively influence the level of firm competitiveness, but this is subject to qualification. This relates to the level of perceived environmental uncertainty. Strategic leadership will only be more effective in influencing firm competitiveness when the level of perceived environmental uncertainty is high (Gul & Chia, 1994). In other words, the effects of perceived environmental uncertainty on firm competitiveness will be influenced by strategic leadership skills. Considering first the relationship between perceived environmental uncertainty and strategic leadership, when perceived environmental uncertainty is low, management is able to make relatively accurate predictions about the market (Hong & Sullivan, 2013). In contrast. when perceived

environmental uncertainty is high, firms will require additional information to cope with the complexities of the environment (Gul & Chia, 1994). Application of strategic leadership skills will help reduce uncertainty and improve on decision making which intern will improve the level of competitiveness of firms (Abubakar *et al.,* 2019).

Numerous scholars have identified key factors that play a significant role in enhancing a firm's competitiveness. The aforementioned factors encompass a range of critical elements that have been identified in academic literature as being significant to the success of export businesses. These factors include export business strategy (Leonidou *et al.,* 2015), marketing capabilities (Peter Ayeni, Peter Ball, 2010), human resource management practices (Albrecth. *et al.,* 2015), dynamic capabilities (de Medeiros *et al.,* 2020), information technology and knowledge management (Mao et al., 2016), employee empowerment (Ukil, 2016), and organisational learning (Kadhim *et al.,* 2018). Regrettably, the majority of research pertaining to the correlation between strategic leadership and firm competitiveness has neglected to account for the potential moderating influence of additional variables. In the absence of moderating factors, it is unsurprising that numerous empirical investigations have established a favorable correlation between strategic leadership conduct and the competitive edge of an organization. The observed outcomes could be attributed in part to a tendency to investigate relationships that are subject to moderation by other variables. However, the introduction of one or more moderators could yield a distinct outcome. The present study aimed to examine the moderating and mediating effects of perceived environmental uncertainty and organizational learning on the association between strategic leadership and firm competitiveness.

1.2 Statement of the Problem

In today's uncertain economic environment, competitiveness has become more important than ever for a firm's growth, success and survival (Akben-Selcuk, 2016a). As such, competitive firms are able to conquer new markets, to outplay other actors in the market, to attract investment and grow (Falciola *et al.*, 2020). Despite the benefits that accrue from high levels of firm competitiveness, manufacturing firms in Uganda have remained uncompetitive with respect to quality, price, delivery or new product development (Calabrese *et al.*, 2019). This has resulted to the country importing up to 70% of its manufactured goods' needs from other countries (Www.ugandainvest.go.ug, 2020).

Furthermore, in Kenya the manufacturing industry has over the last decade experienced stagnation despite its overall growth potential. If the current trend continues to 2030, the growth forecasts in Kenya's Vision 2030 will not be attained. This, in turn, implies that the country may fail to attain the projected annual growth of 10 percent in GDP. For example, the growth of the manufacturing sector in Kenya has decreased as the trade between Kenya and China has increased, for instance, it was only 3.4% in 2019, down from 5.6% in 2017 (Chen, Geiger, & Fu, 2020). Kenya's exports are reported to have been performing terribly due to the lack of competitiveness of the sector. According to the World Bank Group (2015), manufacturing in Kenya has remained at only 10% of G.D.P. for more than 10 years, and many have suffered losses in sales (World Bank, 2020a). Factors responsible for such low levels of competitiveness of the manufacturing firms include among others; inadequate entrepreneurship and managerial skills; costly, unreliable, and inadequate physical infrastructure, an unreliable supply of inputs; a low level of technology (African Development Bank Group, 2014).

Research conducted by Calabrese *et al.*, (2019) indicate that as a result of their lack of competitiveness, such firms have been affected in terms of their survival and growth leading to closure of 101 manufacturing firms in Uganda in the period 2018-2020 alone (Public, 2020). To deal with the problem of lack of competitiveness, many researchers found critical factors which contribute in part to firm competitiveness. Such factors include, strategic leadership (Egwakhe & Adeoye, 2019; Shrestha, 2019) marketing capabilities (Nath *et al.,* 2010); and organizational learning (Kadhim *et al.,* 2018). Moreover, studies linking strategic leadership and organizational learning to firm competitiveness in the face of perceived environmental uncertainty is still scanty world over (Egwakhe & Adeoye, 2019). The few studies carried out are not conclusive enough and are limited in terms of scope. Most of the empirical literature reviewed indicate a positive effect of strategic leadership on firm competitiveness (Shrestha, 2019). In a similar vein, researchers such as (Adebayo & Mudashiru, 2019) also pointed out the positive effect of strategic leadership on firm competitiveness most especially from the service sector.

However, researchers such as Díaz-Chao *et al.,* (2016) found an inverse relationship between strategic leadership and firm competitiveness. Adebayo & Mudashiru (2019) argued that such divergent views are based on the method of data analysis utilized for these studies and contextual representation of strategic leadership. As a result of these divergent views, this research analyzed how strategic leadership affects firm competitiveness specifically among manufacturing firms in Uganda. Furthermore, most studies on the effects of strategic leadership on firm competitiveness failed to consider the potential mediating and moderating role of other factors. For example, in a study by Kitonga (2017) on the influence of strategic leadership practices on firm competitiveness in not for profit organizations in Nairobi County Kenya, the analysis

and results show a significant positive direct correlation between strategic leadership practices and firm competitiveness.

Kitonga (2017) recommend that future researchers should develop a testable model and theory on firm competitiveness with the associated moderators, mediators, and other variables that have been ignored in the earlier framework to extend the scope and coverage of firm competitiveness. Premised on the existing research gap and the existing phenomena, the study sought to fill the knowledge gaps in previous studies by examining the conditional indirect effect of perceived environmental uncertainty on the relationship strategic leadership and firm competitiveness through organisational learning among manufacturing firms in Uganda.

1.3 Research Objectives

1.3.1 The General Objective

The study's main objective was to determine the influence of strategic leadership, organisational learning, and perceived environmental uncertainty on firm competitiveness among manufacturing firms in Uganda.

1.3.2 Specific objectives

i. To examine the effect of strategic leadership on firm competitiveness.
ii. To establish the effect of organizational learning on firm competitiveness.
iii. To determine the effect of perceived environmental uncertainty on firm competitiveness.
iv. To determine the effect of strategic leadership on organisational learning
v. To assess the mediating effect of organizational learning on the relationship between strategic leadership and firm competitiveness.

vi. To examine the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and organizational learning.

vii. To investigate the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness.

viii. To investigate the moderating effect of perceived environmental uncertainty on the indirect relationship between strategic leadership and firm competitiveness via organizational learning.

1.4 Research Hypotheses

This study tested the following Research Hypotheses in line with the specific objectives;

$H_0$1 Strategic leadership has no significant effect on firm competitiveness

$H_0$2 Organizational learning has no significant effect on firm competitiveness.

$H_0$3 Perceived environmental uncertainty has no significant effect on firm competitiveness.

$H_0$4 Strategic leadership has no significant effect on organizational learning

$H_0$5 Organizational learning has no significant mediating effect on the relationship between strategic leadership and firm competitiveness.

$H_0$6 Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and organizational learning

$H_0$7 Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and firm competitiveness

$H_0$8 Perceived environmental uncertainty has no significant effect on the indirect relationship between strategic leadership and firm competitiveness via organizational learning.

1.5 Significance of the Study

The researcher believes that the outcome of this study will assist management of manufacturing firms in designing mechanisms through which the competitiveness of their firms can be enhanced. The findings of the same research can help firms apart from those manufacturing in Uganda and around the world to improve the competitiveness of their firms. The findings of this research will provide a framework upon which government, policy makers and regulators will formulate and implement policies and regulations on how to enhance the competitiveness of manufacturing firms in Uganda. This study's fulfillment of the stated objectives will provide valuable insights for researchers who are interested in comprehending the notion of firm competitiveness. The study holds noteworthy significance as its findings may serve as a valuable resource for future researchers, potentially leading to impactful studies with far-reaching societal implications.

Further, the study will contribute to the body of knowledge on Porters' five forces model, transformational leadership theory and organizational learning theory in explaining the competitiveness of manufacturing firms in Uganda. To other stakeholders, the study will increase public understanding and awareness on issues of FC, OL, ST, & PEU. The study is expected to enrich the researcher's skills and knowledge in teaching, research, publications, management consulting and career growth. This will position the researcher within a theoretical and practical scene to develop amenable solutions to practical problems.

1.6 Scope of the Study

The study was conducted among manufacturing firms in Uganda, specifically those registered by the Uganda Manufacturers' Association. This composed of 419 manufacturing firms that were registered with Uganda Manufacturers Association. This scope was considered appropriate because firm competitiveness can easily be seen through the manufacturing firms Uganda.

The study focused on establishing the effect of strategic leadership, organizational learning, and perceived environmental uncertainty on firm competitiveness among manufacturing firms in Uganda. Strategic leadership is the independent variable; organizational learning is the mediating variable, yet perceived environmental uncertainty is a moderating variable while firm competitiveness is the dependent variable. Strategic leadership is conceptualized to include the dimensions of; strategic direction, core competences, corporate culture and strategic control. Organizational learning has the dimensions of; information acquisition, knowledge dissemination, shared interpretation, and organizational memory. Perceived environmental uncertainty is unpacked to include; market environment, technological environment and competitive environment, while firm competitiveness is conceptualized as; price, quality, delivery dependability, product innovation and time to market. The study was conducted in the period between November 2021 to January 2022. Three theories guided the study that is Porters' five forces Model, transformational leadership theory and organizational learning theory. Data was collected using both questionnaire and interview guide.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The current chapter provides an overview of the conceptual, theoretical, and empirical literature that informed the study, along with the developed conceptual framework that served as a guide for the research. The study conducted a thorough review of pertinent theories to elucidate the fundamental principles that underlie the notions of firm competitiveness, strategic leadership, organizational learning, and perceived environmental uncertainty. The theories encompassed are Porters' Five Forces Model, The Resource Based View Theory, Transformational Leadership Theory, and Organizational Learning Theory. The reviewed empirical literature pertained to the topic of firm competitiveness, strategic leadership, organizational learning, and perceived environmental uncertainty. The concluding section of the chapter provides a recapitulation of the theoretical and empirical analysis, along with an identification of the areas where further research is needed. The development and presentation of a conceptual framework was based on the reviewed literature.

2.1 Conceptual Review

2.1.1 Firm Competitiveness

Firm competitiveness is a widely discussed topic in the fields of economics and management. However, there remains a lack of agreement regarding its precise definition and the appropriate metrics for its assessment. A number of scholars came up with numerous definitions which in turn led to different measurement approaches. Ambastha & Momaya, (2019) outlined a summary of 14 different definitions which exist within the literature, a few of which include; Henricsson *et al.*, (2004), who defined firm competitiveness as the firms' ability to produce the right goods and

services at the right quality, at the right price, at the right time which means meeting customers' needs more efficiently than other firms. To Aiginger *et al.,* (2013), firm competitiveness is the capacity of firms to compete, increase their profits and grow. While Falciola *et al.,* (2020) came up with a more enhanced definition of firm competitiveness, where they stressed the multidimensional and dynamic aspects of firm competitiveness and they described the current, and the past firm performances but also more dynamic elements, such as the managerial processes and the firms' strategies to sustain its competitiveness. Gehlhar *et al.,* (2006), opined that firm competitiveness relates to a combination of assets and processes, where assets are created (infrastructure) or inherited (natural resources) and the processes transform these assets to achieve economic gains from sales to customers. In line with Falciola *et al.,* (2020), this study splits the concept of firm competitiveness along three main dimensions; firm competitive performance which measures the firm's past and current performance in a market; competitive potential which relates to internal factors that may determine a firm's current or future competitive performance and; firm capabilities relevant to firm level competitiveness which are key factors in translating the competitive potential into actual or future performance of the firm.

An organization's competitiveness is measured by how well it can compete in its industry, as defined by Lau (1994). Porter argues that vitality, creativity, and flexibility are essential to success in a competitive market. The ability to exceed one's competitors in terms of profit, sales, and market share is what House (2001) calls competitiveness. Strong competition, he believes, is essential to their continued success in the market. Kiveu *et al.,* (2019) define competitiveness as a company's capacity to provide items that both satisfy customers and generate sustainable profits over time. It is challenging to come up with clear incontestable measurements of a company's competitiveness

because of the relative nature of competitiveness. However, it seems that there is agreement on a number of factors/measures that may be used to assess a company's competitiveness. The productivity, market share, profitability, efficiency, product variety, value creation, and customer happiness of a business are all interconnected and contribute to its competitiveness, as stated by Kiveu *et al.*, (2019). Among the many factors that contribute to a company's competitiveness, export attractiveness stands out as a key factor Kiveu *et al.,* (2019). Others include product differentiation, product/service quality and variety, originality, process efficiency, cost reduction, technological adaptation, and innovation.

Conversely, the refinement of corporate procedures, the caliber of the microeconomic commercial milieu, and the potency of clusters are the preeminent factors that dictate a nation's competitiveness, as posited by Porter (1990). Porter's (1990) seminal contribution to the field of business strategy is the diamond model, which elucidates the heterogeneity of competition and competitive advantage across industries and industry segments, as articulated by Porter (1990). The model developed by Porter is particularly efficacious in evaluating competition within discrete industrial sectors, which are unequivocally situated within a larger macro-context, while simultaneously serving as an arena for the functioning (and competitiveness) of individual firms. The Diamond Model, as proposed by Porter, serves as a framework for analyzing the microeconomic factors that shape a firm's competitive advantage. It effectively translates macro-level factors into micro-level considerations that impact a firm's capabilities. The paradigm under consideration pertains to the enhancement of the well-being of the populace and the augmentation of the efficiency of production factors. The present model posits that the augmentation of productivity serves as the mechanism through which the enhancement of welfare can be achieved. This phenomenon is

subject to the influence of the capabilities of firms and the actions of the government. The influence of governments extends to the realm of social norms, and their responsibility lies in the formulation and execution of macroeconomic strategies.

The diamond model proposed by Porter serves as a crucial bridge connecting the macroeconomic determinants and the competitive advantage of firms. Within Porter's elucidation of the Microeconomic Competitiveness Index of the World Economic Forum (2004), he proffers an inventory of factors pertaining to the business environment of nations. The aforementioned inventory possesses the potential to be seamlessly integrated into a macro-micro framework, thereby lucidly evincing the diamond's efficacy as a conduit, contingent upon judicious elucidation. Enterprises engage in competition within the realm established by the Porter (2003) framework's synthesis of factors pertaining to national and sectoral competitiveness. In light of the intensifying global competition, it is imperative for them to cultivate competencies that facilitate their adaptability to these multifarious factors. The metrics utilized to gauge national competitiveness are customer satisfaction and profit, both of which play a pivotal role in augmenting the well-being of the populace. The augmentation of productivity is contingent upon the discernment of one's proficiencies.

At the firm level, it is anticipated that firms that are competitive will demonstrate a greater rate of growth with respect to sales and revenues, superior returns on investment, increased market share, heightened market access, and greater control over distribution, relative to their non-competitive counterparts (Akben-Selcuk, 2016a). According to Kiveu *et al.*, (2019), enterprises of this nature are distinguished by their capacity to curtail production expenses, thereby augmenting their earnings, and their aptitude to vend their products while satisfying the demands of the market. Diverse

metrics of competitiveness have been deliberated, encompassing the utilization of rudimentary indicators to more intricate indices, as posited by Laureti & Viviani, (2011). According to Liargovas & Skandalis (2012), the measurement of a firm's competitiveness can be achieved through the analysis of its financial performance. Therefore, a favorable financial performance is indicative of a competitive firm, as per the aforementioned authors. Various financial metrics, including but not limited to return on sales, return on assets, and turn over, have been employed to gauge the competitive edge of a firm (Andrews & Andrews, 2014). The benefits of utilizing financial performance measures are manifold, encompassing the ease of computation and the existence of standardized, universally recognized definitions. Various non-monetary metrics have been employed to gauge competitiveness, encompassing factors such as the firm's market share, sales volume, productivity, and market growth (Liargovas & Skandalis, 2012).

According to Porter's (1990) findings, the competitive standing of a firm is intricately linked to its productivity and growth. Consequently, it can be inferred that a correlation exists between elevated productivity levels and increased competitiveness, as posited by Ajitabh & Momaya, (2003). The concept of export competitiveness has been employed to connote the competitive edge of a firm. Specifically, a firm that is capable of exporting its merchandise to international markets may be deemed more competitive in the global arena (van den Berghe, 2003). The utilization of financial and market performance indicators as gauges of a firm's competitiveness is a common practice. According to Slater & Olson (2000) findings, market performance indicators are typically associated with financial indicators. It is a highly probable outcome that an increase in market share and sales will lead to a corresponding increase in profits. It is

highly probable that the implementation of enhanced and optimized procedures will result in decreased expenditures, ultimately leading to increased revenue.

Numerous scholarly inquiries (Liargovas & Skandalis, 2012; Akben-Selcuk, 2016a) have employed the utilization of profit and market share as surrogates to gauge the competitive standing of a firm. Frequently, external parties tend to evaluate a company's competitiveness based on its performance, thereby utilizing performance as a metric to gauge a firm's competitiveness (Rosli & Sidek, 2013). The postulate posits that enterprises that exhibit a competitive nature tend to outperform their non-competitive counterparts. As per Lalinsky (2015) observations, the performance metrics that are frequently employed to gauge the competitiveness of firms encompass indicators such as profitability, productivity, market share, and export performance.

2.1.2 Strategic Leadership

Strategic leaders possess both human and organizational qualities, according to a model put forward by Davies and Davies, (2004). The quality of the organization's strategic leadership is crucial to the creation of a strategically oriented organization, as argued by Davies (2004). Strategic leaders are capable of being strategically minded, claim Davies and Davies, (2004). This attribute includes the capacity to perceive the wider picture, take into account the long-term future, and comprehend the organization's existing contextual environment (Stacey, 1992; Boisot, 1995; Beare, 2001; Adair, 2002). The capacity to put strategy into practice is possessed by strategic leaders. It is imperative that strategic leaders oversee the development of a suitable organizational strategy and translate it into operational language in order to put it into action. "Strategy maps" and "balanced scorecards," according to Kaplan and Norton (2001), "provide a framework to describe and communicate strategy in a consistent and insightful way."

They claim that these tools can help achieve this. Moreover, individuals and organizations may be brought into alignment by strategic leaders. Aligning people or the entire school to a future organizational state or position is part of this skill (Gioia & Thomas, 1996; Gratton, 2000; Davies, 2003).

Fostering commitment via common values is a crucial component of this skill (Boal & Bryson, 1988). It appears that the leader's own beliefs and ideals are crucial to this process, and part of their leadership ability is to make it tangible for others. As a result, in order to foster effective communication, leaders must be able to comprehend who they are and the principles that guide them. Moreover, strategic leaders possess the capacity to identify places of successful action, according to Davies and Davies, (2004). The critical juncture for strategic transformation in companies can be identified by strategic leaders. Burgleman and Grove (1996) refer to this idea as strategic inflection moments. These are pivotal moments in an organization's growth where new ideas, plans, and approaches may be developed and pursued.

Furthermore, strategic leaders must be able to create strategic competencies. Prahalad and Hamel (1990) use the phrase "core competencies," but Stalk et al. (1992) use the word "strategic capabilities." If a manufacturing company wants to grow and be sustainable in the long run, it must create strategic skills. A problem-solving culture rather than a blaming culture for employees are examples of these; creativity in problem-solving and teamwork might also be regarded resources that provide the manufacturing organization with deep-seated strategic competencies or talents. Strategic leaders are dissatisfied or restless in the present. This restlessness is characterized by what Senge (1990) refers to as 'creative tension,' which arises from clearly perceiving where one aspires to be, one's vision, and facing the truth about one's

existing reality. Strategic leaders can envisage the' strategic leap' that a company intends to take while also serving as enthusiastic change agents

Strategic executives must be able to accept the fact that their organization's culture may not be as forward-thinking as they are. Strategic leaders have the ability to absorb information. Absorptive capacity is defined by Cohen and Levinthal (1990) as the ability to absorb new knowledge, digest it, learn from it, and, most crucially, apply it to new goals. According to Hambrick (1989), strategic leadership happens in an atmosphere of ambiguity, complexity, and information overload. Strategic leaders must consequently be able to notice new information, analyze it, and apply it to new results; leaders must be able to learn. This is also referred to as 'absorptive capacity' by Boal and Hooijberg (2001, p. 517), who assert that leaders 'have a unique power to modify or reinforce current activity patterns' inside the business. As a result, strategic leaders must develop an organizational environment conducive to learning. This might make advantage of the double-loop learning proposed by Argyris and Scho n (1978). Strategic leaders have the ability to adapt. The ability to change is defined as 'adaptive capacity' by Black and Boal (1996) and Hambrick (1989). Sanders (1998) supports this viewpoint by stating that, mastering chaos, complexity, and change' necessitates new ways of' seeing and thinking'. According to Whittington (2001, p. 43), "leaders require an enduring sense of purpose and a continuous sense of motivation." This may be observed in the term 'strategic flexibility' used by Hitt et al. (1998). This is especially crucial in a period of innovation and constant learning, when success may depend on a flexible strategic response, and may favor the emergent strategy or strategic intent approach. According to Davies' (2004) idea of' strategic opportunism,' leaders position themselves to take advantage of important opportunities by adapting to new knowledge in a responsive and proactive manner. Strategic leaders are wise leaders. Wisdom may

simply be described as the ability to take the appropriate action at the appropriate moment. Robert Sternberg articulated in a perceptive presentation to the 2002 International Thinking Skills Conference that leaders require wisdom because: you need creative abilities to come up with ideas, you need analytical abilities to decide whether ideas are good ideas, and you need practical abilities to make your ideas functional and to convince others of the value of your ideas.

The theory of strategic leadership has undergone a significant evolution from its original conceptualization as the upper echelons' theory by Hambrick and Mason (1984) to a comprehensive examination of the dominant coalition's influence on organizational outcomes, encompassing both instrumental and symbolic aspects of top executives (Hambrick & Pettigrew, 2001). According to the scholarly research conducted by Hambrick and Pettigrew (2001), it has been suggested that there are two distinct dichotomies that can be observed between the notions of leadership and strategic leadership. The essence of leadership theory centers on the examination of leaders at all levels of an organization, whereas strategic leadership theory is primarily concerned with those occupying the uppermost echelons of an organization's hierarchy. Following this, erudite investigation into leadership has focused on the nuanced dynamic between leaders and their followers. It is irrefutable that the analysis of the correlation between leaders and their adherents has been tackled from a plethora of viewpoints (House & Aditya, 1997).

The focal point of the trait and style approaches has been primarily centered on the leaders themselves, as evidenced by the works of Bryman (2004). Conversely, the information-processing approaches and implicit theories of leadership have shifted their focus towards the followers, as demonstrated by the research conducted by Maurer and

Lord (1991). Scholarly investigations into leadership have taken various approaches, including sociological perspectives and alternative models that aim to replace traditional leadership frameworks. The former has emphasized the importance of situational factors that influence leadership dynamics, while the latter has focused on the nature of interactions between leaders, followers, and their respective contexts. These approaches have been explored in works such as Podsakoff (1993). As opposed to the previously mentioned examination at a smaller scale, the realm of investigation pertaining to strategic leadership is focused on the executive facet. This encompasses not only the interpersonal aspects, but also strategic and symbolic endeavors (Hambrick & Pettigrew, 2001).

The study employed the strategic leadership paradigm, which entailed a shift in focus from the attributes of leaders' associations with their direct subordinates to the impact of the dominant coalition of the organization on the strategic course of enhancing the firm's competitive edge. The transactional/transformational leadership framework developed by Bass (1985, 1998) has demonstrated its utility in the examination of executive-level administration. The framework developed by Bass was formulated within the ambit of expansive organizations, as per Burns' (1978) work, and has been efficaciously employed in the examination of high-ranking executives, as demonstrated by Lowe, Kroeck, and Sivasubramaniam's (1996) research. The amalgamation of personality theory advancements with transformational and visionary leadership theories, as per Cannella and Monroe's (1997) perspective, can potentially offer a more pragmatic outlook towards top management.

The differentiation between transformational and transactional leadership is predicated upon antecedent categorizations, including relational versus task-oriented leadership

(Fiedler, 2016) and directive versus participative leadership (Fiedler, 2016). Moreover, it can be observed that the principles of transactional leadership bear a striking resemblance to the path-goal theory proposed by Martin G Evans (1996). The leadership models of charisma, inspiration, and vision, as posited by Shamir et al., (1993), share several similarities with the concept of transformational leadership. Bryman and Stephens, (1996) novel dichotomy of leadership styles, traditional versus contemporary, serves as an extension to the Bass model. In addition, contemporary notions such as emotional, narcissistic, and compassionate leadership underscore the significance of a CEO's capacity for empathy and self-assurance as pivotal factors in determining organizational success. Conversely, alternative scholarship, such as that of Egri and Herman (2000), has underscored that transformational leaders possess all of these attributes.

Within the domain of leadership studies, a specific avenue of investigation that has proven to be useful in analyzing high-level management is Bass's (1985, 1998) conceptualization of transactional/transformational leadership. Bass' framework, as elucidated by Burns (1978), was conceived within the ambit of more expansive organizational architectures. The demonstrated effectiveness of this approach is exemplified in the study conducted by Kroeck and Sivasubramaniam (1996), which focused on the assessment of top-tier corporate leaders. The formulation of transformational and transactional leadership styles is based on prior typologies, including the binary opposition between leadership that prioritizes relationships versus that which prioritizes tasks (Fiedler, 1967), and the differentiation between leadership that is directive versus that which is participative (Heller & Yukl, 1969). Additionally, one may note that the precepts of House and Mitchell's (1974) path-goal theory are closely upheld by transactional leadership.

The theoretical frameworks surrounding charismatic, inspirational, and visionary leadership, as advanced by House and Shamir (1993) and Westley and Mintzberg (1989), bear notable similarities to the construct of transformational leadership. The proposition of a dichotomy between novel leadership and traditional leadership by Bryman, Stephens, and a Campo (1996) serves as an extension of the Bass model. Furthermore, it is of significance to note that current notions of affective (Goleman, Boyatzis, & McKee, 2001), egocentric (Maccoby, 2000), and benevolent leadership (Dutton, Frost, Worline, Lilius, & Kanov, 2002) emphasize the crucial role of the CEO's ability to exhibit empathy and self-confidence in the achievement of organizational triumph. On the other hand, alternative scholarship, as exemplified by Egri and Herman's work in 2000, has emphasized that transformational leaders possess each of these characteristics.

As per Burns' (1978) postulations, the leadership styles of transformational and transactional nature are situated at diametrically opposite extremities of a continuum. As per the scholarly works of Bass (1985, 1998), it is evident that there exist discrete dimensions that enable a leader to exhibit transactional, transformational, or a combination of both leadership styles, or none of the aforementioned. The primary impetus for individuals under transactional leadership is contingent-reward exchanges and active management-by-exception, as posited by Avolio, Bass, and Lung (1999). The establishment of objectives, the formulation of unambiguous arrangements regarding the leader's expectations from the members of the organization, and the provision of incentives for their dedication and exertions are all crucial components of effective leadership. Additionally, the provision of constructive feedback serves as a means of ensuring that all parties remain focused and on course (Bass & Avolio, 1993b;

Howell & Hall-Merenda, 1999). Transactional leaders operate within the confines of an established framework to enhance an organization's ethos, tactics, and framework.

The discipline of strategic leadership pertains to the top-level executives who bear the ultimate accountability for their respective organizations, encompassing their attributes, actions, methodologies, and notably, their impact on the outcomes of the firm (Watermarks, 2009). According to Watermarks' (2009) analysis, strategic leadership research pertains to entities such as individuals occupying the position of Chief Executive Officer, groups of individuals comprising top management teams, or boards of directors. As per Watermarks' publication in (2009), the phrase "strategic leadership" carries the connotation of overseeing an entire enterprise, rather than a mere subset, and entails significant decision-making duties that extend beyond interpersonal and relational considerations.

According to Hitt *et al.,* (2008), there exist several activities and components that delineate strategic leadership, which significantly enhance the attainment of organizational strategy. The aforementioned elements encompass the formulation of a strategic trajectory, establishment of organizational safeguards, proficient allocation of resources, perpetuation of a streamlined organizational ethos, and emphasis on ethical conduct. The indispensability of strategic leaders in all strategic endeavors has been underscored by Khurshid *et al.,* (2016). Consequently, the execution of strategy is fortified by the implementation of each of these astute leadership endeavors. As per Bello's (2006) assertion, it is imperative for organizational leaders to establish a leadership style that is efficacious. The present investigation centers on the components of strategic leadership posited by Hitt *et al.,* (2008), which have been observed to enhance organizational strategy and elevate competitiveness levels.

2.1.3 Organizational Learning

Peter Senge's idea that a learning organization is a group of people who are always getting better at doing what they want to do has had a big impact. He came up with five disciplines that he thinks are most important for learning organizations, as well as some problems and questions about the theory and practice of learning organizations. The elements of the fifth discipline according to Peter Senge include;

First, system thinking as a discipline is a conceptual framework, a body of knowledge, and a set of tools that have been created over the last fifty years to help us recognize the whole patterns and how to successfully modify them. Thus, the idea goes, a deeper understanding of systems will result in more suitable action. Peter Senge stated that while we live in a world of extraordinary interdependence, our awareness of it is declining, and yet we cannot exist in a niche if we do not have a shared mentality.

Second is personal mastery which according to him is the practice of consistently refining and expanding our personal vision, concentrating our efforts, cultivating patience, and seeing reality objectively. Consequently, it is a crucial pillar of learning organizations. Peter Senge argued that organizations can only grow via the learning of people. Individual growth does not ensure organizational growth. But without it, organizational learning cannot occur. (Senge 1990: 139). Individuals with a high degree of personal mastery are in a constant state of learning. The discipline requires the development of personal vision, the maintenance of creative tension, the recognition of structural tensions and restrictions as well as our own power in relation to them, a dedication to the truth, and the use of the subconscious.

Third is team development which Peter Senge (1990) contend that begins with discussion, which requires team members to set aside preconceived beliefs and think

together in an authentic manner. To Peter Senge, team learning is the process of encouraging a group of individuals to work together and develop their abilities in order to achieve the desired outcomes. It is founded on self-mastery and a common goal, but individuals must also be able to collaborate.

Fourth is Mental Models which Peter Senge avows that include the capacity to engage in meaningful dialogues that strike a balance between inquiry and advocacy. People successfully disclose their thought and make it susceptible to the influence of others. Mental models, according to Peter Senge, are "deeply established beliefs, generalizations, or even thoughts and ideas that impact how we comprehend the world and behave" (Senge 1990). If businesses are to gain the ability to operate with mental models, then individuals will need to acquire new abilities and adopt new perspectives.

Fifth discipline according to Peter Senge is building shared vision with the premise that if one leadership concept has inspired organizations for millennia, it is the ability to hold a shared vision of the future we aim to create. Such a vision has the capacity to inspire and promote experimentation and creativity. People thrive and learn when there is a true vision, not because they are told to, but because they want to. The concept of shared vision entails the ability to find common "visions of the future" that encourage true commitment and enrollment as opposed to compliance.

The attainment of organizational learning is contingent upon the transmission of knowledge via social exchanges among diverse groups of individuals, facilitated by a common understanding. According to Santos-vijande *et al.,* (2012), the acquisition of knowledge enables employees to engage in a continuous exchange of knowledge within an organization, resulting in a mutually beneficial process of knowledge transfer. According to Kandemir and Hult (2005), organizational learning can be defined as a

multi-stage process that involves information acquisition, knowledge dissemination, shared interpretation, and organizational memory. During the initial phase of information acquisition, individuals may obtain information from a variety of sources, including both external and internal sources. According to Cano *et al., (*1992), internally generated information originates from innate learning that has its origins in the founders. According to Santos-vijande *et al.,* (2012), internally developed information is derived from prior experience and implicit analysis of competitors' actions in the marketplace.

In certain instances, organizations engage in a deliberate pursuit of external information primarily to address particular issues (Ahuja, 2002), recognize significant trends (Milliken, 1990), and evaluate their performance relative to that of their rivals. According to Simon, (1991), the process of seeking external information encompasses various strategies such as assimilating fresh members from external entities, procuring other organizations, or establishing collaborative ventures. The second phase of organizational learning involves the distribution of knowledge within the organization. This process occurs through both formal and informal interactions among employees, as outlined by Kofman & Senge, (2001). The third phase, known as shared interpretation, is focused on the comprehensive analysis of information from a global standpoint. The primary focus during this stage is to attain agreement on the interpretation of data and its significance for the organization, as stated by Santos-vijande *et al.,* (2012). During this phase, companies establish collective cognitive frameworks and carry out their activities through reciprocal adaptations. In order to effectively comprehend information, organizations must engage in unlearning procedures. The process involves challenging the existing mental frameworks and

knowledge, and discarding outdated and erroneous beliefs or information that may result in inaccuracies or suboptimal decision-making (Holan & Phillips, 2004).

The concept of organizational memory, which constitutes the fourth dimension of organizational learning, is derived from the notion of collective learning and encompasses the entirety of knowledge that a company acquires. As per the findings of Santos-vijande *et al.,* (2012), effective management of this knowledge necessitates appropriate storage and accessibility to all personnel within the organization, thereby enabling its prompt retrieval as and when required.

2.1.4 Perceived Environmental Uncertainty

According to Andrews & Andrews (2014), Perceived Environmental Uncertainty (PEU) is a construct that reflects the perceptions of managers regarding the complexity, instability, and unpredictability of their organization's environment. Andrews & Andrews (2014) posit that when an environment is perceived as complex, rapidly changing, and unpredictable, it generates significant levels of uncertainty regarding the appropriate organizational reactions to external circumstances. Consequently, managers are compelled to meticulously contemplate the ramifications of their actions and decisions. According to scholarly works by Rohof (2013) and Child, J., (1972), it is argued that managers engage in strategic decision-making by evaluating the prevailing environmental circumstances. Miles *et al.,* (1978) subsequently developed and enhanced this assertion, positing that the achievement of organizational effectiveness is contingent upon the implementation of a coherent approach to harmonizing an organization with its external surroundings. The efficacy of implementing an appropriate approach in such situations was found to be associated with the managerial perception of environmental uncertainty. According to Andrews &

Andrews (2014), a significant degree of managerial perceived Environment Uncertainty (PEU) would indicate an increased awareness of the external limitations that affect an organization. Consequently, this awareness would be linked to the implementation of strategies and structures that are more likely to optimize the performance and competitiveness of the firm. Low levels of perceived environmental uncertainty (PEU) indicate an inadequate assessment of organizational contingencies, which could lead to a misalignment between strategy, structure, and environment, ultimately resulting in reduced firm competitiveness.

2.2 Theoretical Review

2.2.1 Porters' Five Forces Model

The most significant and influential analytical tool for assessing the nature of competition in an industry according to many scholars is, Michael Porter's Five Forces Model (Stonehouse & Snowdon 2007). With the introduction of the Five Forces Model, Porter presented his arguments that competition in any industry is not only between explicit industry players which we refer to as rivals, market players, industry competitors or competing businesses but goes well beyond that. Porter's Five Forces Model helps managers and analysts understand the competitive landscape that a company faces and to understand how a company is positioned within it. Porter's Five Forces is a business analysis model that helps to explain why various industries are able to sustain different levels of profitability. Porter's Five Forces is a model that identifies and analyzes five competitive forces that shape every industry and helps determine an industry's weaknesses and strengths. Five Forces analysis is frequently used to identify an industry's structure to determine corporate strategy. Porter's model can be applied to any segment of the economy to understand the level of competition within the industry and enhance a company's long-term profitability. Porter presented a model which

provides a view of all competitive forces which create pressures on prices, costs, the rate of investment and other strategies necessary to compete in the industry (Porter, 1979, 1985, 1989).

The model focuses on five forces that shape the competition within an industry: (a) the threat of new entry, (b) the threat of substitutes, (c) the bargaining power of buyers, (d) the bargaining power of suppliers, and (e) the extent of rivalry between competitors within an industry (Porter, 2008). On the basis of analyzing the five forces, Porter argues that an organization can develop a generic competitive strategy of differentiation or cost leadership, capable of delivering superior performance through an appropriate configuration and coordination of its value chain activities (Stonehouse & Snowdon 2007). To effectively analyze the competitiveness of the manufacturing firms in Uganda, each of the five forces identified by Michael Porter shall be analyzed separately. This is to ensure that a depth empirical review is undertaken.

First is the threat of new entrants in manufacturing sector. This force refers to the number of competitors and their ability to undercut a company. The larger the number of competitors, along with the number of equivalent products and services they offer, the lesser the power of a company. Suppliers and buyers seek out a company's competition if they are able to offer a better deal or lower prices. Conversely, when competitive rivalry is low, a company has greater power to charge higher prices and set the terms of deals to achieve higher sales and profits. Porter argues that the threat of new entrants into an industry is related to the barriers to entry that exist within the industry and geographic boundaries (E. Dobbs, 2014; Porter, 2008). In order to assess the threat of entry in the manufacturing sector of Uganda each of these barriers must be analyzed in the context of the relevant boundaries. Some of the important variables to

be analyzed are; Capital requirements: The biggest barrier to entry into the capital-intensive manufacturing sector is usually access to finance (Ofunya Afande & Mathenge Paul Maina 2015). To cover high fixed costs, serious contenders typically require a large amount of cash. When capital markets are generous, the threat of competitive entrants escalates. When financing opportunities are less readily available, the pace of entry slows down. In order to analyze the threat of new entrants based on the capital requirement, it is essential to evaluate the capital market and thus understand the availability of finance for this sector. It is an expensive business; contenders need to be large enough and produce sufficient cash flow to absorb the costs of expanding operations (Farrell & Klemperer 2011).

Large manufacturing companies make huge amounts of profits and with this such firms are in position to expand operations and even sell at reduced prices to the detriment of competitors; Switching costs: Customer switching costs are fixed costs that buyers face when they change suppliers (Porter, 1985). In the manufacturing sector, it mainly depends on what kinds of cost consumers or buyers have to undertake if they switch from one manufacturer to another; Unequal access to distribution channels: Distribution channels in the manufacturing industry range from self-owned distribution points to any type of shop and also to sales points with vending and automated machines (Oloko *et al.*, 2021). Generally, these distribution points are of negligible value to telecommunications organizations and therefore have no impact on the threat to entry. However, if exclusive distribution rights existed at critical or highly dynamic distribution points, then unequal access to these points might constitute a restriction to the threat to new entrants.

Bargaining power of suppliers is the second force. This force addresses how easily suppliers can drive up the cost of inputs. It is affected by the number of suppliers of key inputs of a good or service, how unique these inputs are, and how much it would cost a company to switch to another supplier. The fewer suppliers to an industry, the more a company would depend on a supplier. As a result, the supplier has more power and can drive up input costs and push for other advantages in trade. On the other hand, when there are many suppliers or low switching costs between rival suppliers, a company can keep its input costs lower and enhance its profits If suppliers have more bargaining leverage against the firm, then they are more powerful and can dictate terms (Brown *et al.,* 2009). The power of these suppliers depends on a number of factors, namely: the level of concentration of suppliers, whether or not they depend heavily on the manufacturing firms for their revenues, the costs to the manufacturing firms switching to other suppliers and the level of differentiation of products (Brennan & Cao 1997). In Uganda most of the suppliers are small firms depending more on the manufacturing firms for revenue generation and this gives the manufacturing firms more bargaining power over them. The power exerted by workforce (labour) suppliers is the second element; it is affected by the availability of a qualified and experienced manufacturing sector work-force and also by the consolidation in the regional labour market in the manufacturing sector (Doellgast 2008). Some companies with good corporate image and stability are preferred by many of the labour suppliers, this therefore means that they will always attract the best employees in the market. It's also true employees of most manufacturing firms in Uganda are not members of any trade union, and this reduces their bargaining power over various issues with the company.

Third force is the bargaining power of buyer or customer power. The ability that customers have to drive prices lower or their level of power is the other force. It is

affected by how many buyers or customers a company has, how significant each customer is, and how much it would cost a company to find new customers or markets for its output. A smaller and more powerful client base means that each customer has more power to negotiate for lower prices and better deals. A company that has many, smaller, independent customers will have an easier time charging higher prices to increase profitability. Buyers of manufacturing products include both individual and corporate buyers. The most influential factors in their decision making are price sensitivity and the perceived quality of products (Kyu Kim *et al.,* 2011). Price sensitivity is a function of the overall buying behavior of buyers in the market, the income of the buyers and the value that is accorded by these buyers to the products and services offered by the manufacturing firms (Inderst 2003). In recent years we have witnessed price wars among the competitors in the manufacturing sector in Uganda. These they elude to the fact that most Ugandan consumers are price sensitive. The negligibility of switching costs for buyers is also a critical factor when investigating the power of the buyer. Due to highly differentiated products by a company, the cost of switching from one firm to another might be too high in terms of convenience since a manufacturer might be the only producer of such product among the many manufacturing firms in the country. In such a scenario buyer power is reduced (Coker *et al.,* 2018).

Threat of Substitutes is the fourth force. A substitute is a product or service that performs the same function as firm's product but by different means (M. Porter & Siggelkow, 2008). Substitute goods or services that can be used in place of a company's products or services pose a threat. Companies that produce goods or services for which there are no close substitutes will have more power to increase prices and lock in favorable terms. When close substitutes are available, customers will have the option

to forgo buying a company's product, and a company's power can be weakened. Understanding Porter's Five Forces and how they apply to an industry, can enable a company to adjust its business strategy to better use its resources to generate higher earnings for its investors. The main substitutes in the wider manufacturing industry in Uganda are verse. Local competitor services for both Voice and data are also a threat for the rate of growth of competitor firms. Substitutes offer the greatest threat when they can provide buyers with better products at lower costs through changes that improve the value of their products or services. Entry of products manufactured from countries such as Kenya are not fully restricted, and this possess more threats to the local manufacturers.

Michael Porter's fifth force is competitive rivalry, which may be defined as the efforts that industry players or existing competitors make in order to sustain and improve their market share, revenue, profitability and image. High rivalry limits the profitability of an industry (Dobbs 2014). In the manufacturing sector, all aspects of rivalry, including price discounting, introduction of new products, service improvements and advertising campaigns play an important role (Kandie 2001). According to Porter, the degree of rivalry depends on the intensity as well as the basis of competition (Porter, 2008). Some of the variables used to analyze competitive rivalry include; industry concentration and size competitors, the rate of industry growth, exit barriers, price competition and competition on innovation dimension and marketing. Even though (M. E. Porter, 2000), alluded to the fact that the model helps a company assess the potential profitability of a particular industry (Mauri & Michaels, 1998) argue that the profitability does not depend on industry-wide factors; firm-specific factors such as unique endowment, individual competence, and strategies are more important to the profitability of the business. The Porter model also indicates that five forces apply equally to all firms in

an industry but in reality, the strength of those forces may vary from business to business in terms of size or strength of brand name (Stonehouse & Snowdon, 2007).

The Five Forces model has some drawbacks, including that it is backward-looking, making its findings mostly relevant only in the short term; that limitation is compounded by the impact of globalization. Another big drawback is the tendency to try to use the five forces to analyze an individual company, versus a broad industry, which is how the framework was intended. Also problematic is that the framework is structured so that each company is placed in one industry group when some companies straddle several. Another issue includes the need to assess all five forces equally when some industries aren't as heavily impacted by all five. The other limitation is that the model does not explain all the variables of the study. As a result of the limitations of the model, other theories were proposed by the study to address such limitations. These theories included transformational leadership theory and the organisational learning theory.

2.2.2 Transformational leadership theory

Burns (1978) initially developed the theory of transformational leadership. Transformational leadership emphasises satisfying basic needs and meeting higher desires though inspiring followers to provide newer solutions and create a better workplace (Chandrashekhar, 2002; Eagly & Carli, 2003; Norris, 2005; Jue, 2004; Horwitz et al, 2008; Marturano & Gosling, 2008; Patiar and Mia, 2009). This leadership theory actually employs charismatic behaviours and motivates subordinates to provide better outcomes (Druskat, 1994; Norris, 2005). The "effectiveness among transformational leaders is measured by the effect of leader behaviours on followers; subordinates of transformational leaders verbalise feelings of admiration, respect, trust,

and appreciation toward these leaders and are motivated to provide extra effort" (Webb 2007, p.54). Yukl and Van Fleet (1992) postulate that transformational leadership focuses on the critical human assets' commitment in effectively exerting organisational changes. Based on this, this leadership theory sheds light on the strategic roles, followers' attitudes and values to accomplish a higher degree of effectiveness, and highlights the importance of employees in implementing changes at the organisational level. It is evident that as today's global business environments involve a high level of uncertainty, organisations will increasingly need more transformational leaders to be more competitive. Although Zaccaro and Horn (2003) critique the literature of leadership for having no relevance between leadership theories and today's changing business environment, transformational leadership theory unfolds results in organisations, influencing employee individual interests to align with institutional interests, and through inspiring followers to create new ideas and innovations for effective business outcomes.

Bass (1985) uncovered four dimensions of transformational leadership. They are idealised influence, individualised consideration, intellectual stimulation, and inspirational motivation. The idealised influence aspect aims to develop a shared vision and improve relationships with followers (Avolio, Waldman & Yammarino, 1991; Canty, 2005); while individualised consideration concentrates on identifying employees' individual needs and empowering followers (Avolio, Waldman & Yammarino, 1991; Canty, 2005) in order to build a learning climate (Lowe, Kroeck, & Sivasubramaniam, 1996) and mobilise their support towards goals at the organisational level (Osong, 2006). On the other hand, intellectual stimulation propels knowledge sharing in the company to generate more innovative ideas and solutions (Canty, 2005). Finally, inspirational motivation focuses on inspiring human assets, thereby setting a

higher level of desired expectations for them (Bass & Avolio, 1997; Canty, 2005). These four dimensions represent an effective leader in a knowledge-based economy grounded on developing and managing intellectual capital within organisations.

2.2.3 Organizational Learning Theory

The theory of organizational learning is frequently characterized as a mechanism for cultivating, preserving, and disseminating knowledge within a company. This process is believed to arise from experience, and an organization is deemed to have learned from an experience when there is a discernible shift in its overall behavior or performance (Argyris., 1967). Argyris (1967) initially proposed the concept of organizational learning, which posits that the process of identifying and rectifying errors is integral to learning. In situations where an individual or a group executes a task and the realized result deviates from the anticipated outcome, it is probable that the said individual or group will engage in an inquiry to identify the underlying causes of the deviation and subsequently rectify the errors as necessary. Ellström (2010) posited that learning takes place within an organization when individuals engage in interactions with their colleagues. Argyris (1967) posits that Organizational Learning Theory asserts that firms must adapt their goals and actions to achieve competitiveness in an unpredictable business environment.

Furthermore, the acquisition of knowledge will solely transpire when organizations deliberately opt to modify their conduct in reaction to existing circumstances, establish a connection between their conduct and consequences, and retain knowledge of the outcomes (Huber, 1991). According to Huber's 91991) perspective, the process of learning encompasses three distinct phases. The first phase involves data acquisition, whereby a company acquires a "memory" of valid action-outcome links, as well as the

environmental conditions under which they are applicable. Additionally, this phase involves understanding the likelihood of outcomes occurring and the level of uncertainty surrounding such probabilities (Raj & Srivastava, 2013). The links between actions and outcomes undergo continuous updates over time, which may involve the addition or rejection of links based on emerging evidence, or the expansion of links based on available confirmatory evidence. It is imperative for firms to adapt their actions in accordance with alterations in the environment, as it is necessary to specify each action-outcome connection in relation to relevant conditions. In order to achieve success, it is imperative for firms to conduct a thorough environmental scan to identify any indications of change, whether actual or anticipated, and subsequently ascertain the need for change.

The subsequent stage of the procedure entails interpretation, wherein companies consistently juxtapose factual outcomes with anticipated ones, thereby facilitating the revision or augmentation of their cognitive repository. Cangelosi & Dill (2016) assert that when unexpected results arise, it is imperative to evaluate them for causality, adjust actions accordingly, and potentially establish new connections between actions and outcomes to enhance learning. Theorists hold divergent views on the necessity of action for learning to occur within organizations. Some contend that learning can transpire without any accompanying action, while others assert that learning cannot be said to have taken place unless there is a corresponding change in actions (Cangelosi & Dill, 2016).

The third stage involves the process of adaptation/action, wherein organizations utilize the interpreted knowledge to identify and implement new action-outcome associations that are suitable for the altered environmental circumstances. Ellström (2010)

characterizes the phenomenon as an ongoing process of adapting to a variety of environmental factors, including but not limited to external and internal conditions, technological advancements, and competition. The complexity and dynamism of a firm's experiences are significant factors that can greatly impact this process. Following the process of adaptation, the knowledge base of the firm is revised to incorporate the newly established action-outcome relationship, probabilities, unpredictability, and pertinent circumstances, and the cycle persists. The process of providing feedback is a continuous and iterative one that takes place at every stage of the process.

2.3 Empirical Literature

2.3.1 Strategic Leadership and Firm Competitiveness

A number of scholarly investigations conducted by researchers such as Adebayo & Mudashiru, (2019), Jaleha & Machuki, (2018), Kim & Thapa, (2018), Banmore *et al.*, (2019) have revealed a favorable impact of strategic leadership on the competitive advantage of organizations. The findings presented in the aforementioned results are supported by the scholarly works of Andersson *et al*., (2014), Wang *et al.*, (2011), G. Wang *et al.*, (2016) and Adeoye, (2019). These authors conducted systematic investigations on the impact of strategic leadership on the competitive advantage of service firms and reported a positive correlation. Moreover, the aforementioned studies posit that specific leadership competencies enhance strategic leadership, thereby elevating the level of organizational competitiveness.

Mahdi & Almsafir (2014) posit that strategic leadership plays a crucial role in attaining and maintaining competitiveness within the academic sphere, citing a noteworthy and affirmative impact. The research conducted by Kabetu (2018) indicates that strategic leadership has a noteworthy and favorable impact on the competitiveness of firms. This

finding is consistent with the earlier research conducted by Mahdi and Almsafir (2014). The manner in which top managers engage in the strategic leadership process of decision making has a notable impact on the caliber of decisions made, which in turn has a significant bearing on the competitive advantage of the firm (Egwakhe & Adeoye, 2019). Cheng, Wang, and Zhang (2011) discovered a robust and statistically significant impact of the strategic leadership component of decision-making on a company's competitiveness, as evidenced by their research. Based on a review of several empirical studies, it is evident that there is a lack of research on the impact of strategic leadership components, such as strategic control, core competencies, strategic direction, ethical practices, and corporate culture, on the competitive performance of manufacturing firms in Uganda.

In their research, Hitt *et al.*, (2010) formulated a strategic leadership framework comprising six essential components that elucidate the impact of strategic leadership on the competitive advantage of firms. Akenten (2019) has identified several key factors that are crucial for organizational success. These factors include determining strategic direction, developing human capital, exploiting and maintaining core competences, sustaining effective corporate culture, emphasizing ethical practice, and establishing strategic control. According to Akenten (2019), the interplay of these elements indicates that the amalgamation of these factors by strategic leaders would lead to a rise in firms' competitiveness. Effectively managing organizational resources involves the development of human capital that contributes to the establishment of a strategic direction, the maintenance of corporate culture, the implementation of effective control systems, the establishment of ethical practices, and the exploration of core competencies. The source cited is Akenten (2019).

As per the aforementioned, the Chief Executive Officers bear the exclusive responsibility of ascertaining the strategic trajectory of their respective organizations (Hitt *et al.,* 2010). This process, as described by Hitt *et al.,* (2010) and Rotemberg *et al*., (2016), pertains to the formulation of a comprehensive and enduring outlook for a firm's strategic objectives. Prahalad and Hamel, (1994) define strategic intent as the utilization of a firm's internal resources, capabilities, and core competencies to achieve a seemingly unattainable goal within a competitive environment that is uncertain. According to Akenten (2019), strategic intent is present within organizations when all employees are dedicated to achieving a particular performance standard, possess strong beliefs in their product and industry, and concentrate exclusively on their competitive advantages. Strategic intent fosters a forward-looking perspective that motivates employees to exceed their perceived limits of achievement, thereby enhancing the competitive advantage of the firm through the realization of substantial change and progress (Akenten 2019).

According to Hitt *et al.*, (2010), the exploitation and preservation of core competencies is crucial for strategic leaders. They argue that these leaders must exert significant effort to utilize these competencies in a manner that enhances firm performance, ultimately leading to improved competitiveness at the firm level. According to Jaleha and Machuki's (2018) research, it is crucial for strategic leaders and corporate managers to make decisions that facilitate the development, maintenance, strengthening, leveraging, and exploitation of core competencies within their organization. This can be achieved by effectively sharing resources across various units of the firm. According to Akenten (2019), intangible resources serve as a more effective foundation for core competencies as they pertain to the knowledge and skills of employees, rendering them less conspicuous to competitors.

The effective utilization of core competencies in large and diversified firms involves their development and application across various units of the organization, with the aim of creating and sustaining a competitive edge in the market (Nicholson & Howard, 2018). Nicholson and Howard (2018) underscored the significance of core competencies in multinational corporations, as they aid in managing intricate relationships among businesses that operate in diverse international markets. These competencies are developed, nurtured, and applied to facilitate effective management of such relationships. However, the successful implementation of core competencies is contingent upon the development of effective human and social capital.

Akenten (2019) has observed that in the present highly competitive and uncertain business landscape, human capital plays a crucial role in augmenting performance and firm competitiveness, in addition to exploiting and sustaining core competencies. According to Akenten (2019), numerous manufacturing companies assert that their employees are their most valuable assets. Furthermore, strategic leaders are those who recognize the firm's workforce as a critical resource that underlies many core competencies and enables the successful exploitation of competitive advantage. Lengnick-Hall *et al.*, (2011) assert that in order to enhance employee productivity, it is necessary to invest in them as valuable capital resources. Hitt, (2001) and Snell and Youndt, (1995) posit that in the face of intensifying competitive pressures, employees may represent the sole enduring means of securing a competitive edge for firms.

Similarly, Hagen (1998) asserts that high-ranking executives view employees as a crucial factor in the competitive advantage of a firm, and it is incumbent upon them to create training and development initiatives aimed at enhancing the skills and competencies of their workforce. According to Hagen's (1998) perspective, the

implementation of training and development initiatives can aid organizations in maintaining a competitive edge and fostering the growth of fundamental capabilities. According to Dickson (2003), the implementation of human capital development initiatives enables strategic leaders to enhance their skill sets, which are essential for achieving the organization's strategic objectives, sustaining its core competencies, and fostering a corporate culture that promotes ethical conduct. Dickson (2003) asserts that the development of human capital is crucial for the successful implementation of strategic leadership.

Organizational culture, comprising a complex set of six ideologies, symbols, and core values that are shared throughout a firm, exerts an influence on the manner in which businesses are conducted (Odor, 2018; Carvalho *et al.*, 2019). Scholars Kraśnicka *et al.*, (2018) and Jardioui *et al.*, (2020) share the perspective that organizational culture plays a significant role in shaping firms' business practices, regulating and managing employee behavior, and contributing to a firm's competitive advantage. The authors emphasized that the establishment and execution of organizational culture is a fundamental responsibility of strategic leaders.

The aforementioned argument is consistent with the subsequent research conducted by Ireland and Hitt, (2005), which asserts that in the context of an unpredictable global economy, strategic leaders who possess the ability to acquire the skills necessary to mold a company's culture in ways that are advantageous to its competitiveness will be regarded as valuable sources of competitive advantage. According to Akenten, (2019), cultures serve as the framework for the development and execution of firm-level strategies, and represent the accumulated knowledge and experience of an organization in response to ongoing challenges related to its growth and sustainability. According to

Sarpong et al., (2018), strategic leaders hold the responsibility of cultivating a suitable organizational culture that fosters focused learning and human development, facilitates the exchange of skills and resources across various departments of a company, and encourages entrepreneurial attitudes that are crucial for promoting innovation and enhancing the competitiveness of the firm.

Thomas *et al.,* (2004) assert that strategic leadership bears the responsibility of instigating changes that encompass the objectives of establishing and maintaining an ethical climate, wherein employees engage in ethical conduct as a habitual practice. According to Akenten, (2019), ethical practice pertains to the moral principles that dictate the appropriate and inappropriate conduct of employees, and encompasses conduct beyond the boundaries of the organization. According to Sarpong *et al.,* (2018), proficient strategic leaders prioritize ethical practices within their organizations and strive to integrate them into the organizational culture. The function of an organization is to shape and regulate the conduct of its employees and managers by means of formal regulations, economic incentives and penalties, and the principles and standards that embody the corporate culture.

According to Akenten (2019), ethical firms facilitate and motivate employees across all hierarchical levels to conduct themselves in an ethical manner while executing the firm's strategies, thereby enhancing the firm's competitiveness. According to Brass & Butterfield (2016), the proliferation of unethical practices within a company can spread like an infectious disease, ultimately resulting in a detrimental effect on the firm's competitive standing. Instances of corporate organizational scandals and accounting irregularities have led to a widespread loss of trust in the ethical practices of major corporations, both public and private, across the globe. Sarpong *et al.,* (2018b) proposed

that companies should appoint ethical strategic leaders who can integrate ethical practices into their long-term vision for the organization, based on the aforementioned scandals and incidents. According to Sarpong *et al.*, (2018b), this practice has the potential to enhance the competitive advantage of these firms by fostering a perception of honesty, trustworthiness, and integrity among the public.

The pervasive incidence of character failure and unethical conduct demonstrated by upper-level executives has had an adverse impact on the attainment of organizational objectives and long-term aspirations. The aforementioned phenomenon is discernible in the findings of Adeoye, (2019), who uncovered that several service-oriented organizations that are led by individuals who engage in unethical conduct have suffered a decline in their reputation, loss of trust from their subordinates, and a decrease in customer patronage, ultimately leading to a loss of their competitive edge. Conversely, recent research conducted by Yukl *et al.*, (2019) and Kia *et al.*, (2019) has demonstrated an inverse correlation between ethical practices and a firm's competitive advantage. The aforementioned discovery was corroborated by Ryan & Powers (2012), whose research revealed an inverse correlation between ethical conduct and corporate competitiveness. The divergent viewpoints on this matter were primarily attributed to the contextual portrayal of strategic leadership. This study aims to address the existing literature gaps by examining the impact of strategic leadership on firm competitiveness within the context of Uganda, in light of the aforementioned contradictions.

Strategic controls refer to formal information-based procedures that strategic managers utilize to establish, sustain, and modify patterns in firm activities. These controls facilitate the development of credibility, demonstration of the value of strategies to diverse stakeholders of the firm, and promotion and support of strategic changes

(Akenten, 2019). According to Ireland and Hitt (2005), strategic control plays a crucial role in directing and shaping organizational activities towards the attainment of performance goals. In addition, strategic leaders are responsible for implementing measures that enable adaptable and creative employee actions that result in gaining advantageous market positions for their organizations (Akenten, 2019).

According to Iborra *et al., (2019)* and Sambamurthy *et al.,* (2016), the implementation of controls is crucial for firms to attain their desired outcomes. Controls establish the boundaries within which strategies are executed and enable corrective actions to be taken when adjustments related to implementation are necessary. According to Sarpong *et al.*, (2018b), the effective implementation of strategic controls by senior management necessitates the incorporation of suitable levels of autonomy across the different sub-units of organizations. This integration can assist firms in achieving a competitive edge in their respective markets. According to Management and Makori (2019), the promotion of the concurrent utilization of strategic control and autonomy can facilitate the attainment of flexibility and innovation, thereby empowering firms to capitalize on distinct market opportunities.

2.3.2 Organizational learning and firm competitiveness

As posited by Authors (2013), the fundamental underpinnings of competitive strategies are rooted in the organizational resources and capabilities. These strategies are meticulously crafted to ensure a seamless alignment with market conditions, while also taking into account the unique resources and capabilities of the firm, as expounded by Akenten (2019). In order for enterprises to attain elevated degrees of competitiveness in the marketplace, it is imperative that the resources held by said enterprises possess the qualities of being valuable, rare, inimitable, and non-substitutable, commonly

referred to as VRIN (Jerez Gómez *et al.*, 2004). The concept of organizational learning as a VRIN capability is substantiated by existing literature, as it enables firms to capitalize on opportunities and mitigate threats, thereby leading to a favorable market position (Hult *et al.*, 2003). Sinkula (1994) posits that organizational learning is a highly esteemed capability, as it enables firms to attain enhanced knowledge and a more profound comprehension of both the environment and the organization in its entirety. Organizational learning serves to mitigate the sensation of environmental intricacy and forestall the potential for stagnation in strategic decision-making processes resulting from uncertainty, as posited by Evans, (2007).

The acquisition of knowledge within an organization is contingent upon the availability of its existing knowledge base, as the processes of imitation and transfer are inherently challenging. It is worth noting that while competitors may observe the actions taken by the organization, the underlying rationale behind these actions remains obscure (Hult *et al.*, 2003). The discovery made by Hult *et al.*, (2003) aligns with the prior research conducted by Yoon *et al*., (2018) and Battistella *et al.*, (2020), wherein they posited that the transference of organizational learning is a complex and challenging process. In accordance with Tomas *et al.*, (2000) findings, it can be posited that organizational learning represents an intangible asset that is deeply rooted in the organizational framework and, furthermore, lacks strategic substitutes due to its irreplaceability within contemporary markets. Furthermore, the aforementioned arguments posit that organizational learning, as a VRIN capability, holds significant sway in the development of strategic initiatives that drive firm competitiveness (Paper & Amani, 2016).

In accordance with the research conducted by Paper and Amani (2016), it has been observed that organizational learning has the potential to bring about a transformation in the market conditions, rather than merely conforming to the changes in the market. This is primarily due to the fact that generative learning plays a pivotal role in the creation of groundbreaking innovations. As posited by Darroch (2005), the acquisition of knowledge and skills enables enterprises to establish novel market segments and reconfigure the operational parameters of extant ones. In contemporary times, an augmented aptitude for acquiring knowledge is imperative for corporations to contend with the ramifications of market fluctuations, technological advancements, the vast array of information accessible, and the significance of proactive measures (Moon & Lee, 2015). From a strategic standpoint, it can be argued that organizational learning serves as a critical dynamic capability that facilitates swift adaptation to shifting environments. This, in turn, empowers firms to consistently generate market offerings that cater to diverse market segments (Madhavaram & Hunt, 2008) and effectively address evolving market demands (Beer *et al*., 2005).

An increasing cohort of erudite individuals have recognized the significance of organizational learning as a crucial origin of exceptional corporate performance, ultimately rendering the firm more competitive within its respective industry (Goh *et al*., 2012; Evans, 2007). As posited by Battor & Battour, (2013), the process of learning is centered on comprehending and adeptly fulfilling the articulated and unspoken requirements of customers via novel offerings, amenities, and operational methodologies. Consequently, the process of organizational learning ought to culminate in outcomes that are superior in nature, including but not limited to, heightened success rates in the development of new products, superior levels of customer retention, greater profitability, and ultimately, a competitive advantage over

rival firms in the market. According to the research conducted by Paper and Amani (2016), organizational learning is a crucial factor in enabling companies to attain a competitive edge. This is achieved through the enhancement of information processing activities, which in turn enables firms to adapt more efficiently and expeditiously to the ever-changing market environments and conditions, as posited by Malter & Dickson, (2001).

The proposition of organizational learning as a crucial strategic process and the sole sustainable competitive advantage of the future has been put forth by Namada (2018b). In the study conducted by Ricciardi *et al.,* (2019), it was expounded that the process of organizational learning facilitates the attainment of perpetual refinement and the augmentation of knowledge, competencies, and dispositions. This, in turn, leads to the creation of value and ultimately, the enhancement of a firm's competitive edge. The findings of (Zulkarnain *et al.*, 2019) support the prior research of Ricciardi *et al.,* (2019) by asserting that the acquisition of organizational knowledge is a crucial prerequisite for achieving a durable competitive edge within a given sector. Moreover, the research conducted by Singh *et al.,* (2019) revealed that the process of organizational learning is a protracted endeavor that significantly contributes to the attainment of a competitive edge. Furthermore, Namada (2018b) and Kadhim *et al.,* (2018) conducted a study pertaining to the correlation between organizational learning and competitive advantage within the Taiwanese context. Their findings suggest that organizational learning plays a significant role in enhancing a firm's competitive advantage. Consequently, as previously deliberated, the acquisition of organizational knowledge constitutes a pivotal factor in bolstering a firm's competitive edge vis-à-vis its rivals. Thus, it follows that the cultivation of organizational learning can serve as a catalyst for enhancing firm competitiveness, particularly in Uganda, where the manufacturing sector is currently

characterized by intense competition. Drawing upon the existing literature, I hereby posit that organizational learning does not exert a statistically significant impact on the competitive standing of a firm.

2.3.3 Perceived environmental uncertainty and firm competitiveness

Buchko (1994) and Milliken (1987) posit that the phenomenon of perceived environmental uncertainty arises when the decision makers of a firm discern an element of unpredictability in their business milieu. This phenomenon arises in situations where a disparity exists between the information that is accessible and the information that is necessary for those in positions of decision-making. As per Milliken's (1987) findings, strategic managers tend to experience a sense of ambiguity in their environment when they lack a clear understanding of the significant occurrences or trends taking place in the external milieu. This uncertainty may also arise when they encounter difficulty in accurately assessing the likelihood of specific events or changes. Etim (2019) posited that the degree of recognition of the external environment's importance and the corresponding response of firms to their environment are contingent upon the perceived environmental uncertainty, which varies across industries and industry lifecycle stages.

Furthermore, scholars in the past have delineated the concept of perceived environmental uncertainty into two overarching dimensions, namely variability and complexity, as expounded by Madinda (2015). Madinda (2015) argues that the concepts of variability and complexity are used to describe environmental changes. A stable environment is characterized by marginal and foreseeable changes, while a dynamic environment is characterized by vibrant, unpredictable, and frequent changes in an organization's environment. In contrast, complexity pertains to the quantity of heterogeneous constituents present within the surroundings. An environment is deemed

simple if it comprises a limited number of uncomplicated and relatively uniform components that exhibit a degree of stability. Conversely, an environment is regarded as complex if it encompasses a multitude of constituents that are prone to exert a significant impact on the operations of an organization (Madinda, 2015). The contemporary business landscape is marked by heightened levels of unpredictability. Petrus (2019) posits that the heightened levels of volatility and dynamism observed in the contemporary business landscape can be attributed to the forces of globalization and internalization. This phenomenon has consequently led to an escalation in the levels of uncertainty experienced by individual firms. According to Lee and Klassen, (2016), elevated levels of uncertainty in the business milieu stem from insufficient experience and knowledge of management pertaining to potential future alterations.

The presence of ambiguous business environments, propelled by external factors such as market trends, technological advancements, and competitive intensity (Chin *et al.*, 2014), is marked by a consistent flux in consumer demands (Liu, 2017). In the given milieu, Nica *et al.,* (2015) posit that enterprises ought to endeavor to create commodities that align with evolving consumer predilections in order to attain a strategic edge over rival firms operating in the same sector. It is imperative for the upper echelons of corporate entities to possess the aptitude to comprehend such circumstances, given the expeditious evolution of consumer predilections and the concomitant rise in prognostic hurdles (Fang *et al.*, 2011).

The concept of technological uncertainty pertains to the dynamic nature of technological resources and the potential for management to lack comprehension or foresight regarding certain facets of the technological environment, as posited by (Köseoglu *et al.,* 2013). The phenomenon of technology uncertainty, as posited by Chin

et al., (2014), arises from the incapacity of upper-level executives to ascertain the potential of nascent technologies that may be amalgamated to engender novel concepts for the purpose of product innovation. According to the scholarly work of Nguyen and Mutum (2015), competitive uncertainty denotes the incapacity of a firm's upper echelon to effectively address the ramifications of heightened competition in the foreseeable future, including the comparative potency of rival firms and their respective plans and tactics. In order to enhance their competitiveness, it is imperative that top-level executives meticulously contemplate the prospective rivals and their undertakings within a given sector (Nguyen and Mutum 2015).

Several scholarly inquiries have established a correlation between the perception of environmental uncertainty and its potential to moderate a company's internal factors with respect to firm performance. However, the moderating influence of perceived environmental uncertainty on the correlation between firm internal factors and firm competitiveness has been overlooked. As exemplified by Kafetzopoulos *et al.,* (2019), an inquiry was conducted to scrutinize the impact of environmental uncertainty as a moderator on the correlation between innovation dimensions and firm performance. In the interim, Liu, (2017) conducted a study on the moderating impact of environmental uncertainty on the relationship between intellectual and social capital and firm performance. Furthermore, scant research has delved into the immediate impact of perceived environmental ambiguity on intra-organizational operations. The researcher conducted an empirical investigation to examine the direct impact of perceived environmental uncertainty on firm competitiveness, particularly among manufacturing firms in Uganda, due to the absence of prior studies that explored this relationship. This gap in the literature necessitated the present study.

2.3.4 Strategic Leadership and organizational learning

The efficacy of firms is contingent upon the dissemination of novel knowledge and perspectives amidst individuals and collectives, with the aim of accomplishing organizational objectives. The significance of leaders in knowledge management, encompassing the dissemination of novel insights amidst various groups, individuals, and organizational echelons, is highly esteemed in contemporary workplace praxis (Swart & Harcup, 2013). The crux of the matter lies in the observation that the conduct and administration of leaders play a pivotal role in fostering organizational learning via knowledge management. The implementation of this particular management approach serves as a viable solution to the various obstacles that companies encounter in their continuous pursuit of innovation amidst the highly interconnected and cut-throat business landscapes (Nemanich *et al.*, 2009).. In order to optimize the productivity of both the collective entity and its constituents, it is incumbent upon those in positions of leadership to furnish efficacious methodologies that augment the transfer of knowledge amongst employees and their respective organizations. This is the rationale behind the heightened scholarly focus on strategic leadership and organizational learning, as expounded upon by Berson *et al*., (2006).

As per the findings of Lear (2012), entities that are helmed by strategic leaders tend to exhibit greater success in the realm of knowledge acquisition, spanning across the individual, collective, and organizational domains. Research conducted by Caylan and District (2014) and Watermarks (2009) has indicated that effective organizational learning initiatives require the integration of both managerial and visionary leadership approaches. As per the findings of Vera *et al.,* (2004), the communication of a vision by a strategic leader has the capability to alter a company's established learning patterns, whereas their managerial style can aid in the propagation and strengthening of

continuous learning initiatives. The integration of learning and institutionalization of newly discovered knowledge is deemed essential for firms to continually acquire new knowledge and retain it for future use (Malewska & Sajdak, 2014). The cultivation and dissemination of knowledge within an organization are essential prerequisites for sustained competitiveness, and are more effectively implemented under the guidance of a strategic leader.

The import of strategic leadership is rooted in its acknowledgement of the crucial function fulfilled by proficient communication in fostering the dynamic participation of both individuals and collectives in diverse organizational procedures. As per the findings of Vera *et al.*, (2004), it is the prerogative of strategic leaders to foster an environment that promotes the transcendence of learning barriers and facilitates the dissemination of knowledge across organizational boundaries. According to Goleman et al. (2001), strategic leaders who exhibit accessibility and solicit input are able to foster favorable perceptions regarding the dissemination of knowledge. Leaders who adopt a strategic approach and exhibit a visible presence by engaging in regular rounds of their organization communicate a distinct message regarding the significance they place on the viewpoints of their subordinates. According to Vera *et al.*, (2004), leaders who solicit input from individuals at various levels of management within an organization facilitate an atmosphere of knowledge exchange. Additionally, strategic leaders who acknowledge their own limitations cultivate a culture of continuous learning, which communicates to other members that mistakes and apprehensions can be addressed candidly (Goleman et al., 2001). The concentration of strategic leaders on internal transformations of organizations enables the transfer of knowledge from individuals to groups, as well as from groups to the organization, as posited by Vera *et al., (*2004).

Tichy and Devanna (1986) posit that strategic leaders implement mechanisms that facilitate the engagement of individuals and groups in the strategic process, thereby enabling them to exert influence over values, structures, systems, and products. When individuals comprehend the alignment of their personal and collective identities within the overarching framework envisioned by upper echelons of leadership, they are motivated to proffer their cogitations. In situations where the endeavors of personnel to conceive innovative concepts are disregarded and remain unimplemented at the organizational level, the process of acquiring knowledge from individuals and collectives fails to become an established practice, leading to a decline in the generation of novel ideas.

At the individual level, strategic leaders endeavor to foster learning opportunities by advocating for mechanisms such as perpetual enhancement, acquisition of competence, experimentation, and boundary transcending, as posited by Ulrich *et al.,* (1993). Furthermore, to cultivate a conducive environment for novel concepts, chief executive officers and upper-level executives establish a justification for "cognitively astute mishaps" within their respective establishments (McGill & Slocum, 1993). The control orientation of strategic leaders has been found to have an impact on individual learning, as per the research conducted by Snell and Man-Kuen Chak (1998) and Winter, Sarros, and Tanewski (1997). This is due to the possibility of employees being restricted in their ability to substantially alter the nature of their work tasks. At the organizational level, upper-level executives have the capacity to devise frameworks and communication systems that offer inducements to personnel for the purpose of exchanging their concepts, methodologies, and insights (Friedlander, 1983). The impact of strategic leaders on group learning is manifested through their ability to foster an environment of collaboration, mutual reliance, diversified skill sets, and

interconnectivity. Additionally, they facilitate productive discourse, even in the face of divergent perspectives, and view conflict as a means of promoting knowledge acquisition (Friedlander, 1983).

The acquisition of knowledge at the organizational level transcends the mere codification of procedures into habitual patterns. It is imperative that educational archives are harmoniously synchronized to uphold the strategic direction of the organization within the context of the competitive landscape (Crossan *et al.*, 1999). The constituents that embody the internal context or inner environment of an organization, as posited by Hedberg (1981), wield a significant impact on the cognitive and behavioral patterns of individuals, social interactions between individuals, and the dynamics of groups. The learning process is subject to the influence of the internal environment, wherein certain environments are more propitious to learning, thereby increasing or decreasing the likelihood of learning to transpire. Simultaneously, the acquisition of knowledge has the potential to induce transformation within the internal milieu (Argyris & Schn, 1978; Fiol & Lyles, 1985; Hedberg, 1981). Analogously, a comparable interdependent association can be observed in the realm of leadership. The limitations of leadership within the internal environment are well-established, however, strategic leaders possess the capability to influence and mold critical elements such as the organization's culture, strategy, and structure (Bass, 1985, 1998; Duncan & Weiss, 1979; Nahavandi, 1993; Schein, 1992).

While numerous scholars have scrutinized the correlation between strategic leadership and organizational learning in various industrialized nations, scant attention has been paid to the impact of strategic leadership on organizational learning in emerging economies (Boa, 2007). Furthermore, there is a dearth of research on this subject matter

in the Ugandan milieu. Furthermore, extant literature fails to elucidate the causal mechanisms through which the various components of strategic leadership, namely strategic direction, strategic control, ethical practices, corporate culture, human capital, and core competencies, impact the process of organizational learning (Lear, 2012).

2.3.5 The Mediating role of organizational learning in the relationship between Strategic leadership and firm competitiveness

Organizational learning has become more important than ever for firms to achieve the levels of competitiveness they long for by enabling firms adapt to the constantly changing business environments. Many empirical studies demonstrated that organizational learning had a positive effect on firm competitiveness. In a study conducted by Aksu & Özdemir, (2005), it was found that organizational learning facilitated adaptation to uncertain business environmental effects and had a positive correlation with firm competitiveness. Similarly, Khandekar & Sharma, (2006) maintained that organizational learning had a positive effect on firm performance ultimately leading to an improvement in the level of firm competitiveness.

Further, in another empirical study where Rezaei *et al.,* (2018) examined the relationship between organizational learning and financial performance of firms, it was found that there was a strong and positive correlation between organizational learning and financial performance which is an indicator of an improvement in firm competitiveness. To corroborate the earlier findings of Rezaei *et al.,* (2018), Naranjo-Valencia *et al.,* (2011) conducted a study and found that organizational learning and organizational innovation greatly contributed to organizational competitiveness. The later study by Naranjo-Valencia *et al.,* (2011) where they argued that organizational competitiveness increased based on factors such as increased communication between

the personnel, unity towards common objectives and risk-taking, which mostly occur depending on organizational learning. While organizational learning was found to have a direct positive effect on firm competitiveness, it also contributes to other business capabilities that positively affect competitiveness of firms (Kaya *et al.,* 2020).

Bavarsad *et al.,* (2014) conducted a study to investigate the correlation between organizational learning, strategic leadership, and firm performance. The findings of the study revealed that organizational learning plays a crucial role in enhancing firm performance by facilitating top managers in devising effective firm-level strategies. Kostadinović & Stanković (2021) conducted a study which determined that organizational learning enhances the capacity of organizations to adjust to emerging markets, thereby exerting a positive impact on leadership and the level of firm competitiveness (Kaya *et al.,* 2020).

Prior research has examined the mediating function of organizational learning in relation to two constructs. One instance of research in this area is the study conducted by Liao *et al.,* (2017), which revealed that the connection between absorptive capability and firm competitiveness is mediated by organizational learning. Hsu and Fang (2009) discovered a correlation between intellectual capital and new product development that is mediated by organizational learning. Real *et al*., (2014) have documented that organizational learning plays a mediating role in the relationship between entrepreneurial orientation and firm performance. The present study aims to investigate the potential mediating role of organizational learning in the association between strategic leadership and firm competitiveness.

2.3.6 The conditional effect of perceived environmental uncertainty

Due to the scanty literature in this area, this study proposes that perceived environmental uncertainty moderates the direct and indirect relationship between strategic leadership and firm competitiveness. This proposition is made by drawing on the moderation effect of perceived environmental uncertainty that has been consistently found in different related fields. For instance, Mahmood Hosseini *et al.*, (2012) delved into the correlation between competitive capability and firm competitiveness amidst perceived environmental uncertainty. Their results were consistent with the prior research conducted by Gime, (2007), which established a noteworthy link between competitive capability, financial performance, and market performance. Moreover, it was deduced that the perceived ambiguity of the environment exerted a moderating influence on the competitive aptitude and corporate competitiveness. In accordance with the research conducted by Jansen *et al.*, (2009), it has been determined that strategic leadership is particularly efficacious in the face of environmental uncertainties.

Regrettably, additional research has revealed that the impact in question is paradoxical due to the intricate nature of the exogenous milieu and other contextual variables that may potentially restrict or curtail the efficacy of strategic leaders (Fitza, 2017). As posited by Waldman, (2016), it can be inferred that the efficacy of strategic leadership in enhancing firm performance is contingent upon the degree of environmental ambiguities. The scholar posits that the exogenous milieu in which enterprises function is a pivotal factor in shaping the correlation between strategic guidance and corporate competitiveness. This study posits that instead of solely examining the correlation between strategic leadership and firm competitiveness, it would be prudent to consider the potential moderating effect of perceived environmental uncertainty. This approach

aims to fill the existing knowledge void. Consequently, this investigation aims to evaluate the moderating impact of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness.

2.4 Summary of Literature and Gaps

Table 2.1: Showing summary of literature and gaps

Author	Topic	Methodology	Findings	Knowledge gaps	Contribution of the current study
Solmaz et al., (20212)	Determinants of firm competitiveness: case of the Turkish textile and apparel industry	Used five-point Likert scale. Also, competitiveness was measured on the basis of constructs such as; Quality Management, Licensing and other non-tariff restrictions, Focus on foreign markets, Reliable access to Inputs, etc.	This study shows that networking will only have a minimal impact on a firm's competitiveness; either this networking is in the form of having close relationship with politicians and state officials or having good corporate relations in the industry	The focus of the research was on determinants of firm competitiveness	The goal of this study is to determine whether strategic leadership has an indirect and moderated mediation effect on firm competitiveness
Waldman et al., (2001)	Does Leadership Matter? CEO Leadership Attributes and Profitability Under Conditions of Perceived Environmental Uncertainty	Measured perceived environmental uncertainty using four items from an instrument developed by Khandwalla (1976: 641-643).	The results suggest that charisma, in its interaction with uncertainty, is the key variable in the prediction of performance.	Focused on direct and moderation effects of perceived environmental uncertainty. Perceived environmental uncertainty was measured using four items from an instrument developed by Khandwalla (1976)	Tested the mediation and moderated mediation effects on firm competitiveness. Perceived environmental uncertainty was measured using multiple items to minimize measurement errors
Dusya Vera and Mary Crossan	Strategic leadership and organisational learning	Data was collected from textile manufacturing firms using a cross sectional survey method. Random numbers generated by the computer were used to select respondents from the sampling frame	According to the findings, both transformational and transactional leadership styles are effective in facilitating organizational learning, albeit in different situations.	Focused on relationships and did not control for firm profiles like firm age and firm size	The study provides evidence for mediation and moderated mediation while controlling for the covariates

Ondrej Dvoulety (2020)	Determinants of Competitiveness of the Czech SMEs: Findings from the Global Competitiveness Project	Competitiveness index (score) from the survey data based on the methodology of the Global Competitiveness Project which reflected the ten pillars of firm competitiveness (i. e. technology, human capital, products, domestic market, networks, international markets, online presence, marketing, decision making and strategy)	The study found a significant relationship between the firm size and competitiveness of the Czech SMEs	The study ignored pricing of products and product quality which are very important for firms that wants to be competitive in the market	Firm competitiveness was measured using the scale adapted from the study of Li *et al,*. (2006) with five dimensions such as price, quality, delivery dependability, product innovation and time to market.
Sabah Agha and Laith Alrubaiee (2012)	Effect of Core Competence on Competitive Advantage and Organizational Performance	This study was descriptive quantitative in nature	Core Competence (Shared Vision; Cooperation and Empowerment) was found to have a significant positive effect on competitive advantage of firms	Used multiple regression analysis	Hierarchical regression analysis was employed. This study also focused on mediation, moderation as well as mediated moderation analysis.
James M. Bloodgood (2018)	Knowledge acquisition and firm competitiveness: the role of complements and knowledge source	Aspects of knowledge acquisition from the innovation, knowledge and routines literatures are integrated to create propositions showing the effects of knowledge acquisition on firm competitiveness.	Knowledge acquisition was found to criticality cause significant competitive effects, such as parity, relative harm and opportunity capture, that managers should be cognizant of when planning knowledge acquisition	Focused on only automobile industry and direct links between the study variables	The study utilized cross sectional explanatory research design and both quantitative and qualitative data was collected. The analysis focused on moderated mediation
Ovoke Kingsley Oruma1 & B.	Organizational Memory Management and Competitive Advantage	The cross-sectional survey was carried out and a total of fifteen (15) oil and gas firms	Organisational memory relates substantially with	Used organisational memory which is a dimension of organisational	Organisational memory as a mediator in the relationship between strategic leadership and firm competitiveness.

hima Onuoha (2020)	of Oil and Gas Firms in Rivers State, Nigeria	were covered as the population of the study	competitive advantage in oil and gas firms.	learning as an independent variable. Also, a small population of only 15 firms was used	A total of 410 manufacturing firms was used
Oanh et al., (2021)	The moderating effect of perceived environmental uncertainty and task uncertainty on the relationship between performance management system practices and organizational performance: evidence from Vietnam	A web-based survey (designed on Survey Monkey) was used to deliver the questionnaire in to the population of 309 companies listed on the Vietnamese Stock Exchange, including 118 manufacturing companies	The moderating effect of perceived environmental uncertainty on the relationship between decentralized decision-making and organizational performance was found to be insignificant.	Focused on direct and moderation effects	Tested moderation and moderated mediation effect of perceived environmental uncertainty.

2.5 Conceptual framework

The summary of the literature reviewed indicates that there are methodological, contextual, conceptual, and theoretical gaps in the previous studies. Previous studies focused on the direct effects; little effort was devoted to studying mediation, moderation, and moderated mediation among the variables under study. The study introduced mediation, moderation, and moderated mediation to close the methodological, contextual, conceptual, and theoretical gaps identified in the literature.

The study examined the interaction effects of strategic leadership-independent variable, organisational learning-mediating variable, perceived environmental uncertainty-moderating variable, and firm competitiveness-dependent variable as shown in ***Figure 2.1*** of the conceptual framework made up of four components. The first component examined the direct effects as a precursor to further analysis. The direct effect had four hypotheses as presented below:

i. Strategic leadership has no significant effect on firm competitiveness
ii. Organizational learning has no significant effect on firm competitiveness.
iii. Perceived environmental uncertainty has no significant effect on firm competitiveness.
iv. Strategic leadership has no significant effect on organizational learning

The second part examined the meditation effect with one hypothesis as:

i. Organizational learning has no significant mediating effect on the relationship between strategic leadership and firm competitiveness.

The third component examined moderation effects with two hypotheses:

i. Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and firm competitiveness

ii. Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and organizational learning

$H_0$8 Perceived environmental uncertainty has no significant effect on the indirect relationship between strategic leadership and firm competitiveness via organizational learning.

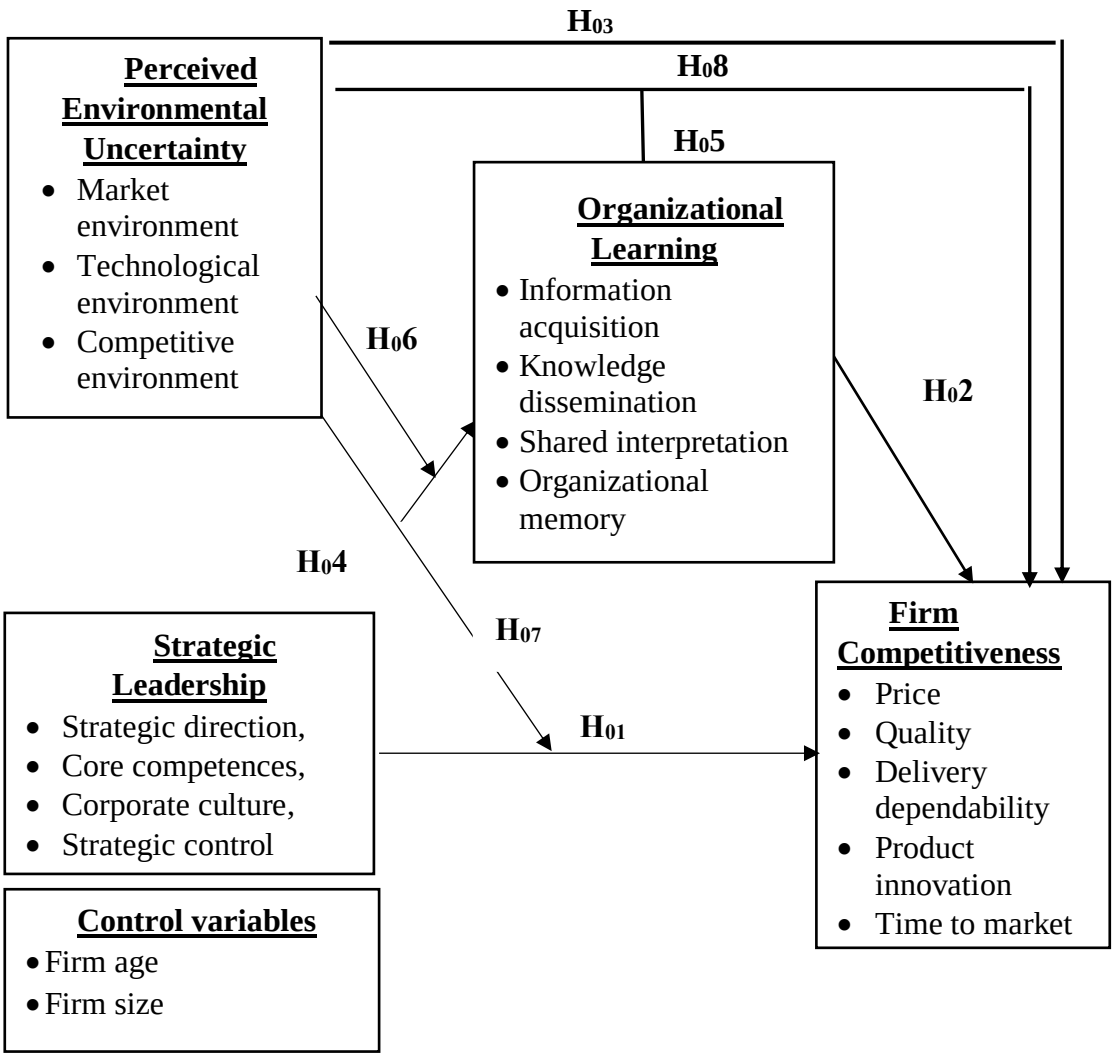

Figure 2.1: The Conceptual Framework
SOURCE: Adapted with modification of Andrew F. Hayes Model 8

2.6 Control Variables

According to Liargovas and Skandalis (2004), the impact of a firm's age, as determined by the number of years since its establishment, on its competitiveness is considered to be uncertain. According to Coad *et al.*, (2018), it is anticipated that mature firms will

reap advantages from reputation effects, thereby enabling them to generate greater profit margins on their sales. In contrast, Akben-Selcuk, (2016b) observed that mature firms may possess established routines that are not aligned with the fluctuations in market conditions resulting from the dynamic business environment. Consequently, a negative correlation between age and competitiveness may be discernible. In contrast, the argument put forth by Coad *et al.*, (2018) posits that the competitiveness of a firm is impacted by its age, potentially due to intermediary factors such as reutilization, accumulated reputation, and organizational rigidity.

According to Akben-Selcuk's (2016) research, there exists a positive correlation between firm size and both innovation and firm performance. This is due to the fact that larger firms possess greater resources to allocate towards innovative endeavors, ultimately leading to improved overall performance. Moreover, the competitiveness of a firm is influenced by its size, and the impact of size on competitiveness has been found to differ across different geographic locations, as noted by Moen (1999). According to Liargovas and Skandalis (2004), it can be argued that larger firms have a favorable impact on asset returns due to their theoretical advantage in investment opportunities that are not accessible to smaller firms. On one hand, larger firms may implement more sophisticated tactics to mitigate and proactively address customer discontent. On the other hand, smaller firms may leverage their typically more intimate connections with customers, particularly when pursuing a unique niche strategy. Smaller enterprises are comparatively less susceptible to public scrutiny and may consequently avoid unfavorable media coverage, as suggested by Führer and Michel (2004).

According to Chaddad and Mondelli's (2013) research, it was discovered that greater profitability is associated with larger firms within the food industry. Similarly, Sumner (2014) and Chavas (2008) have documented a positive correlation between firm size and productivity within the agricultural industry. In the insurance sector, Nanda and Panda (2018) discovered a noteworthy positive correlation between firm size and profitability. While most studies support the notion that larger firms have a positive influence on a company's competitiveness as measured by various metrics, there are also instances where the effect is either negative or negligible. This is evidenced in the works of Pattitoni et al. (2014) and Sivathaasan et al. (2013).

Theoretical arguments of diseconomies of scale are often linked to negative outcomes, wherein larger firms exhibit a less adaptable organizational structure, while smaller firms demonstrate a superior capacity to promptly recognize lucrative opportunities and capitalize on them (Pattitoni et al., 2014). Variations in managerial decision-making processes exist, whereby managers of larger firms may prioritize the expansion of assets over the augmentation of firm value (Baumol, 1959). Consequently, the present research will incorporate measures to regulate the influence of company magnitude on the association between strategic leadership and firm competitiveness, while considering the moderating impact of perceived environmental uncertainty and the mediating effect of organizational learning.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter includes a detailed description of the research methodology. The chapter explains how the study was executed. The chapter explains the research philosophy, research design, study population, determination of the sample size and sampling techniques, data collection methods and instruments, validity and reliability checks, procedure of data collection, and data analysis

3.1 Research Philosophy

At a fundamental level, all forms of research and inquiry develop from the human desire to understand and make sense of the world (Abraham, 1993). Research philosophy is concerned with the fundamental nature of knowledge; reality and existence of a phenomenon under study (Watts, 2015). Scholars suggest that social science phenomena are shaped by two fundamental philosophical assumptions: ontology and epistemology (Burrell & Morgan, 2019). Ontology is concerned with the nature of reality (knowledge) while epistemology is concerned with the best way to study the world around us (Bhattacherjee, 2012). Firm competitiveness is a reality that exists out there, both structured and unstructured in nature (Knight & Cross, 2012). The best way to study such a phenomenon is to use objective and subjective approaches.

In this study, the objective approach looked at firm competitiveness as real, hard, countable and concrete. This is independent of the researcher, implying that the study adopted quantitative approaches of using self-administered questionnaires to collect data which is in line with positivistic philosophical assumptions (Kivunja & Kuyini, 2017; Burrell & Morgan, 2019). On the other hand, the subjective paradigm assumes

that firm competitiveness as a reality exists with differing perceptions that are within the minds of participants. This can be understood by interacting with the participants for the researcher to collect their views and be able to construct reality based on their understanding (Fay, 2012). A combination of both quantitative and qualitative procedures were adopted to understand the theoretical perspectives and perception of reality of the study (Kagaari *et al*., 2013). The positivists' view characterizes how the researcher sees reality "out there" as a law of nature just waiting to be found (Babbie, 2013) while the interpretivists' believes that knowledge is a social reality, value-laden and it only comes to light through individual interpretation (Licsandru & Cui, 2019). Since the survey is both a quantitative and a qualitative study, the researcher chose pragmatism as a philosophy to guide the study. To Creswell & Clark (2011), pragmatism as a research philosophy emerged as a method of inquiry for more practical-minded researchers. Therefore, the researcher selected pragmatism since it helped the researcher in suggesting solutions to practical problems related to lack of firm competitiveness of manufacturing firms in Uganda.

3.2 Research Design

A cross-sectional explanatory survey design was used to combine both theoretical and empirical (qualitative and quantitative) research approaches. Thwaites, (2020) argued that explanatory research looks for causes and reasons and provides evidence to support or refute an explanation or prediction. It is conducted to discover and report some relationships among different aspects of the phenomenon under study. On the other hand, Creswell, J.W. and Creswell, (2018), highlighted the importance of using both quantitative and qualitative methods in social science research. They contend that a mixed-method approach can be useful for; corroborating data and obtaining convergent validity, or what is termed as triangulation; complementarily or more fully explaining

the results of analyses; and guiding further data collection, sampling and analysis, or also known as development. According to Daniel (2016), mixed method is necessary for the sake of pulling a mass of facts and findings into a wide range and coherent set of generalization.

Quantitative method of structured questionnaires was used to collect quantitative data to establish the correlation effect for the hypotheses while qualitative methods of semi structured interview guides were conducted amongst key informants to collect qualitative data to supplement quantitative data and fully understand the phenomena that was being studied. This implies that sequential procedure was applied during data collection and analysis, where quantitative methods was applied first. Specifically, explanatory sequential design (or sequential explanatory design) as in Walker & Baxter (2019) was used in that the quantitative data and analysis provided a general understanding, while the qualitative data and their analysis followed so as to refine and explain the statistical results from the quantitative analysis (Ivankova *et al.,* 2006). This also enabled the researcher explore contradictory results through qualitative methods (Hesse-Biber, 2010b). However, quantitative method was given priority (Creswell & Plano Clark, 2018; Doyle, Brady, & Byrne, 2016; Harrison & Reilly, 2011; Jeanty & Hibel, 2011; Stentz *et al.,* 2012).

All statistical tests were conducted at a 5% level of significance, as implemented in Amos Graph 20.0. When testing the structural model, the researcher ran the model with organizational control variables (firm age, and size). ***P*** statistic was applied where if ***P***< 0.05, the researcher rejected the null hypothesis and if $P > 0.05$ and the test is insignificant, the researcher accepted the null hypothesis (Joseph F. Hair, Marko Sarstedt, 2012).

3.3 Study Area and Target Population

3.3.1 Study Area

The study was conducted in the four regions of Uganda (Northern, Eastern, Central and Western Uganda), where the manufacturing firms are established.

3.3.2 Target Population

The study targeted a population of 1,324 manufacturing firms registered at Uganda Manufacturers' Association. This number was arrived at as per the records obtained from Uganda Manufacturers' Association (2020). All these firms are privately owned. Industrialization is quite instrumental in the development of any nation; thus, manufacturing firms were selected for the study because they ably demonstrate the construct of firm competitiveness. The study's unit of analysis were the manufacturing firms while the units of inquiries were; Marketing Managers and Human Resource Managers of the selected manufacturing firms. These were purposively selected because they relate well with the study variables as compared to other managers or employees of these organizations and they are more knowledgeable on issues relating to firm competitiveness (Lopez *et al.*. 1997, Seidler 1974, Smith 1983, Zelditch 1962). Operations' Managers participated in the interviews. They were selected on the basis of the knowledge they possess with regards to manufacturing.

3.4 Sample Size and Sampling Design

This section entails how the sample was determined and how it was derived from the study population.

3.4.1 Sample size

A sample is a group of people, objects, or items selected from a larger population for measurement. Sampling is a method or technique that allows a researcher to select a

sample or a subset of the population to make statistical inferences based on the results from the subset of the population to estimate the population characteristics. When selecting a sample from a population, a researcher must ensure that the sample is representative of the entire population in order to generalize the study findings to the entire population. The sampling process starts with a sampling frame of all eligible individuals, from which the sample is selected. The selection of a suitable sample size has always been a big challenge to researchers, but a sample size needs to be carefully selected as statistical analysis are strongly affected by the sample size selected by the researcher (Christian *et al.*, 2015).

According to Collis and Hussey (2013), sample size grounded on statistical analysis methods like structural equation modeling and applying confirmatory factor analysis, casual modeling with latent variables, structural path analysis, and multiple regression analysis must be carefully selected to represent the entire population to draw statistical inferences about the population with the required degree of accuracy or level of precision. When determining a representative sample size from a population, there are different strategies that are used based on the research needs at a particular point in time (Sarmah *et al.*, 2013). There are various formulae used to determine the required sample size for a research study under different situations. The study used Yamane formula of 1967 (Israel, 1992) to determine the sample size since the population is finite (Adam, 2020). Yamane (1967) developed a formula for calculating sample size, which is alternative to Cochran's formula since the formulae of the two authors are in agreement and consistent with other sample size determination techniques (Sarmah *et al.*, 2013). According to Yamane (1967), for a 95% confidence level and p = 0.5, the size of the sample is expressed as:

$$n = \frac{N}{1+N(e^2)}$$

Where: n = the Sample Size, **N** = the Population Size, **e** = the level of precision. Applying the formula in the study where N = 1324 manufacturing firms in Uganda with ± 5% precision. Taking into consideration 95% confidence level and p = 0.5, we get the sample size for the study as:

$$n = \frac{N}{1+N(e^2)} \quad n = \frac{1324}{1+1324(0.05^2)} \quad n = 307$$

According to Comrey and Lee (1992), a sample of 50–100 is regarded as very poor; 100–200 poor; 300–400 good; 400–500 very good; and consequently, a sample of over 1000 is considered to be excellent. Based on the above considerations, and supported by Salkind (2010), the sample size for the study was increased by 50% and computed as:

n = 307 * 0.5 + 307

n = 153.5 + 307

n = 460.5

n = 461

The sample size of 461 manufacturing firms was considered accurate and reasonable to perform the statistical analysis stated in the research hypotheses. This was chosen to allow performance of statistical analysis such as mediation, moderation, and moderated mediation effects (Borau *et al.,* 2015) that requires high statistical power to minimize Type II errors, since the study took into account quantitative techniques to derive statistical inferences about the study population with a high degree of precision (Delİce 2001).

3.4.2 Sampling Design

The study used multistage sampling method to divide the population into groups to ease data collection, management, and interpretation. The researcher selected four regions of Uganda (*i.e.* northern, eastern, central and western) where the manufacturing firms are located. From the regions the researcher went to select the specific towns (*e.g.* Arua, Gulu, Lira, Soroti, Kampala, Mbarara and Kabale) where manufacturing firms are located. Thereafter, the manufacturing firms were grouped into those manufacturing agro related products and those manufacturing non agro related products.

Simple random sampling technique was used to select the manufacturing firms that participated in the study. This method was chosen because it is the most beneficial and supportive technique in quantitative studies (Collings & Mellahi, 2009) and ensures that all manufacturing firms from the two categories were equally represented in the study to minimize bias and sampling error. The selection of manufacturing firms from each category was based on a list provided by Uganda Manufacturers' Association, where the manufacturing firms were assigned numbers a random number and picked using lottery method without replacement.

From the sampled manufacturing firms, a marketing and human resource manager were purposively selected to participate in the study. These techniques were used since they helped the researcher identify and select information-rich cases related to the phenomenon of interest to participate in the study. The other reason for the selection of these sampling methods is that, they are widely used in mixed studies. This implies that, a total of two respondents/participants were selected from each firm. The Marketing and human resource managers were purposively selected to participate in this study

since they are considered to be very conversant with strategies that can be used to ensure competitiveness of their firms are improved.

3.5 Data Collection

3.5.1 Data type, sources and collection

The research purely relied on primary sources. Here data was collected directly from the respondents using self-administered questionnaire. Semi structured interviews were also conducted to collect qualitative information. Those who filled the questionnaire were given ample time to complete the questionnaire to guarantee that the data collection procedure was as accurate as possible. Data was collected in the period between November 2022 to February 2023

3.5.2 Procedure of data collection

The study's data collection process encompassed a series of procedures, including the recruitment and confirmation of participation from manufacturing firm managers, the selection, acquisition, and training of research assistants, the implementation of a pilot study to pre-test research instruments, the acquisition of a research permit, the distribution and completion of questionnaires, the follow-up on questionnaire collection, and the conduction of interviews. The questionnaires underwent a pre-testing phase to assess their clarity and effectiveness in eliciting the necessary responses to meet the research objectives. Additionally, the relevance and sufficiency of the questionnaire content were evaluated. The adjustments were made in accordance with the feedback received. The chosen sample firms were contacted via email and telephone in order to elucidate the research, ascertain their precise location, and request their participation. The questionnaire was accompanied by an introductory letter that conveyed the study's objectives and significance to the participants. The letter also

provided reassurance regarding the confidentiality of the information, emphasizing that it would be used solely for research purposes. The researcher recruited and trained research assistants to aid in the process of data collection.

3.6 Measurement of variables

The study variables were measured by adapting items that are already established from existing literature. This was done through a critical literature review, where necessary items were obtained and modified to suit the study.

In this study, firm competitiveness describes the achievements of firms compared to their competitors. It was measured as a unidimensional variable by adapting a 15 measurement scales from the study of Li *et al,*. (2006) with five dimensions such as price (2 items), quality (4 items), delivery dependability (3 items), product innovation (3 items) and time to market (4 items). The scale does not measure competitiveness on the basis of financial indicators since the study was conducted among firms where financial indicators have limited applicability in terms of their competitiveness. According to Stam & Elfring (2008), financial figures do not necessarily reflect sustained improvements in their competitive performance and are also hard to obtain and difficult to interpret in the context of such ventures. All items were anchored on a seven-point Likert scale that ranged from **1** = Much worse than competitors, **2** = *Worse*, **3** = *Somewhat Worse*, **4** = *Neutral*, 5 = *Somewhat Better*, ***6*** = *Better to* ***7*** = *Much better than competitors*.

Strategic leadership was measured by adapting and modifying the six critical criteria developed by Ireland & Hitt (1999) and empirically tested by Serfontein (2010) and Jooste & Fourie (2009). The dimensions include; strategic direction core competencies corporate culture strategic controls.

Organisational learning was operationalised using four dimensions - information acquisition (11 items), knowledge dissemination (7 items), shared interpretation (6 items) and organizational memory (7 items) as proposed by Santos-vijande *et al*., (2012). Items were measured on a five-point Likert scale, however, this study measured items on a seven-point Likert scale from **1** = *Strongly Disagree* **to *7*** = *Strongly Agree.*

In this study, the scale developed by Miles *et al.*, (1978) called the perceived environmental uncertainty scale was adopted and modified to help in the measure of perceived environmental uncertainty. This scale composes of 18 items, with three dimensions of market environment, competitive environment, and technological environment, each containing from 6 items.

Control variables were used to ensure that the results were not unjustifiably influenced by other factors. Following Oliver Schilke (2014), the study controlled for the firm age, and firm size. Firm age was measured as the number of years since the establishment of the firm. This has been suggested to influence a firm's competitiveness (Philippon, 2018). Firm size was assessed by the firm's number of employees. It was assumed that firm size impact employee performance (Schumpeter, 1950) and can also improve the competitiveness of the firm through economies of scale or scope (Carnahan *et al.*, 2017).

Table 3.1 Summary of measurement of the variables

Variable	Type of variable	No. of items	Reference to questionnaire part	Source	Type of measurements
Firm competitiveness	Dependent variable	16	Section B Part 1	*Li et al*. (2006)	7 points likert scale transformed arithmetically
Strategic leadership	Independent variable	16	Section B Part 2	Ireland & Hitt, (1999)	7 points likert scale transformed arithmetically
Organisational learning	Mediator variable	35	Section B Part 3	Santos-vijande *et al*., (2012)	7 points likert scale transformed arithmetically
Perceived environmental uncertainty	Moderator variable	18	Section B Part 4	Miles *et al.*, (1978)	7 points likert scale transformed arithmetically
Demographic factors	Control variables	4	Section A Part 1		Nominal scale

3.7 Research Instrument

The fieldwork was conducted using quantitative and qualitative data collection methods. Quantitative data was obtained through the use of questionnaire, while qualitative empirical data was gathered via semi-structured interviews. As Yin, (2009) states, the adaptation of various data sources is relevant, as it allows increased validity and reliability of the constructs. In the qualitative method, to identify the relationships between the various variables, a semi-structured interview was held with managers of the selected manufacturing firms. The interview protocol was subjected to a pre-test and this enabled the researcher validate the vocabulary used in the questions and ensure the later allowed the researcher reach the intended objectives (Yin, 2009).

The primary data was also collected through questionnaire, designed on seven points Likert scale with options from (**1**) "Strongly disagree", to (**7)** "Strongly Agree" or from

(1) “Much worse than competitors” to (7) “Much better than competitors”. Seven-point Likert scale was selected because it was considered to be most valid and reliable since most authors of the original measure used it to test the psychometric properties of the variables. The other reason for the selection of the 7-point Likert scale was that reliability can be optimized with seven response categories, and other early investigations tended to agree (Ghiselli, 1955). The reliability and validity of the questionnaire items were re-examined during the pilot study. The questionnaire consisted of two parts with section “A” and “B”. Section “A” consisted of items seeking firm information based on nominal and ordinal scaling, while section “B” consisted of questions relating to strategic leadership, organizational learning, perceived environmental uncertainty and firm competitiveness based on seven-point Likert scale. A cover letter describing the objectives and scope of the study assured respondents about strict secrecy. The questionnaires were distributed amongst the human resource & marketing managers of the 461 selected manufacturing firms in Uganda.

Podsakoff (2003) argued that, the use of a questionnaire in survey study is prone to common source bias. In this study, the researcher minimized the concern for common method bias statistically or procedurally by ensuring a rigorous methodology. This included a pilot study to address the concern about ambiguity of the attributes used in the study. A pre-analysis was carried out using reliability and validity analysis on the actual study to ensure the suitability of the attributes used to represent the factors that were investigated. In addition, the researcher also used Herman's single factor test for detection of common method bias using SPSS. When the single factor was found to be more than 50% of the variance, then there was a common method bias, but if the single factor was less than 50% of the variance, then there was no common method variance. The use of these methods and research design solutions prior to data collection in

applied settings offers a higher quality solution. Example, a set of strategies of ensuring that respondents have the ability to answer the questions on self-report measures more accurately, without systematic bias is a perfect solution to common method bias.

3.8 Validity and Reliability

3.8.1 Validity of the research instrument

According to Dikko (2016), the validity of research instruments explains how well the collected data covers the actual area of investigation. Validity refers to the accuracy and meaningfulness of inferences based on the research findings (Rahmawati & Dewi 2020). Validity test was conducted to assess the accuracy of the research instrument for replicability. The study used content/face, content, criterion, and construct validity tests to assess the instruments for accurate and consistent (Taherdoost & Group 2017).

3.8.1.1 Content Validity

This refers to the degree to which an item on a test is a representative of the domain in which the test seeks to measure. For a researcher to produce valid results from a test, the content of the test must cover all the desired parts of the subject it purports to measure. According to Mugenda (1999), the procedure for assessing the content validity of a measure is to use a professional or expert in a specific field, who assists in discovering question content, correcting wording and sequencing issues prior to the actual study, and exploring ways to improve the overall quality of the study. The researcher sought the opinions of experts in the fields of strategic management, behavioral science, and psychology to establish the validity of the research instruments. This facilitated the necessary revisions and modifications of the research instruments to enhance the quality and relevance of the instruments to meet the assessment purpose.

3.8.1.2 Face Validity

This is the type of validity, also referred to as logical validity, which appears to test or measure what the instrument purports to measure based on face value. Face validity is the most informal and subjective way to measure the validity of the research instrument through asking multiple people to rate the validity of the test instrument using a Likert scale. A research instrument is believed to bear face validity if it has clear and comprehensible items that measure the concept under investigation (Pittman & Bakas 2010). To ensure face validity of research instruments, the supervisors and practitioners in behavioural science and strategic management assessed the relevancy and adequacy of the items in the research questionnaire.

3.8.1.3 Criterion Validity

Criterion validity establishes whether the variable can be measured with accuracy through comparison with an existing set standard or whether the instrument can be substituted with a set standard. Criterion validity is used to test for correlation between the variables. The relationships between the constructs were quantified using a correlation coefficient that ranges between -1 and +1 and values were closer to +1. The assessment of criterion validity was related to external yardsticks that are compared with the construct (Fayers & Machin, 2013).

3.8.1.4 Construct Validity

Construct validity measures the extent to which a measurement scale measures what it purports to measure (Crestani *et al.*, 2017). This was determined using factor analysis, where items with a coefficient greater than 0.5 were retained to constitute the factor structure of the study variables. The items with a coefficient below 0.5 were dropped from the factor structure of the study variables that the researcher relied on to make

predictions based on the stated research hypotheses, and the predictions were tested to support the instrument validity (Hair, Black, Babin, Anderson, & Tatham, 2009).

3.8.1.5 Convergent and Discriminant Validities

Hair *et al.* (2009) indicate that convergence validity indicates the degree to which a specific construct has a high proportion of variance in common with others. Discriminant validity explains the degree to which the construct differs from the others. There are several methods for estimating convergent validity, and factor loading is one of the most commonly used methods in this study. High factor loads indicate that the factors converge at one common point to explain the latent variable.

Literature plugs that factor loads must be at least 0.5 or higher. In the case where one of the items in the measurement scale present values is below 0.5, the item is deleted from the factor structure (Hair *et al.*, 2009). Another measure that was adopted was the assessment of the average variance extracted (AVE), which verifies the proportion of variance of the items that is explained by the construct to which they belong. Just as in the evaluation of factor loads, when the AVE values are equal to 0.5 or over, the model converges to a positive result (Edeh *et al.*, 2021). The researcher performed the analysis of cross loads in the assessment of discriminant validity. The items of the assessed tool presented factor loads higher in the constructs that were previously designed than in the others (Chin, 1998). The square roots of AVE must be higher than the correlation between the constructs in order to have discriminant validity (Leguina 2015) After the assessment of the convergent and discriminant validity, the study developed a theoretical model following the relationships between the constructs as per the conceptual framework. Table 3.2 summarizes the validity and reliability components used to assess the research instruments.

3.8.2 Reliability of the research instrument

Reliability is the extent to which results are consistent over time and are an accurate representation of the population under study. This implies that the results of the study can be replicated using the same methodology and instrument (Sahlan *et al.*, 2020). According to Sahlan *et al.,* (2020) threats to reliability may result from instrument error, observer error or respondent error. To ensure the instrument is reliable, the researcher standerdised the conditions under which data was collected and used well trained research assistants to minimize external sources of variation (Lumpkin & Dess, 1996). The reliability of the questionnaire was calculated using the Cronbach's alpha coefficient Cronbach, (1951), which measures the internal consistency among a set of items; i.e., the extent to which the same set of respondents responds in a consistent manner to similar questions. This was based on the data that was collected from the pilot study.

3.8.3 Pretesting Results

A pilot-test was carried out on a small sample population of 40 manufacturing firms which were not registered with the Uganda Manufacturers' Association but were presumed to have similar characteristics with those registered with the Uganda Manufacturers' Association. To select the firms that participated in the pilot study, the researcher physically visited the manufacturing firms with the list provided by Uganda manufacturers Association. If a firm appeared in the list, it was an indication that the firm was registered with Uganda Manufacturers Association and such a firm was not considered for the purpose of the pilot study. It was only those that did not appear in the list that were considered. The firms that participated in the pilot did not take part in the final study but were only used to enable the researcher test the research instrument. The response to questions in the questionnaire was used to evaluate the instrument in

terms of questions' variation, meaning, clarity, length of questionnaire, and ease of answering questions by the respondents. The pilot study was also used to assess whether each question measures what it was supposed to measure, that is if all the respondents interpreted the questions in a similar way. Based on the response, the questionnaire was revised to improve validity. Table below shows the results from the pilot study;

Table 3.2 Pilot Test Results

Variable	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
SL	**.858**	.866	16
OL	**.946**	.948	32
PEU	**.912**	.918	12
FC	**.936**	.938	39

Source: *Survey data 2022*

Key

SL: Strategic Leadership OL: Organisational Learning

FC: Firm Competitiveness PEU: Perceived Environmental Uncertainty

3.9 Testing Assumptions of multiple regression

Prior to conducting regression analysis, a preliminary assessment was conducted to verify the fulfillment of certain assumptions. This was undertaken to ascertain that the data could be subjected to parametric tests. The purpose of this assessment was to ensure that the assumptions of regression were satisfied. If the assumptions underlying the regression analysis are not satisfied, the obtained results will be deemed invalid. The assumptions encompassed in this study are normality, linearity, homoskedasticity, multicollinearity, and serial correlation. Casson and Farmer (2014) posit that under the condition that all assumptions are satisfied, the estimations of the beta parameters will be deemed satisfactory. The items in question underwent testing, as described in the subsequent discussion.

3.9.1 Normality Test

One of the underlying assumptions for parametric tests to yield reliable results is that the data should exhibit an approximate normal distribution. The normality test is employed to ascertain whether the sample data has been derived from a population that follows a normal distribution. To assess the normality of the data, various statistical techniques were employed, including the examination of skewness and kurtosis, normal p-p plots, as well as the Jarque-Bera test. The collected data was subjected to statistical analysis to assess its skewness, which indicates the lack of symmetry, and kurtosis, which measures the degree of peakedness. The study performed an analysis to determine the existence of positive skewness, which is characterized by a concentration of frequent scores at the lower end and a tail extending towards higher or more positive scores. In a similar vein, the investigation also assessed the occurrence of negative skewness, which is characterized by a concentration of frequent scores towards the upper range and a distribution tail extending towards lower or more negative scores.

Further experimentation was undertaken in order to determine the degree to which scores are clustered at the tails of the distribution (kurtosis). The statistical analysis encompassed the examination of the characteristics of platykurtic distributions, which are distinguished by their heavy tails and relatively flat shape, as well as leptokurtic distributions, which display thin tails and a more pointed shape. According to Field (2005), the skewness and kurtosis values closely approximating zero in a dataset that follows a normal distribution

To assess the normality distribution of the residuals, a Jarque-Bera normality test was conducted. In the context of the Jarque-Bera test, if the p-value is less than the significance level (Prob > Chi (2) value), it is not possible to reject the null hypothesis. This suggests that the residuals conform to a normal distribution.

3.9.2 Linearity Test

The primary objective of performing a test of linearity is to ascertain the presence of a linear association between the criterion variable, which in this case is firm competitiveness, and the independent variables, namely strategic leadership, organizational learning, and perceived environmental uncertainty. In the event that the data fails to satisfy the assumption of linearity, it would be necessary to apply a transformation in order to conduct regression analysis (Tabachnick & Fidell, 2001). In order to assess linearity, the researcher examined the scatter plots of the standardized residuals of the dependent variable and the independent variables, as suggested by Pallant (2010). Data would be linearly distributed if the dots are concentrated along the diagonal line.

3.9.3 Homoscedasticity Test

The assumption of this regression model posits that the variance of the error term remains constant across all possible combinations of predictor variable values (Ernst & Albers, 2017). The observed variance remains consistent, indicating a constant relationship across the entire range of the dependent variable. Heteroskedasticity is observed when there is variability in the error variance across different values of predictor variables, as stated by Osborne and Waters (2002). This indicates a violation of the assumption of homoscedasticity. The violation of this assumption is commonly known as "heteroskedasticity," a phenomenon that can result in misleading outcomes and a higher probability of type 1 error (Ernst & Albers, 2017). Hence, the influence process can be deemed unreliable. To assess the presence of heteroscedasticity, various techniques can be employed. This study employed both graphical and non-graphical methods, and utilized Leven's statistical test as described by Mertler and Reinhart (2016). The determination of the decision rule was predicated upon the statistical

significance level of Leven's values (Ernst & Albers, 2017). In cases where the p-values exceed the threshold of 0.05, indicating non-significance, the presence of homoskedasticity is documented.

3.9.4 Multicollinearity Test

Collinearity is a term used to describe the correlation between two predictor variables, while multicollinearity refers to the existence of strong correlations between multiple predictors (Williams et al., 2013). Multicollinearity refers to the presence of strong relationships among two or more predictor variables in a multiple regression model. Multicollinearity leads to unstable coefficient estimates for individual predictors. The standard errors and confidence intervals of the coefficient estimates will be inflated.

The level of concern regarding multicollinearity is contingent upon the specific objectives of the analysis. When the objective of the study is to predict the response variable, the presence of multicollinearity does not pose a significant obstacle. The issue of multicollinearity poses a greater challenge in this particular study due to its objective of drawing inferences about population parameters. While there exist various alternative diagnostic methods, the variance inflation factor and tolerance are widely preferred measures for assessing multicollinearity (Williams et al., 2013). The assessment of multicollinearity was conducted by employing tolerance and variance inflation factor. According to Stevens (2002), the acceptable tolerance values should exceed 0.20, while the variance inflation factor (VIF) values should not exceed 5.

3.9.5 Serial Correlation Test

To enable the study, determine whether the regression model is acceptable or not, the study carried out a test of auto correlation/serial correlation using Durbin Watson Test.

If Durbin-Watson value falls between 1.5 to 2.5, the implication is that there is no serial correlation.

3.10 Data Analysis and Interpretation

The software was used to generate descriptive statistics such as standard deviation, minimum, maximum, skewness, and kurtosis, as described by Kombo and Tromp (2006). The data was analyzed through the utilization of descriptive and inferential statistics in the study. The statistical measures used to describe the data provide evidence supporting the appropriateness of the predictors used to determine firm competitiveness. The study employed inferential statistics, specifically the Pearson product-moment correlation and simple linear regression analysis, to evaluate the research hypotheses and extract significance from the obtained results. The utilization of the correlation coefficient allows the researcher to determine the extent of relationships between the variables under investigation.

The Statistical Packages for Social Sciences (SPSS) version 23 was utilized for quantitative data analysis in order to produce both descriptive and inferential statistics in accordance with the research objectives and hypotheses. The study employed descriptive statistics to provide a summary, description, and explanation of the sample characteristics through the use of frequency tables, mean, and standard deviation, as noted by Singh (2007). On the other hand, inferential statistics utilized the computed statistics from the sample characteristics to make statistical inferences about the population parameters using the sample data drawn from the population, as observed by Singh and Masuku (2014). The internal consistency of the research instruments was evaluated by computing the Cronbach alpha coefficient to determine their reliability. The utilization of Exploratory Factor Analysis and confirmatory factor analysis were

employed to examine the construct validity. DeVellis (2003) and Thompson (2004) have emphasized the importance of taking into account reliability and construct validity while employing the measurement model in diverse study contexts with varying sample sizes, even if the research instruments have been previously utilized and validated in multiple contexts.

A sample adequacy test was performed. The study utilized the Pearson correlation coefficient to determine the strength and direction of the linear relationships among the variables. The researcher utilized a correlation matrix to investigate the level of correlation between the variables. The research utilized a Hierarchical Regression Model to examine the degree to which the independent variables, namely strategic leadership, organisational learning, and perceived environmental uncertainty, explain the variability in the dependent variable, which is firm competitiveness. The study employed a methodology that involved examining the incremental changes in the R2 value as more predictor variables were introduced. According to Leech, Barrett, and Morgan (2014), the hierarchical regression model is a useful tool for evaluating the degree to which a new variable adds to the predictive equation. Ho (2013) posits that the choice of entry mode is commonly influenced by rational or conceptual considerations. For instance, a researcher may ascertain that two discrete independent variables demonstrate higher levels of predictability for the dependent variable, based on theoretical justifications (Ho, 2006). The current study utilized various factors such as control variables, strategic leadership, organizational learning, and perceived environmental uncertainty as predictors to assess their additional value to the hierarchical regression model.

The investigation employed the Process macro technique to calculate moderated mediation through a conditional process model, as outlined by Hayes (2017). The Process Model produced both direct and indirect effects in the moderated mediation model as outlined by Hayes (2013a). Hayes (2018) has stated that Process provides multiple techniques to investigate interactions between two or three variables. Additionally, it can generate confidence intervals for indirect effects using percentile bootstrap, bias-corrected bootstrap, and Monte Carlo methods.

Qualitative data on the other hand was analyzed by use of content analysis, where Nvivo was used to categorize data in to themes. This was selected since it follows a systematic procedure that can easily be replicated by other researchers, yielding results with high reliability. The technique can also be used any time, in any location, and at low cost.

3.10.1 Model Specification

The process of model specification involves the avoidance of excluding important causal variables or incorporating correlated but causally irrelevant ones, while also accurately indicating the direction of arrows that link the variables within the model (Garson, 2012). Misspecification errors have the potential to alter the parameter estimates' magnitude and, in some cases, the direction of the relationships. There does not exist a statistical test to detect misspecification. The significance of a well-executed literature review lies in its ability to identify variables that require specification, as posited by Garson (2012). The matter was addressed through a comprehensive analysis of scholarly literature and theoretical frameworks, which involved the identification of variables that exhibit a statistically significant correlation with the dependent variable. Typically, the R2-coefficient of determination was employed in multiple regression analysis to ascertain whether crucial variables were excluded from the model.

Garson (2012) suggests that researchers can simplify their task by comparing different models to determine which one best fits the data, rather than solely justifying one model and assessing the significance of independent variables. The research employed three analytical models to examine eight research hypotheses concerning four study variables: strategic leadership (SL), organizational learning (OL), perceived environmental uncertainty (PEU), and firm competitiveness (FC). The models were designed to assess the direct and indirect effects of these variables, and the resulting statistical data were used to draw inferences.

3.10.1.1 Model specification for the control variables

The study took into account the effect of firm age and firm size as control variables on firm competitiveness among manufacturing firms in Uganda. This is based on previous literature that suggests that these control variables are related to firm competitiveness (Akben-Selcuk 2016; Chaddad & Mondelli 2013) and also to account for methodological and statistical errors that might occur during data collection. The control variables were entered in the first step of the hierarchical regression model during data analysis (Atinc *et al.,* 2012; Carlson & Wu, 2012). To test for the effect of the control variables on firm competitiveness (Y), the analytical model below was applied as expressed in Equation 3.1 below:

$Y = \beta 0 + \beta 1AGE + \beta 2SIZE + \mathcal{E}$-------*Equation 3.1*

Where;

Y = firm competitiveness

β0 = Constant

AGE = Firm age

SIZE = Firm size

β1, β2= The coefficients of the parameter estimate

Ɛ = Error Term

3.10.1.2 Model specification for the direct effects

The analytical model for the direct effects was developed using strategic leadership, organisational learning, and perceived environmental uncertainty to evaluate their effects on firm competitiveness. A Hierarchical Regression Model (HRM) was used to test for the direct effects on firm competitiveness. The analytical models were expressed in the form of equations to translate Path C^1 and Path b_1 of the conceptual framework into mathematical models that can be used to estimate the direct effects on the established model. The first equation of the direct effect tested for the effect of strategic leadership on firm competitiveness in response to $H_0$1 as expressed in Equation 3.2 below:

$Y = \beta_0 + C + \beta_1 X + \mathcal{E}$ ---------- *Equation 3.2*

Where;

Y = Firm competitiveness

β_0 = Constant

C = Control variables (firm age and firm size)

X = Strategic leadership

β_1 = The coefficient of the parameter estimates

Ɛ = Error term

The second equation of the direct effect tested the effect of organisational learning on firm competitiveness in response to $H_0$2 as shown in Equation 3.3.

$Y = \beta_0 + C + \beta_1 X + \beta_2 M + \mathcal{E}$ ---------- *Equation 3.3*

Where;

Y = Firm competitiveness

β0 = Constant

C = Control variables (firm age and firm size)

β_1 & β_2 = The coefficients of the parameter estimates

X = Strategic leadership

M = Organisational learning

Ɛ = Error term

The third equation of the direct effect tested the effect of perceived environmental uncertainty on employee performance in response to $H_0$3 as illustrated in Equation 3.4.

$Y = \beta_0 + C + \beta_1 X + \beta_2 M + \beta_3 W + \mathcal{E}$ ---------- *Equation 3.4*

Where;

Y = Firm competitiveness

β_0 = Constant

C = Control variables (firm age and firm size)

β_1, β_2 & β_3 = The coefficients of the parameter estimate

X = Strategic leadership

M = Organisational learning

W = Perceived environmental uncertainty

Ɛ = Error term

Consequently, another analytical model for the direct effects representing Path $\mathbf{a_1}$ of the conceptual framework was derived using two analytical models to test for the effects of control variables, perceived environmental uncertainty, and strategic leadership on organisational learning. The first model of a_1 tested the effect of the control variables and perceived environmental uncertainty on organisational learning as expressed in Equation 3.5;

$M = \beta_0 + C + \beta_1 W + \mathcal{E}$ ---------- *Equation 3.5*

Where;

M = Organisational learning

β_0 = Constant

C = Control variables (firm age and firm size)

$\beta 1$ = The coefficients of the parameter estimate

W = perceived environmental uncertainty

ε = Error term

The second model of a_1 was tested for the effect of strategic leadership on organisational learning while holding constant the effects of the control variables and perceived environmental uncertainty in response to $H_0$4 as expressed in Equation 3.6 below:

$M = \beta_0 + C + \beta_1 W + \beta_2 X + \varepsilon$ ----------*Equation 3.6*

Where;

M = Organisational learning

β_0 = Constant

C = Control variables (firm age and firm size)

β_1 & β_2 = The coefficients of the parameter estimate

W = Perceived environmental uncertainty

X = Strategic leadership

ε = Error term

3.10.1.3 Model specification for the mediation

Model 2: Hayes (2013a) Model 4 was used to test for mediation while following MacKinnon, Cheong, and Pirlott (2012); MacKinnon, Coxe, and Baraldi (2012); MacKinnon and Fairchild (2009); and MacKinnon, Fairchild, and Fritz (2007) procedures of mediation involving the following sequential steps: In the first step, an independent variable (X) must affect the mediator (M). In this case, strategic leadership must affect organisational learning as expressed in Equation 3.7 below.

$M = a_0 + C + a_1X + \mathcal{E}$ ---------- *Equation 3.7*

Where;

M = Organisational learning

a_0 = Constant

C = Control variables (firm age and firm size)

a1 = The coefficient of the parameter estimates

X = Strategic leadership

Ɛ = Error Term

In the second step, the mediator variable (M) must have an effect on the dependent variable (Y). In the second scenario, organisational learning must affect firm competitiveness as expressed in Equation 3.8 below;

$Y = b_0 + C + b_1M + \mathcal{E}$ ---------- *Equation 3.8*

Where;

Y = Firm competitiveness

b0 = Constant

C = Control variables (firm age and firm size)

b_1 = The coefficient of the parameter estimates

M = Organisational learning

Ɛ = Error term

The third step tested for the effect of the independent variable (X) on the dependent variable (Y) while controlling for the effect of the mediator (M). This step is not a necessary condition for mediation to take place. The model equation is expressed in Equation 3.9 below.

$Y = C_0 + C + b_1M + C^1X + \mathcal{E}$ ---------- *Equation 3.9*

Where;

Y = Firm competitiveness

C_0 = Constant

C = Control variables (firm age and firm size)

b1 = The coefficient of the parameter estimates

M = Organisational learning

C^1 = Direct effect coefficient

X = Strategic leadership

Ɛ = Error term

The mediation results were computed using the multiplicative rule where the coefficients of a_1 and b_1 were multiplied as $a_1 * b_1$ and the product provided the mediation results. Alternatively, mediation can also be calculated by subtracting direct effects (C^1) from the total effects (C) expressed as $C - C^1$. The two methods of computing mediation yield the same result and were applied to estimate $H_0$5. The total effects in the research model were computed by adding mediation effect ($a_1 * b_1$) to direct effect (C^1), denoted as $a_1 * b_1 + C1$. The statistical diagram that was used to compute the mediation effect is shown in Figure 3.1.

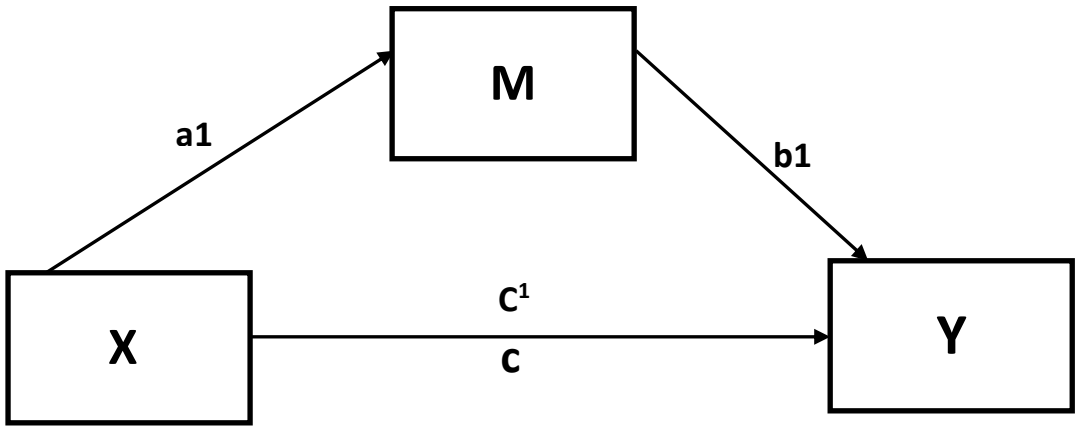

Figure 3.1. Statistical diagram for mediation

3.10.1.4 Model specification for the moderation and moderated mediation

Hayes (2018) Model 8 was used to test the moderators ($H_0$6 & $H_0$7) and moderated mediation ($H_0$8). The statistical diagram for moderations and moderated mediation is shown in Figure 3.2

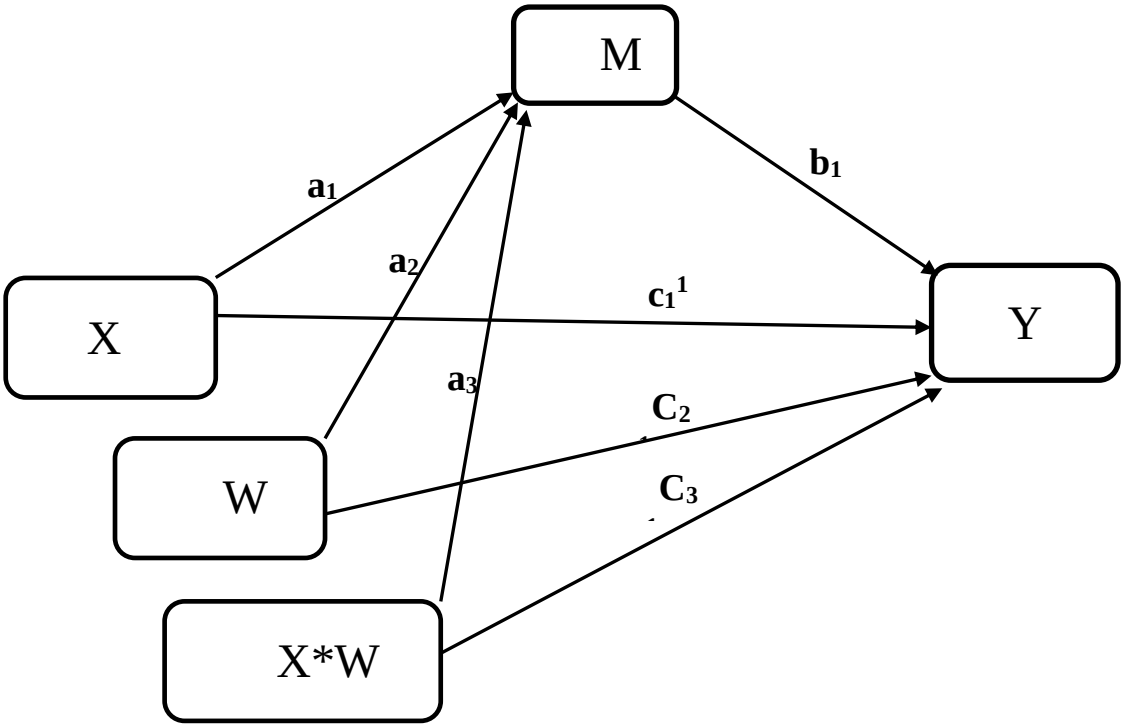

Figure 3.2: Statistical diagram for moderation and moderated mediation

The statistical model for moderation in response to $H_0$6 took the form of:

$M = a_0 + C + a_1X + a_2W + a_3X.W + \mathcal{E}$ ---------- *Equation 3.10*

Where;

M = Organisational learning

a0 = Constant

C = Control variables (firm age and firm size)

a_1, a_2 & a_3 = The coefficients of the parameter estimates

X = Strategic leadership (SL)

W = Perceived environmental uncertainty (PEU)

X.W = SL * PEU

Ɛ = Error term

The statistical model for moderation in response to $H_0$7 took the form of:

$Y = C_0' + C + C_1'X + C_2'W + C_3'X.W + \mathcal{E}$----------*Equation 3.11*

Where;

Y = Firm competitiveness

C_0' = Constant

C = Control variables (firm age and firm size)

C_1', C_2' & C_3' = The coefficients of the parameter estimates

X = Strategic leadership (SL)

W = Perceived environmental uncertainty (PEU)

$X.W$ = SL * PEU

Ɛ = Error term

The statistical model for moderated mediation in response to $H_0$8 took the form of:

$Y = a_0 + C + a_1b_1 + a_3b_1W = (a_1 + a_3W)\, b_1$ ---------- *Equation 3.12*

Where;

Y = Firm competitiveness

a_0 = Constant

C = Control variables

a_1, a_3 & b_1 = The coefficients of the parameter estimates

W = Perceived environmental uncertainty

Ɛ = Error term

3.10.2 Statistical Tools for Hypotheses Testing

The study used beta coefficient (β-value), p-value, r-square change (ΔR^2) and t-value to test for the direct hypotheses ($H_0$1, $H_0$2, $H_0$3, & $H_0$4). The decision to reject or fail to reject the $H_0$1, $H_0$2, $H_0$3, & $H_0$4 were based on p-value ($p \leq .05$) and critical t-value ($t \geq 1.96$). Whereas indirect hypotheses used β, p-value, F-value, r-square (R^2), r-square

change (ΔR^2), t-value, Confidence Intervals (Lower Limit Confidence Intervals-LLCI & Upper Limit Confidence Interval-ULCI). The decision to reject or fail to reject the mediation hypothesis ($H_0$5) and moderations hypotheses ($H_0$6 & $H_0$7) were based on confidence intervals (LLCI & ULCI) being none zeros, p-value ($p \leq .05$) and critical t-value ($t \geq 1.96$). The decision to reject or fail to reject the moderated mediation hypothesis ($H_0$8) was based on confidence interval (LLCI & ULCI) being none zeros. The summary of the statistical tools used to test the hypotheses is presented in Table 3.3 below;

Table 3.3. Statistical tools for hypotheses testing

Research Hypotheses		Test Statistics	Decision point	Decision
H01	Strategic leadership has no significant effect on firm competitiveness	β, p-value, F-value, ΔR2 and t-value	t ≥ 1.96 & p ≤.05	Reject H01
H02	Organizational learning has no significant effect on firm competitiveness	β, p-value, F-value, ΔR2 and t-value	t ≥ 1.96 & p ≤.05	Reject H02
H03	Perceived environmental uncertainty has no significant effect on firm competitiveness	β, p-value, F-value, ΔR2 and t-value	t ≥ 1.96 & p ≤.05	Reject H03
H04	Strategic leadership has no significant effect on organizational learning	β, p-value, F-value, ΔR2 and t-value	t ≥ 1.96 & p ≤.05	Reject H04
H05	Organizational learning has no significant mediating effect on the relationship between strategic leadership and firm competitiveness	β, p-value, t-value, R2 LLCI & ULCI	LLCI & ULCI are none zeros, t ≥ 1.96 & p ≤.05	Reject H05
H06	Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and firm competitiveness	β, p-value, F-value, ΔR2 , t-value, LLCI & ULCI	LLCI & ULCI are none zeros, t ≥ 1.96 & p ≤.05	Reject H06
H07	Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and organizational learning	β, p-value, F-value, ΔR2 , t-value, LLCI & ULCI	LLCI & ULCI are none zeros, t ≥ 1.96 & p ≤.05	Reject H07
H08	Perceived environmental uncertainty has no significant effect on the indirect relationship between strategic leadership and firm competitiveness via organizational learning	β, LLCI & ULCI	LLCI & ULCI are none zeros	Reject H08

3.11 Ethical Considerations

The process of research entails the gathering of information from individuals and pertaining to individuals (Punch, 2013). This necessitates that the researcher adheres to established ethical principles during the data collection process, particularly when obtaining information from the target population within the field of study (Creswell & Creswell, 2017). Mingers and White (2010) posit that ethical conduct holds significant importance in the realm of research. Non-compliance with research ethics can lead to legal repercussions for the researcher, as is the case in any other domain of human endeavor. It is imperative for researchers to proactively identify potential ethical concerns that may arise during the course of their research endeavors and establish effective strategies to address them in a timely and appropriate manner (Hesse-Biber & Leavy, 2011; Punch, 2013; Sieber & Tolich, 2012). The ethical issues that the researcher dealt with the research process included the followings:

3.11.1 Informed consent

According to Hesse-Biber (2016), informed consent involves implementing a range of procedures when dealing with human subjects in research studies. Informed consent is a deliberate agreement and arrangement to participate in a scientific inquiry (Shahnazarian, Hagemann, Aburto, & Rose, 2013), without duress (Stevens, 2013), while making a cautious attempt to be aware of the details of what they are agreeing to undertake (Davies, 2013). Informed consent emphasizes that the subjects of the research must have adequate knowledge about research studies (Faden & Beauchamp, 1986; Israel & Hay, 2006). For this study, informed consent involved providing information detailing the purpose of the study, benefits, risks, methods, and changes to the study.

This information was given in a neutral way such that the respondents make informed decision on whether to participate or not in the research study (Sieber & Tolich, 2012). There are eight fundamental informed consent principles, which were brought to the attention of respondents when conducting the study: the purpose of the research, expected duration and procedures; their right to decline to participate and withdraw from the research once participation has begun; the foreseeable consequences of declining or withdrawing; reasonably foreseeable factors that may be expected to influence the respondent's willingness to participate (*e.g.* potential risks, discomfort or adverse effects; any prospective research benefits; limits of confidentiality; incentives for participation; and lastly, the person to contact for questions about the research and research respondents' rights).

The consent form given to respondents was both informed and spontaneous, without any form of intimidation or unwarranted effect. When conducting research about people, the basic principle states that respondents must be informed about their participation and allowed to fill in the informed consent forms showing their willingness to take part in the study, well aware that they are free to withdraw from the study as and when they so wish without any form of coercion or detriment. The researcher made an effort to guarantee the choices about the respondent's participation in the research were made without coercion (Stevens, 2013). However, informed consent forms usually have deficiencies in explaining the aim of the study and the risk of research to respondents. According to the European Education (2013), anthropologists note that most respondents are not aware of what they consented to at the end of the research. Researchers created an environment that allowed for the free flow of information with the research respondents by asking questions about their concerns, interests, and guaranteed information safety (Faden & Beauchamp, 1986).

3.11.2 Voluntary participation

According to Hogan (2008), the involvement of respondents/participants in the study was entirely voluntary, granting them the freedom to decide whether or not to participate. The entitlement of the respondents to engage in a survey is safeguarded by ethical guidelines established by international, national, and scholarly organizations. Various factors influence the involvement of respondents/participants in the research process, including their capacity to withstand external influences, such as monetary incentives, social influence from peers, and personal motivation or curiosity to acquire novel knowledge. The survey respondents/participants were motivated by their own self-determination to take part in the study.

3.11.3 Anonymity and privacy

Anonymity refers to a state in which the researcher is unable to establish a connection between the data provided by the respondent/participant during the completion of a research survey (Creswell & Creswell, 2017). The preservation of anonymity was achieved by administering the survey in an incognito manner, and respondents/participants were instructed to abstain from providing any identifying information such as names, initials, email addresses, phone numbers, etc. This measure was implemented to safeguard the privacy of the respondents. In general, investigators offer confidentiality to respondents/participants either in written communication such as cover letters or verbally.

The issue of ethics arises when respondents/participants are given a guarantee of confidentiality, as noted by Creswell (2014a), while the researcher is cognizant that this assurance cannot be upheld, as pointed out by De Vos, Delport, Fouché, and Strydom (2011). Various types of research, including observational studies and surveys, should

be carried out with the assumption that the researcher may disclose results without revealing the identities of the respondents/participants. Prior notification was given to the respondents/participants (Driscoll & Brizee, 2012) that the disclosure of their personal information, including their demographic details and names, was prohibited (Sales & Folkman, 2000).

3.11.4 Confidentiality

According to Shumbayawonda (2011), it is the responsibility of researchers to safeguard the anonymity of respondents and maintain confidentiality of their disclosures, unless explicit consent is obtained for the release of personal information. The confidentiality of the respondent's information was maintained during the investigation, as noted by Gast and Spriggs (2010), and the identities of the individuals were not disclosed, as reported by Thakhathi, Shepherd, and Nosizo (2018). The data obtained from the respondents were treated with the highest level of confidentiality, as per the guidelines of McMillan and Schumacher (2010), and were not disclosed or exposed to any unauthorized parties. The investigator took measures to ensure that data pertaining to the respondents were de-identified. The information provided by the respondents in the final research report was carefully refined in a manner that did not violate their privacy rights (Giordano, O'Reilly, Taylor, & Dogra, 2007).

3.11.5 Reward and benefits

The participants were duly notified that there were no incentives or advantages linked to their involvement in the survey, as stated by Bonevski et al. (2014). If a study offers benefits or rewards, it is important that they are realistic and given as a gesture of appreciation for the participants' efforts, rather than as an incentive to participate in the research study. The provision of benefits or rewards to research participants as an

incentive may result in the dissemination of inaccurate data, as respondents may be inclined to provide false information in order to receive additional rewards and benefits. As per Bonevski et al. (2014), it is imperative that the potential benefits of a study should outweigh the risks associated with the participation of respondents, while adhering to ethical standards.

3.11.6 Reduction of harm

In the realm of social science research, adherence to an ethical code of conduct is imperative for researchers to ensure that participants/respondents are not subjected to any harm during the course of the study, subsequent to their voluntary agreement to participate (Prinsloo & Slade, 2013). The present investigation focuses on the occurrences of adverse effects on the participants, which are centered on the concealment of delicate information that may cause embarrassment or jeopardize the subjects directly or indirectly with respect to their social relationships, residences, occupations, workplaces, or overall lifestyle, among other factors. Consequently, it was incumbent upon the researcher to ensure the protection of respondents from disclosing sensitive information in order to safeguard their psychological well-being. Participants were instructed to refrain from divulging any personal details pertaining to their work circumstances, such as supervision, leadership, and related matters. According to Kumar and Dash (2011), the act of revealing such information typically elicits feelings of discomfort or intimidation among the respondents.

The participants/respondents in the research study were provided with assurances by the researcher that they would be safeguarded and shielded from any unwarranted interference, distress, shame, bodily discomfort, individual humiliation, psychological injury, or any other type of harm that could potentially arise from their involvement in

the study (Stevens, 2013). If the research study involves any form of harm, it is imperative that the research protocol clearly outlines the type and extent of potential harm that may arise from the respondent's participation in the survey. It is imperative to inform the participants about the measures taken to safeguard them against any potential harm. These measures should include offering the participants the utmost level of care in case of any harm, providing compensation for any injury incurred during the research, and referring them to psychosocial and legal support. (Fynn, 2016).

3.11.7 Avoiding bias

According to the ethical code, researchers are expected to refrain from exhibiting any form of bias during the research process. In an ideal scenario, failure to control for biases may have an impact on the outcome of the research. Frequently, there exists a confusion among individuals regarding the differentiation between bias and subjectivity in the context of research. The presence of subjectivity in research can be attributed to various factors such as the researcher's level of expertise, educational background, and training, as well as their philosophical standpoint. Similarly, bias refers to the intentional actions taken by a researcher to either overemphasize a particular aspect beyond its actual reality or conceal certain findings discovered during the study. Kumar (2018) suggests that in cases where a researcher is unable to mitigate their bias, it may be preferable to abstain from conducting the study. It is imperative for a researcher to maintain objectivity and integrity in reporting research findings. This involves avoiding any potential biases and ensuring that all information related to the research process and outcomes is presented in a complete and honest manner, without any distortion or fabrication.

3.11.8 Falsification and fabrication of data

The act of fabricating data involves the creation of data or results by a researcher, which are then documented or reported in the research report. On the other hand, falsification refers to the manipulation of material, process, equipment, or the omission of data, which results in an inaccurate representation of the research (Flynn & Goldsmith, 2013). The aforementioned concepts correspond to research misconduct and should be circumvented throughout the research endeavor. The research ethical code of conduct was adhered to by utilizing truthful reporting of data. The researcher utilized authentic and precise data obtained from the study's settings, which were manufacturing firms, without any manipulation or fabrication of the dataset to achieve a desirable research result. Likewise, in the circumstance that the results of the investigation are unfavorable, it is considered sound methodology to disclose the conclusions in accordance with the pragamatic research paradigm.

3.11.9 Faulty data gathering methods

The inclusion of data from individuals who did not participate in the research study is considered unethical and can invalidate the findings, resulting in a loss of both time and resources. In the event that the data source fails to meet the requirements of the research study, it may result in the nullification of the research findings. On the contrary, the utilization of flawed research instruments for data collection is deemed unethical and akin to engaging in academic misconduct. The researcher bore the responsibility of ensuring that the data collection instruments, specifically research questionnaires, adhered to reasonable standards and were characterized by unquestionable validity and reliability. This was necessary to facilitate the attainment of similar or identical conclusions by both the researcher and future researchers.

To ensure the integrity of the collected data, it is imperative for the researcher to take measures to prevent accidental or deliberate misrepresentation of the data. In the event that a researcher erroneously records data and such an error is subsequently detected, the research in question is deemed to be unsuccessful and the reliability of the researcher, as well as the institution with which they are affiliated, is called into question. This, in turn, can have a negative impact on the recognition accorded to the researcher in question. The data was accurately recorded by the researcher utilizing appropriate techniques from the relevant field of inquiry, thereby mitigating any potential skepticism regarding the credibility of the data.

3.11.10 Responsible publication

According to Wager and Kleinert (2010), the ultimate phase of the research process is typically the publication of findings, which serves to communicate research outcomes to important stakeholders. It is the duty of the researcher to guarantee that the publication is unambiguous, precise, comprehensive, truthful, and impartial, as stated by Wager and Kleinert (2011). The paramount concern in research is the attainment of objectivity, which necessitates the avoidance of fabrication, falsification, or inappropriate data manipulation, as well as ambiguous, misleading, and selective reporting (Wager & Kleinert, 2013). Resnik and Shamoo (2017) assert that academic research is conducted with the aim of advancing rigor and scholarship beyond the individual's professional pursuits. Academicians are required to avoid wasteful and duplicative publication by following guidelines that govern publication in adjudicated professional academic journals (Borenstein & Shamoo, 2015).

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION, AND DISCUSSION OF FINDINGS

4.0 Introduction

This section of the thesis presents the results of data analysis which was entered into SPSS software version 23 for analysis. The chapter presents results about the response rate, data cleaning and screening, demographic profile of firms, descriptive statistics, reliability and validity of the research instruments, factor analysis of the study variables, confirmatory factor analysis of the study variables, correlation analysis, testing of regression assumptions, multiple regression of the study variables, interpretation of the tested hypotheses and summary of the findings.

4.1 Response Rate

Table 4.1 presents the distribution outcomes of 922 questionnaires that were disseminated to 461 firms. The results indicate that 838 questionnaires, which accounts for 90.1% of the total, were returned from 419 firms. From the returned forms, 3 firms did not have complete data and the data from six firms were outliers and therefore excluded from further analysis. Excluding incomplete questionnaires and outlier cases helps to overcome the risk of distorting results like the mean values (Lindner & Wingenbach, 2002). This suggests that a valid response rate of 410 firms, which represents 88.9%, was attained. Caslyn and Winter (1999) have established a correlation between non-response bias and reduced response rate. In order to mitigate the effects of non-response bias, appropriate measures should be taken. According to Lindner and Wingenbach (2002), it is recommended that a study should attain a response rate of at least 50% in order to reduce the impact of non-response bias. Sekaran and Bougie (2016) contend that surveys with a response rate of 30% are deemed

acceptable. The study in question has achieved a response rate of 88.9%, indicating that non-response bias is not a significant concern in this particular investigation.

Table 4:1 Response rate

Responses	No.	No. of Firms	Percentages
Administered Questionnaires	922	461	100
Returned Questionnaires	838	419	90.1
Usable Questionnaires	820	410	88.9
Unusable Questionnaires	18	9	0.1

Source: *Survey data (2022)*

4.2 Data Preparation and Screening

After data collection, all the questionnaires were screened to detect all possible errors like missing values, unanswered questionnaires, and partly answered questionnaires. This was done following the guidelines of Tabachnick and Fidel (2013). Thereafter, the completed questionnaires were coded with numbers to ensure systematic data entry. This also ensured that all the questionnaires were catered for and following the recommendation by Enders (2010) only questionnaires with large missing data over 10 percent were not included in the analysis. After data entry, the study also checked for errors that would have been made during the process of data entry. This was done by running descriptive statistics to determine the minimum and maximum scores for each item. For responses where scores were outside the range of 1 to 7, the questionnaire was revisited for error rectification.

4.2.1 Missing data and treatment

Studies have revealed that missing values are a common occurrence in social research (Hayes, 2012). As noted by Fichman and Cummings (2003), missing values can seriously affect results of statistical analysis. Consequently, the study attempted to eliminate or reduce missing values. Data collected was analyzed for frequency and three

cases were found to be have missing values and therefore were eliminated as recommended by (Hair *et al*., 2010).

4.2.2 Outliers Detection and Treatment

Outliers are extreme scores that remarkably differ from the centroid and may affect the study results (Hair *et al.*, 2010). Outliers may arise because of a discrepancy in the measurement, or entry of data and they may indicate possible experimental errors (Churchill & Laccobucci, 2006). Presence of outliers in the data set can distort data analysis and lead to wrong results (Verardi & Croux, 2009). Outliers in this study were detected using Mahalanobis distance (d2). The *p* values were computed for all the responses by use of the formula: 1-CDF.CHISQ(MAH_1,3), and those that were found to have a *p* value of 0.001 or less were considered outliers hence deleted. In this study, 6 multivariate outliers were identified and deleted from the dataset for the reason that presence of outliers could distort the results and inferences drawn from further data analyses that are based on measures like the mean (Tabachnick and Fidell, 2013).

4.3 Analysis of Harmans' one factor

Common method bias also referred to as common method variance was tested using Harmans' one factor analysis. In the table below, it can be seen that there was no common method variance since the percentage of variance (18.6%) is less than 50% as recommended by Antonakis, (2017) who opines that this single factor should not account for 50% or more of the variance present.

Table 4:2 Results for Harman's one factor test

Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.284	18.639	18.639	15.284	18.639	18.639

Extraction Method: Principal Component Analysis.
Source: *Survey data 2022*

4.4 Demographic Characteristics

The demographic profile of firms was described to understand the firm's general information. The firms' background characteristics were firm size, nature of business they are engaged in, region where the firm is located, the firm age and name of department where the respondents work. The results in Table 4.3 below summaries firm's demographic characteristics by indicating that with regard to the firm size, the findings show that 358 firms representing 81.6% were having more than 30 workers, 41 (9.9%) of the firms had between 25-30 workers, 16 firms representing 3.8% had between 20-24 workers, 1 firm had between 15-19 workers, while there were no firms with workers between 10-14 and 5-9. In addition, regarding the nature of business that the firms operate, the findings show that 275 (66.1%) were in to food processing businesses, while only 141 firms (33.9%) were engaged in non-food manufacturing. This is logical since the majority of Ugandans are farmers and more than 70% of Ugandans engage in agriculture as their source of living. Raw materials for agricultural products are also cheap in Uganda and that explains why most manufacturers are engaged in food related manufacturing

As far as the location of the firms is concerned, 260 firms representing 62.5% were located in central Uganda, 93 (22.4%) were established in Eastern Uganda, 50 (12%) of the firms were found in Northern Uganda, and only 13 representing 3.1% were located in Southern Uganda. In relation to firm age, the findings show that 328 (78.8%) of the firms had been operational for twenty years and beyond, 53 firms representing 12.7% had been operational for a period between 15-19 years, 23 (5.5%) of the firms had been in operations for a period of between 10-14 years, only 9 firms representing 2.2% had been operational for a period between 5-9 years and only 3 (0.7%) of the firms had operated for a period of between 0-4 years. Further, with regards to the

departments that the respondents work, the findings revealed that all the 410 had both the department of human resource and marketing departments.

Table 4:3 Firm Characteristics/Profile

Item	Categorization	Frequency	Percentages
Firm size	5-9	0	0
	10-14	0	0
	15-19	1	.2
	20-24	16	3.9
	25-30	40	9.8
	30-above	353	86.1
Nature of business	Food Manufacturing	270	65.9
	Non-food manufacturing	140	34.1
Location	Central	256	62.4
	Eastern	92	22.4
	Northern	49	12.0
	Southern	13	3.2
Firm age	0-4 years	3	.7
	5-9 years	9	2.2
	10-14 years	22	5.4
	15-19 years	53	12.9
	20 and above	323	78.8
Name of the department	Human Resource	410	50
	Marketing	410	50

Source: *Survey data (2022)*

4.5 Descriptive Statistics of the Study Variables

The objective of utilizing descriptive statistics for the study variables was to provide a quantitative representation of the primary characteristics of the data gathered for each variable examined in the study. Tabachnick and Fidell (2010) assert that descriptive statistics offer a simplified understanding of gathered data by presenting it in a more meaningful manner that enables straightforward interpretation. This section provides an account of the results obtained from the analysis of the descriptive statistics pertaining to firm competitiveness, strategic leadership, organizational learning, perceived environmental uncertainty. The statistical measures of mean and standard deviation were utilized to present the descriptions. The mean values offer

insights into the level of agreement or disagreement among respondents in the firms regarding specific statements. The standard deviation values offer insights into the extent to which the opinions of the respondent differ from the centroid.

4.5.1 Descriptive Statistics for firm competitiveness

Table 4.4 below presents the perception of respondents regarding firm level competitiveness. On the statement that "We offer competitive prices", the mean value from the responses indicated that firms offer competitive prices for the goods that they produce in their firms (mean = 5.6, SD = 1.02051). This implies that the firms reached have the capacity to compete within the industry. The standard deviation shows that the respondents' perceptions varied regarding this statement. The results further show that the respondents agreed regarding the statement 'we are able to offer prices lower than our competitors' (mean = 5.5, SD = 1.03582). The standard deviation of 1.03582imply that the respondents had varying views about the statement. The respondents also showed that their firms are able to compete based on quality (mean = 4.7, SD = 1.46572) since the mean value is close to 5 which indicates that the respondents agree with the statement. This implies that quality is considered as an important factor in becoming more competitive and the firms surveyed testified that they are able to compete based on quality meaning they produce quality products. The standard deviation shows a high variability of the respondents' perceptions. Regarding the statement that 'We offer products that are highly reliable, the mean value is 4.6 which is close to 5 and this implies that the respondents agreed with this statement. The standard deviation was 1.46572, which indicates the variability in the respondents' views.

Further, the results also indicate that the respondents agreed with the statements that 'We offer products that are very durable' (mean = 4.9, SD = 1.36704); 'We offer high

quality products to our customer' (mean = 5.1, SD = 1.27675); 'We deliver the kind of products needed' (mean = 5.6, SD = 1.05511); 'We deliver customer's orders on time' (mean = 5.9, SD = 1.02748); 'We provide dependable delivery' (mean = 5.6, SD = 1.0); 'We provide customized products' (mean = 5.9, SD = .99846); 'We alter our product offerings to meet client needs' (mean = 5.5, SD = 1.17133); 'We respond well to customer demand for "new" features' (mean = 5.7, SD = 1.10305); 'We deliver product to market quickly' (mean = 5.3, SD = 1.17077); 'We are first in the market in introducing new products' (mean = 5.5, SD = 1.01315); 'We have time-to-market lower than industry average' (mean = 5.2, SD = 1.25018) and 'We have fast product development' (mean = 5.3, SD = 1.27093). All these combined together implies that the firms reached have the capacity to favorability compete within their specific industries.

Table 4:4 Descriptive Statistics for firm competitiveness

N=410	Mean	Std. Deviation
Our prices are competitively priced.	5.6046	1.02051
Our company is capable of providing prices that are more competitive than those of our rivals.	5.5240	1.03582
Our competitive advantage is based on the quality of our products.	4.7175	1.46572
Our products are characterized by high reliability and durability.	4.6178	1.59497
We offer products that are very durable	4.9195	1.36704
We offer high quality products to our customer	5.1202	1.27675
We deliver the kind of products needed	5.5950	1.05511
We deliver customer order on time	5.8738	1.02748
We provide dependable delivery	5.5853	.99846
We provide customized products	5.8353	.93070
We alter our product offerings to meet client needs	5.5168	1.17133
We respond well to customer demand for "new" features	5.7380	1.10305
We deliver product to market quickly	5.2692	1.17077
We are first in the market in introducing new products	5.5048	1.01315
We have time-to-market lower than industry average	5.2200	1.25018
We have fast product development	5.3029	1.27093
Valid N (listwise)		

Source: *Survey data 2022*

4.5.2 Descriptive statistics for strategic leadership

The study also analyzed the perceptions of respondents regarding the item measures for strategic leadership. The respondents agreed with the statements that 'Organizational strategies are clearly communicated to me' (Mean = 5.3, SD = 1.21233), 'Organizational strategies guide the identification of the skills and knowledge I need to have' (Mean = 5.1, SD = 1.19223), 'People here are willing to change when new organizational strategies require it' (Mean = 5.1, SD = 1.17499), 'Our senior managers agree on the organizational strategy' (Mean = 5.1, SD = 1.31247), 'For each product/service, our organization provides, there is an agreed upon, prioritized list of what customers care about' (Mean = 5.0, SD = 1.30919), 'People in this organization are provided with useful information about customer complaints' (Mean = 5.4, SD = 1.02336), 'Strategies are periodically reviewed to ensure the satisfaction of critical customer needs' (Mean = 5.4, SD = 1.05053), 'Processes are reviewed to ensure they contribute to the attainment of customer satisfaction' (Mean = 5.3, SD = .96874), 'Our organization collects information from employees about how well things work' (Mean = 5.4, SD = .95937), 'My work unit or team is rewarded for our performance as a team' (Mean = 5.4, SD = 1.10236), 'Groups in the organization cooperate to achieve customer satisfaction' (Mean = 5.9, SD = .78346), 'When processes are changed, the impact on employee satisfaction is measured' (Mean = 5.8, SD = 1.16407), 'Our managers care about how work gets done as well as about the results' (Mean = 6.0, SD = .70277), We review our work processes regularly to see how well they are functioning' (Mean = 5.9, SD = .82469), 'When something goes wrong, we correct the underlying reasons so that the problem will not happen again' (Mean = 5.0, SD = 1.38188), and 'Processes are reviewed to ensure they contribute to the achievement of strategic goals' (Mean = 5.3, SD = 1.36733). This implies that; whenever firms develop strategies, the different

stakeholders are consulted and adequate information is sought before a strategy is developed. Further, the results also show that, the different processes are reviewed to incorporate the needs of the customers and this makes the firms to be more competitive.

Table 4:5 Descriptive Statistics for strategic leadership

N=410	Mean	Std. Deviation
Organizational strategies are clearly communicated to me	5.3005	1.21233
Organizational strategies guide the identification of the skills and knowledge I need to have	5.0793	1.19223
People here are willing to change when new organizational strategies require it	5.1454	1.17499
Our senior managers agree on the organizational strategy	5.0625	1.31247
For each product/service, our organization provides, there is an agreed upon, prioritized list of what customers care about	5.0216	1.30919
People in this organization are provided with useful information about customer complaints	5.4423	1.02336
Strategies are periodically reviewed to ensure the satisfaction of critical customer needs	5.4050	1.05053
Processes are reviewed to ensure they contribute to the attainment of customer satisfaction	5.3486	.96874
Our organization collects information from employees about how well things work	5.5361	.95937
My work unit or team is rewarded for our performance as a team	5.4411	1.10236
Groups in the organization cooperate to achieve customer satisfaction	5.9447	.78346
When processes are changed, the impact on employee satisfaction is measured	5.7692	1.16407
Our managers care about how work gets done as well as about the results	5.9904	.70277
We review our work processes regularly to see how well they are functioning	5.8726	.82469
When something goes wrong, we correct the underlying reasons so that the problem will not happen again	4.9748	1.38188
Processes are reviewed to ensure they contribute to the achievement of strategic goals	5.3125	1.36733
Valid N (listwise)		

Source: *Survey data 2022*

4.5.3 Descriptive statistics for organizational learning

This section presents the perceptions of respondents regarding organizational learning. Table 4.6 below shows the extent to which respondents agreed or disagreed with the statements that measured organizational learning. From the findings, the respondents agreed that the employees are informed of how the firm was created and its philosophy of work (Mean = 5.4, SD = 1.08992). This indicates that the employees have adequate knowledge of the philosophy that governs the operation of firms. The respondents also indicated that their firms collect and use the information generated during organizational changes (Mean = 5.5, SD = .98157) which implies that whenever a change is initiated within firms, adequate information is sought before a change is implemented. The standard deviation of .98157 show that the respondents had low varying perceptions regarding information generated during organizational change.

Further, the respondents also indicated that in their firms, employees' interaction and participation to gather information about possible changes are encouraged (Mean = 5.5, SD = .95050). The standard deviation of .95050 however show high variability in the respondents' responses. The respondents also showed that their firms constantly evaluate the need to adapt to the business environment (Mean = 5.5, SD =.93612), implying the firms are always aware of the environmental factors that impact on their businesses. The study results also shows that the members of the firms reached use informal means to find out about the most recent events regarding the market or the environment (Mean = 5.6, SD = .85005). The respondents further, indicated that as a result of the knowledge acquired in the course of time the employees become more efficient in exercising their responsibilities (Mean = 5.6, SD = .88343). This implies that workers are more efficient in carrying out their responsibilities when they have adequate knowledge. The standard

deviation however shows that the respondents had high varying perceptions regarding this statement.

The respondents further agreed with the statement ‘we collect information about what our competitors do through different means (Mean = 5.4, SD = .90051). This implies that firms are aware of what their competitors do. The standard deviation of .90051 indicates that the respondents had varying perceptions about the statement. The standard deviation shows high variability of the respondents’ views regarding this statement. The respondents also showed that when the firms do not have the specific knowledge required, they look for it and acquire it outside the firm (Mean = 5.6, SD = .89538). The standard deviation of .89538 show varying perceptions of the respondents about this statement. In the same vein, respondents agreed with the statement ‘we periodically check whether our strategy is aligned with the business environment (Mean = 5.6, SD = .85597). This implies that firms have strategies which addresses the current changes within the business environment. On the other hand, the majority of the respondents agreed with the statement that ‘Problems are approached proactively, that is, we learn from other entities to be able to respond to these problems before they arise’ (Mean = 5.4, SD = .91994). The respondents were also in agreement with the statement that; ‘We use formal and reiterative procedures to evaluate our results and compare them with those of the competition’ (Mean = 5.4, SD = 1.02734). The high standard deviation shows the high variability among the respondents.

Additionally, respondents agreed with the statements; ‘We have a meeting schedule among departments to integrate the existing information (Mean = 5.4, SD = 1.31005); ‘We devote some time to discussions about the organization's future needs’ (Mean = 5.6, SD = 1.11384); ‘We use databases and organizational files to support our work’

(Mean = 5.6, SD = 1.06664); ‘The company's general objectives are communicated throughout the organization’ (Mean = 5.5, SD = 1.06593); ‘We are really interested in providing employees with an overall view of the company's operations, even with personnel turnover’ (Mean = 5.6, SD = 1.13254); ‘There are people responsible for collecting the proposals made by the staff and for distributing them internally’ (Mean = 5.6, SD = 1.14149); ‘Vital information is transmitted quickly to all employees’ (Mean = 5.6, SD = 1.15961); ‘We systematically examine and update our opinion about the business environment’ (Mean = 5.4, SD = .88303); ‘We try to develop an interpretation as uniform as possible of relevant information’ (Mean = 5.7, SD = .73701); ‘The employees have at their disposal a wide variety of communication tools (telephone, e-mail, fax, intranet, etc.)’ (Mean = 5.8, SD = .66878); and ‘We generate concise reports intended to avoid excess information that may limit our capacity to interpret it adequately’ (Mean = 5.9, SD = .65560).

Further, the majority of the respondents agreed with the statement that ‘Before a decision is taken the different alternatives are thoroughly analyzed’ (Mean = 5.8, SD = .68773). This implies that the firms implement decisions which are more feasible since a number of alternatives are evaluated before a decision is taken. The results further indicate that the firms always review relevant information periodically in case it is obsolete or may lead to error (Mean = 5.8, SD = .72186). The respondents also indicated that firms do not oppose changes in the way of doing things (Mean = 5.4, SD = .95962) implying workers easily accept changes brought in their firms. The majority of the respondents were also in agreement with the statements; ‘We have our own expert personnel in the most essential aspects of the organizational operations’ (Mean = 5.6, SD = .86497); ‘Personnel turnover does not risk our capacity to create new knowledge and solve problems’ (Mean = 5.8, SD = .81023); ‘We carry out training programs (for

example: workshops, seminars, etc.) for the members of the organization' (Mean = 5.9, SD = .65438); 'We are aware of who has the specific abilities and the experience to intervene when an opportunity or problem arises' (Mean = 5.7, SD = .62478); 'Key employees when the organization faces a new opportunity or problem can be conveniently contacted' (Mean = 5.6, SD = .68223); 'People in the organization who are helpful when an opportunity or problem arise are actively committed to looking for possible solutions' (mean = 5.5, SD = .82643) and 'There is an atmosphere of trust and collaboration among the personnel of the company to cooperate when opportunities or problems arise' (mean = 5.6, SD = .97112). The standard deviation however shows some variability in the respondents' views about these statements.

Table 4:6 Descriptive Statistics for organizational learning

N=410	Mean	Std. Deviation
The employees are informed of how the firm was created and its philosophy of work.	5.3798	1.08992
We collect and use the information generated during organizational changes.	5.5192	.98157
Employees' interaction and participation to gather information about possible changes are encouraged.	5.5276	.95050
We constantly evaluate the need to adapt to the business environment.	5.5373	.93612
The members of the organization use informal means to find out about the most recent events regarding the market or the environment.	5.6238	.85005
As a result of the knowledge acquired in the course of time the employees are more efficient in exercising their responsibilities.	5.5865	.88343
We collect information about what our competitors do through different means	5.4459	.90051
When we do not have the specific knowledge required, we look for it and acquire it outside the organization.	5.5781	.89538
We periodically check whether our strategy is aligned with the business environment.	5.5637	.85597
Problems are approached proactively, that is, we learn from other entities to be able to respond to these problems before they arise.	5.4219	.91994
We use formal and reiterative procedures to evaluate our results and compare them with those of the competition.	5.4050	1.02734
We have a meeting schedule among departments to integrate the existing information.	5.3570	1.31005
We devote some time to discussions about the organization's future needs	5.5901	1.11384
We use databases and organizational files to support our work.	5.5962	1.06664
The company's general objectives are communicated throughout the organization.	5.5337	1.06593
We are really interested in providing employees with an overall view of the company's operations, even with personnel turnover.	5.6382	1.13254
There are people responsible for collecting the proposals made by the staff and for distributing them internally.	5.6226	1.14149
Vital information is transmitted quickly to all employees	5.5805	1.15961
We systematically examine and update our opinion about the business environment.	5.3834	.88303
We try to develop an interpretation as uniform as possible of relevant information.	5.7127	.73701
The employees have at their disposal a wide variety of communication tools (telephone, e-mail, fax, intranet, etc.).	5.8257	.66878
We generate concise reports intended to avoid excess information that may limit our capacity to interpret it adequately.	5.8714	.65560
Before a decision is taken the different alternatives are thoroughly analyzed.	5.7728	.68773
We review relevant information periodically in case it is obsolete or may lead to error.	5.8149	.72186
We do not oppose changes in the way of doing things.	5.4291	.95962
We have our own expert personnel in the most essential aspects of the organizational operations.	5.6070	.86497
Personnel turnover does not risk our capacity to create new knowledge and solve problems	5.8113	.81023
We carry out training programs (for example: workshops, seminars, etc.) for the members of the organization.	5.9111	.65438
We are aware of who has the specific abilities and the experience to intervene when an opportunity or problem arises.	5.7476	.62478
Key employees when the organization faces a new opportunity or problem can be conveniently contacted.	5.6478	.68223
People in the organization who are helpful when an opportunity or problem arise are actively committed to looking for possible solutions.	5.5120	.82643
There is an atmosphere of trust and collaboration among the personnel of the company to cooperate when opportunities or problems arise	5.5625	.97112
Valid N (listwise)		

Source: *Survey data 2022*

4.5.4 Descriptive statistics for perceived environmental uncertainty

Table 4.7 presents the perception of respondents regarding perceived environmental uncertainty. The respondents agreed with the statement that 'In our kind of business, customers' product preferences change quite a bit over time' (mean = 5.3, SD = 1.44872). The standard deviation of 1.44872 show variations in the respondents' views about this statement. The respondents also showed that their customers tend to look for new products all the time (mean = 5.5, SD = 1.19623). The mean value for the statement 'Sometimes our customers are very price-sensitive, but on other occasion's price is relatively unimportant' was 5.8 and standard deviation is 1.19623 which implies that the respondents agreed with this statement.

The respondents were as well in agreement with the statements that 'New customers tend to have product-related needs that are different from those of our existing customers' (mean = 5.7, SD = .89508); 'We cater to many of the same customers that we used to in the past' (mean = 5.7, SD = 1.12922); 'It is very difficult to predict any changes in the marketplace' (mean = 5.8, SD = 1.01854); 'The technology in our industry is changing rapidly' (mean = 5.4, SD = .99758); 'Technological changes provide big opportunities in our industry (mean = 5.7, SD = .90957); 'It is very difficult to forecast where the technology in our industry will be in the next two years' (mean = 5.6, SD = .97937); 'A large number of new product ideas have been made possible through technological breakthroughs in our industry' (mean = 5.4, SD = .93720); 'Technological developments in our industry is cutthroat' (mean = 5.6, SD = .89726) and 'The technological changes in this industry are frequent' (mean = 5.4, SD = 1.10931).

Further, the respondents also noted that competition in their industry is cutthroat (mean = 5.5, SD = 1.11281). On the statement of whether there are many promotion wars among firms in the industry, the respondents agreed with the statement, however, there was great variability in the perceptions from the respondents (mean = 5.1, SD = 1.41434). This implies that for a firm to out compete other firms in the market, they need to get involved in to very intense promotional wars. Moreover, the respondents also agreed with the statements such as; 'Anything that one competitor can offer others can match readily' (mean = 5.1, SD = 1.43335); 'Price competition is a hallmark of our industry' (mean = 5.1, SD = 1.39885); 'One hears of a new competitive move almost every day' (mean = 5.3, SD = 1.26568) and 'Our competitors are relatively weak' (mean = 5.1, SD = 1.50159). In summary, the findings of the study in relation to perceived environmental uncertainty shows that a lot of changes in the business environment are brought about by technological changes, changes in customer preferences and the changes in the competitive landscape.

Table 4:7 Descriptive Statistics for perceived environmental uncertainty

N=410	Mean	Std. Deviation
In our kind of business, customers' product preferences change quite a bit over time	5.2512	1.44872
Our customers tend to look for new products all the time	5.5192	1.19623
Sometimes our customers are very price-sensitive, but on other occasions price is relatively unimportant	5.7524	.96067
New customers tend to have product-related needs that are different from those of our existing customers	5.7440	.89508
We cater to many of the same customers that we used to in the past	5.6839	1.12922
It is very difficult to predict any changes in the marketplace	5.7837	1.01854
The technology in our industry is changing rapidly	5.4399	.99758
Technological changes provide big opportunities in our industry	5.6779	.90957
It is very difficult to forecast where the technology in our industry will be in the next two years	5.5841	.97937
A large number of new product ideas have been made possible through technological breakthroughs in our industry	5.4267	.93720
Technological developments in our industry is cutthroat	5.5998	.89726
The technological changes in this industry are frequent	5.4075	1.10931
Competition in our industry is cutthroat	5.4856	1.11281
There are many promotion wars in our industry	5.0962	1.41434
Anything that one competitor can offer others can match readily	5.0998	1.43335
Price competition is a hallmark of our industry	5.0637	1.39885
One hears of a new competitive move almost everyday	5.3137	1.26568
Our competitors are relatively weak	5.0553	1.50159
Valid N (listwise)		

Source: *Survey data 2022*

4.6 Cross Tabulation of firm Demographic Characteristics against the Study Variables

4.6.1 Firm Age against the Study Variables

Firm age was cross-tabulated against the study variables to establish its influence on the study variables. The findings in Table 4.8 below shows that there is no statistically significant difference between firm age and strategic leadership. For instance, firm age and firm competitiveness (F = 0.289, *P* = 0.591), firm age and strategic leadership (F = 0.423, *P* = 0.521), firm age and organisational learning (F = 0.208, *P* = 0.648), firm age and perceived environmental uncertainty (F = 1.363, *P* = 0.244). The results indicate that firm age does not influence strategic leadership at firm level.

Table 4:8 Cross Tabulation of Firm Age against the Study Variables

	Descriptives		Anova	
Variable	**Firm Age**	**Number**	**F**	**Sig.**
SL	0-4 years	3	0.423	0.521
	5-9 years	9		
	10-14 years	22		
	15-19 years	53		
	20 and above	323		
OL	0-4 years	3	0.208	0.649
	5-9 years	9		
	10-14 years	22		
	15-19 years	53		
	20 and above	323		
PEU	0-4 years	3	1.363	0.244
	5-9 years	9		
	10-14 years	22		
	15-19 years	53		
	20 and above	323		
FC	0-4 years	3	0.289	0.591
	5-9 years	9		
	10-14 years	22		
	15-19 years	53		
	20 and above	323		

Source: *Survey data 2022*

Key: FC. Firm Competitiveness SL. Strategic Leadership
Ol. Organizational Learning PEU. Perceived environmental Uncertainty

4.6.2 Firm size against the Study Variables

This section analyses the statistical difference between firm size and the study variables. The results in Table 4.9 below revealed that there is no statistically significant difference between firm size and strategic leadership (F = 2.666, $P > 0.05$). The implication is that strategic leadership at firm level is not influenced by the firm size. As regards firm size and organizational learning, the findings reveal that there is a statistically significant difference between firm size and organizational learning (F = 8.504, $p < 0.05$). The results imply that firm size influences organizational leaning. The findings as well indicate that firm size influences perceived environmental uncertainty (F = 10.950, $p < 0.05$). The results imply that change in firm size determine the level of perceived environmental uncertainty. As regards firm size and firm competitiveness, the findings reveal that there is a statistically significant difference between firm size and firm competitiveness (F = 7.842, $p < 0.05$). The findings imply that firm size influence the level of competitiveness of manufacturing firms.

Table 4:9 Cross Tabulation of Firm Size against the Study Variables

	Descriptives		Anova	
Variable	**Firm size**	**Number**	**F**	**Sig.**
SL	5-9 workers	0	2.666	0.102
	10-14 Workers	0		
	15-19 Workers	1		
	20-24 Workers	16		
	25-29 Workers	40		
	30 and above	353		
OL	5-9 workers	0	8.504	0.004
	10-14 Workers	0		
	15-19 Workers	1		
	20-24 Workers	16		
	25-29 Workers	40		
	30 and above	353		
PEU	5-9 workers	0	10.95	0.001
	10-14 Workers	0		
	15-19 Workers	1		
	20-24 Workers	16		
	25-29 Workers	40		
	30 and above	353		
FC	5-9 workers	0	7.842	0.005
	10-14 Workers	0		
	15-19 Workers	1		
	20-24 Workers	16		
	25-29 Workers	40		
	30 and above	353		

Source: *Survey data 2022*

Key: FC. Firm Competitiveness SL. Strategic Leadership

Ol. Organizational Learning PEU. Perceived environmental Uncertainty

4.7 Reliability of the Research Instrument

Reliability was determined using Cronbach alpha coefficient to assess the internal consistency of the research instrument (Zikmund, 2013). The findings in Table 4.10 below shows that the Cronbach alpha values for firm competitiveness, strategic leadership, organizational learning and perceived environmental uncertainty were above the accepted 0.7 threshold as recommended in the works of Tabachnick and Fiddel (2013). The obtained reliability indices of the variables are adequate and implies

that any other researcher should be able to replicate the original piece of research and achieve comparable evidence or results, with similar or same study population.

Table 4.10 Reliability Statistics

Variable	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
SL	.843	.846	16
OL	.847	.845	32
PEU	.840	.841	18
FC	.820	.823	16

Source: *Survey Data (2022)*

Key: FC. Firm Competitiveness SL. Strategic Leadership
Ol. Organizational Learning PEU. Perceived environmental Uncertainty

4.8 Factor Analysis for the Study Variables

Factor analysis was conducted for basically three reasons; (1) data reduction by identifying the latent variables and condensing a vast number of variables or things to a manageable number of elements, (2) construct validity, and (3) preparation of data for further analysis (Crothers *et al*., 2009). Hence, exploratory factor analysis was conducted on all items used to measure independent variable (Strategic leadership), mediator variable (organizational learning), moderator variable (perceived environmental uncertainty) and the dependent variable (Firm competitiveness). Before executing exploratory factor analysis, principal component analysis was first conducted to check on the adequacy of the sample data. Factorability of the data was assessed using Bartlets test of sphericity and Kaiser- MeyerOlkin (KMO) measure of sampling adequacy (Bartlets test of Sphericity should be statistically significant at $\rho < 0.05$, KMO index should range from 0 to 1). Following that, factor extraction was carried out by calculating the minimum number of factors that might be utilized to best depict the interrelationships between the variables. Factors with Eigen values 1 and above were

extracted using principal component analysis (PCA). Though there are multiple methods like principal factoring, image factoring, and alpha factoring, because the original variables are transformed into a smaller set of linear combinations, PCA was chosen. Tabachnick and Fidell (2001) clam that PCA is psychometrically robust, mathematically simpler, and eliminates some of the potential difficulties associated with factor analysis, such as factor indeterminacy. Finally, after determining the number of components, the next step was to interpret them. To do so, this process was supported by performing factor rotation. This procedure does not alter the underlying solution; rather, it simplifies the interpretation of the loading pattern. The orthogonal approach with varimax method was utilized because it reduced the number of items that had high loadings on each component. While the orthogonal approach was chosen because its results are easier to interpret and report as compared to oblique approaches (Tabachnick & Fidell, 2001).

4.8.1 Factor Analysis for firm competitiveness

The findings in table 4.11 below shows the results from the factor analysis for firm competitiveness showed that only one item, 'We have fast product development' did not load on any component and was eliminated. Therefore, 15 Items were retained for further analysis. In total, the five factors accounted for 75.6% of the total variance in firm competitiveness. The Kaiser-Meyer-Olkin Measure value (0.793) that was above 0.5 hence acceptable. In addition, the Bartlett's Test shows that the obtained findings are significant $X^2(n=416) = 2970.363$ ($p < 0.001$) as recommended in the works of (Tabachnick & Fidell, 2007).

Table 4:11 Factor Analysis for firm competitiveness

	Factor Loading 1	Factor Loading 2	Factor Loading 3	Factor Loading 4	Factor Loading 5
Price/cost:					
We offer competitive prices					.839
We are able to offer prices as low or lower than our competitors					.828
Quality (QO)					
We are able to compete based on quality	.882				
We offer products that are highly reliable	.859				
We offer products that are very durable	.862				
We offer high quality products to our customer	.794				
Delivery dependability (DD)					
We deliver the kind of products needed		.854			
We deliver customer order on time		.855			
We provide dependable delivery		.850			
Product innovation (PI)					
We provide customized products			.844		
We alter our product offerings to meet client needs			.822		
We respond well to customer demand for "new" features			.815		
Time to market(TM)					
We are first in the market in introducing new products				.846	
We have time-to-market lower than industry average				.779	
We have fast product development				.797	
Total variance explained:					
Initial Eigenvalues	4.347	2.954	1.722	1.272	1.046
% Variance	28.978	19.695	11.483	8.478	6.970
Cumulative %	28.978	48.673	60.156	68.634	75.604
KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.793			
Bartlett's Test of Sphericity, Approx. Chi-Square		2970.363			
Df.		105			
Sig.		.000			
Extraction Method: Principal Component Analysis.					

Source: *Survey data 2022*

4.8.2 Factor analysis for strategic leadership

In Table 4.12 below, the results of factor analysis for strategic leadership shows that all the factor loading results for Items measuring strategic leadership were above the 0.5 threshold. Therefore, all the Items were retained for further analysis. The first factor accounted for 30.818%, the second factor accounted for 17.592%, the third factor accounted for 12.444% while the fourth factor accounted for 9.442% of the total variance in firm competitiveness. The Kaiser-Meyer Olkin Measure value (0.793) that was above 0.5 hence acceptable. Also, the Bartlett's Test shows that the obtained findings are significant $X^2(n=416) = 3639.304$, p-value < 0.001) as recommended in the works of (Tabachnick & Fidell, 2007).

Table 4:12 Factor Analysis for strategic leadership

	Factor Loading 1	Factor Loading 2	Factor Loading 3	Factor Loading 4
Determining strategic direction (SD)				
Organizational strategies are clearly communicated to me			.669	
Organizational strategies guide the identification of the skills and knowledge I need to have			.877	
People here are willing to change when new organizational strategies require it			.857	
Our senior managers agree on the organizational strategy			.813	
Exploiting and maintaining core competencies (CC)				
For each product/service, our organization provides, there is an agreed upon, prioritized list of what customers care about	.699			
People in this organization are provided with useful information about customer complaints	.858			
Strategies are periodically reviewed to ensure the satisfaction of critical customer needs	.831			
Processes are reviewed to ensure they contribute to the attainment of customer satisfaction	.730			
Our organization collects information from employees about how well things work	.680			
My work unit or team is rewarded for our performance as a team	.645			
Sustaining effective corporate culture				
Groups in the organization cooperate to achieve customer satisfaction		.821		
When processes are changed, the impact on employee satisfaction is measured		.821		
Our managers care about how work gets done as well as about the results		.842		
We review our work processes regularly to see how well they are functioning		.837		
Establishing strategic controls				
When something goes wrong, we correct the underlying reasons so that the problem will not happen again				.865
Processes are reviewed to ensure they contribute to the achievement of strategic goals				.872
Total variance explained:				
Initial Eigenvalues	4.931	2.815	1.991	1.511
% Variance	30.818	17.592	12.444	9.442
Cumulative %	30.818	48.409	60.854	70.296
KMO and Bartlett's Test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.793			
Bartlett's Test of Sphericity, Approx. Chi-Square	3639.304			
Df.	120			
Sig.	.000			
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser Normalization				

Source: *Survey data 2022*

4.8.3 Factor analysis for organizational learning

Table 4.13 below indicates that the results from the factor analysis for organizational learning showed that the factor loading results were above 0.5 except three items; key employees when the organization faces a new opportunity or problem can be conveniently contacted, people in the organization who are helpful when an opportunity or problem arise are actively committed to looking for possible solutions and there is an atmosphere of trust and collaboration among the personnel of the company to cooperate when opportunities or problems arise. Therefore, 29 factors that measured organizational learning were retained for further analysis. In total, the four factors accounted for 56.501% of the total variance in organizational learning. The Kaiser-Meyer-Olkin Measure value 0.854 that was above 0.5 hence acceptable. Also, the Bartlett's Test shows that the obtained findings are significant $X^2(n=410) = 6554.408$ (p <0.001), as recommended in the works of (Tabachnick and Fidell, 2007).

Table 4:13 Factor Analysis for organizational learning

	Factor Loading 1	Factor Loading 2	Factor Loading 3	Factor Loading 4
Information acquisition (IA)				
The employees are informed of how the firm was created and its philosophy of work.	.589			
We collect and use the information generated during organizational changes.	.720			
Employees' interaction and participation to gather information about possible changes are encouraged.	.715			
We constantly evaluate the need to adapt to the business environment.	.680			
The members of the organization use informal means to find out about the most recent events regarding the market or the environment.	.720			
As a result of the knowledge acquired in the course of time the employees are more efficient in exercising their responsibilities.	.771			
We collect information about what our competitors do through different means	.700			
When we do not have the specific knowledge required, we look for it and acquire it outside the organization.	.743			
We periodically check whether our strategy is aligned with the business environment.	.753			
Problems are approached proactively, that is, we learn from other entities to be able to respond to these problems before they arise.	.727			
We use formal and reiterative procedures to evaluate our results and compare them with those of the competition.	.672			
Knowledge dissemination (KD)				
We have a meeting schedule among departments to integrate the existing information		.888		
We devote some time to discussions about the organization's future needs		.848		
We use databases and organizational files to support our work.		.831		
The company's general objectives are communicated throughout the organization.		.753		
We are really interested in providing employees with an overall view of the company's operations, even with personnel turnover.		.872		
There are people responsible for collecting the proposals made by the staff and for distributing them internally.		.866		
Vital information is transmitted quickly to all employees		.815		
Shared interpretation (SI)				
We systematically examine and update our opinion about the business environment.			.718	
We try to develop an interpretation as uniform as possible of relevant information.			.688	
The employees have at their disposal a wide variety of communication tools (telephone, e-mail, fax, intranet, etc.).			.696	
We generate concise reports intended to avoid excess information that may limit our capacity to interpret it adequately.			.663	

Before a decision is taken the different alternatives are thoroughly analyzed.			.611	
We review relevant information periodically in case it is obsolete or may lead to error.			.617	
We do not oppose changes in the way of doing things.				
Organizational memory (OM)				
We have our own expert personnel in the most essential aspects of the organizational operations.				.715
Personnel turnover does not risk our capacity to create new knowledge and solve problems				.674
We carry out training programs (for example: workshops, seminars, etc.) for the members of the organization.				.788
We are aware of who has the specific abilities and the experience to intervene when an opportunity or problem arises.				.710
Total variance explained:				
Initial Eigenvalues	6.250	5.166	2.662	2.307
% variance	21.553	17.814	9.178	7.956
Cumulative %	21.553	39.367	48.545	56.501
KMO and Bartlett's Test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.854			
Bartlett's Test of Sphericity, Approx. Chi-Square	6554.408			
Df.	406			
Sig.	.000			
Extraction Method: Principal Component Analysis.				
Rotation Method: **Varimax with Kaiser Normalization**				

Source: *Survey data 2022*

4.8.4 Factor Analysis for perceived environmental uncertainty analysis

The findings in table 4.14 below shows the results from the factor analysis for perceived environmental uncertainty showed that all the items loaded above the 0.5 threshold. Therefore, all the 18 Items were retained for further analysis. In total, the three factors accounted for 65.18% of the total variance in perceived environmental uncertainty. The Kaiser-Meyer-Olkin Measure value (0.87) that was above 0.5 hence acceptable. In addition, the Bartlett's Test shows that the obtained findings are significant $X^2(n=410) = 4441.865$ (p <0.001) as recommended in the works of (Tabachnick & Fidell, 2007).

Table 4.14 Factor Analysis for perceived environmental uncertainty

	Factor Loading 1	Factor Loading 2	Factor Loading 3
Market environment			
In our kind of business, customers' product preferences change quite a bit over time		.849	
Our customers tend to look for new products all the time		.877	
Sometimes our customers are very price-sensitive, but on other occasions price is relatively unimportant		.821	
New customers tend to have product-related needs that are different from those of our existing customers		.687	
We cater to many of the same customers that we used to in the past		.798	
It is very difficult to predict any changes in the marketplace		.765	
Technological environment			
The technology in our industry is changing rapidly			.712
Technological changes provide big opportunities in our industry			.775
It is very difficult to forecast where the technology in our industry will be in the next two years			.747
A large number of new product ideas have been made possible through technological breakthroughs in our industry			.718
Technological developments in our industry is cutthroat			.734
The technological changes in this industry are frequent			.753
Competitive environment			
Competition in our industry is cutthroat	.694		
There are many promotion wars in our industry	.872		
Anything that one competitor can offer others can match readily	.903		
Price competition is a hallmark of our industry	.851		
One hears of a new competitive move almost everyday	.822		
Our competitors are relatively weak	.783		
Total variance explained:			
Initial Eigenvalues	5.366	3.965	2.402
% variance	29.809	22.026	13.345
Cumulative %	29.809	51.835	65.180
KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.870		
Bartlett's Test of Sphericity, Approx. Chi-Square	4441.865		
Df.	153		
Sig.	.000		
Extraction Method: Principal Component Analysis			
Rotation Method: **Varimax with Kaiser Normalization**			

Source: *Survey data 2022*

4.9 Transformed variables

After factor analysis, some items that did not load were eliminated to compute the variables that were used in further analysis, and the data were transformed in line with Zikmund et al,. (2013). This was done by computing the mean for each variable. The mean was obtained by summing up the factor scores (loadings) that loaded under each variable, then dividing them by the number of items that loaded. By so doing, a single variable was obtained to explain multiple variables that were factored in. As a result, the descriptive statistics utilized in the subsequent study are listed in table below;

Table 4.15 Transformed Variables after Factor Analysis

	Min	**Max**	**Mean**	**S.D**	**Skewness**		**Kurtosis**	
Variables	Statistic	Statistic	Statistic	Statistic	Statistic	SE	Statistic	SE
Firm Competitiveness	3.87	6.60	5.3786	.61061	-.035	.121	-1.016	.240
Strategic Leadership	4.13	6.72	5.4261	.59781	.065	.121	-.984	.240
Organisational Learning	4.26	6.43	5.6058	.40264	-.438	.121	-.257	.240
Perceived Environmental Uncertainty	3.86	6.61	5.4596	.58732	-.229	.121	-.820	.240
Valid N (listwise)								

Source: Survey data 2022

4.10 Data Diagnostic Tests

Tabachnick and Fidell (2013) have noted that multiple regression models exhibit a high degree of sensitivity to various parametric assumptions, which must be carefully evaluated to ensure the reliability of statistical outcomes. Statistical procedures are predicated on certain assumptions, which vary in their degree of stringency. According to Garson (2012), there may be instances where breaches of testing protocols do not significantly alter the fundamental deductions of a research study. In some cases, incorrect research conclusions may result from the violation of certain diagnostic tests. Hence, it is imperative for researchers to dedicate their efforts towards ensuring that their research data adheres to the test's procedure. This is because all quantitatively-

based journal articles, theses, and dissertations are expected to produce sound statistical results, which are necessary for arriving at credible research conclusions (Garson, 2012).

4.10.1 Sample size

Sample size plays a vital role in minimizing sampling error, which has a consequential effect on data normality to generalize the study findings to a common population on repeated trials in a similar test scenario since a small sample has little scientific value. Stevens (2012) asserts that for any social science research, 15 respondents per case are needed to form a reliable equation, while Tabachnick and Fidell (2013) provide a simple formula for calculating the required sample size, considering the number of independent variables in the study (*i.e.* $N > 50+8m$; where m is the number of independent variables). For instance, in this study the number of independent variables were three and the required cases were 74. While for stepwise regression, the ratio is 40 cases for every independent variable. Generally, the multiple regression model requires that the ratio of valid cases to independent variables be 5 to 1. Thus, the ratio of valid cases (461 to 3 independent variables is 154:1, which is greater than the minimum required ratio for multiple regression analysis. However, the study settled for a ratio of 137:1 since the actual usable responses generated from the field after data screening was 410 responses. The ratio of 137:1 is greater than the minimum ratio of 5:1 needed in a multiple regression model. Table 4.16 displays the relationship between sample size and the distribution of mean and standard deviation for independent variables.

Table 4.16 Distribution of mean and standard deviation (SD) of independent variables

Independent variables	N	Mean	SD
Strategic leadership	410	5.0872	.38075
Organisational learning	410	5.2827	.27605
Perceived environmental uncertainty	410	4.8681	.36985

Source: Survey data (2022).

4.10.2 Normality Test

The assumption of normality was tested to determine whether the data was normally distributed (Field, 2003). The researcher used three interrelated methods to test for normality in researcher's data. The skewness and kurtosis, normal p-p plots, and Jarque-Bera tests were used to determine normality of data. The results indicated that the data was normally distributed as confirmed by test results shown in the sections below.

4.10.2.1 Skewness and Kurtosis Statistics for Normality

The study data underwent testing for skewness, which refers to the absence of symmetry, and kurtosis, which pertains to the degree of peakedness. The study conducted an analysis to ascertain the presence of positive skewness, which is indicated by a clustering of frequent scores at the lower end and a tail pointing towards higher or more positive scores. Similarly, the study also examined the presence of negative skewness, which is indicated by a clustering of frequent scores at the higher end and a tail pointing towards lower or more negative scores. Additional testing was conducted to ascertain the extent to which scores were concentrated in the extreme ends of the distribution (kurtosis). The statistical analysis involved testing the properties of platykurtic distributions, which are characterized by heavy tails and a relatively flat shape, as well as leptokurtic distributions, which exhibit thin tails and a more pointed shape. The data analysis revealed that the skewness and kurtosis values were in proximity to zero (Field, 2005). The results of the analysis indicated that the

prerequisite of normality testing was satisfied, as evidenced by the skewness and kurtosis values being in close proximity to zero and were within the range of +1.96 to -1.96 in a normally distributed dataset as proposed by Templation (2011). The aforementioned information is presented in Table 4.17 as follows. The study's data was deemed suitable for subsequent statistical analyses, given that the assumption of normality was met and justifiable through the use of skewness and kurtosis.

Table 4.17 Skewness and Kurtosis Statistics for Normality

	Skewness		Kurtosis	
	Statistic	**Std. Error**	**Statistic**	**Std. Error**
Firm Competitiveness	-.026	.120	1.001	.239
Strategic Leadership	.008	.120	-.868	.239
Organizational Learning	-.527	.120	-.024	.239
Perceived environmental Uncertainty	-.331	.120	-.457	.239
Valid N (listwise)				

Source: *Survey data 2022*

4.10.2.2 Normal P-P plots

In accordance with the conventional P-P chart methodology, the researcher anticipated a linear arrangement of values along the diagonal axis, with the observed data points being represented as discrete entities. The researcher made the assumption that in the event of normal distribution of data, the observed values depicted on the chart should align precisely with the linear trend. The study findings reveal that the normality of the study data was confirmed by the P-P plots, which demonstrated that the majority of the dots were aligned with the straight line, albeit with minor deviations, as illustrated in Figure 4.5. The aforementioned suggests that the field data is suitable for subsequent statistical analyses, given that the normality assumption has been met and is defensible based on the normal probability-probability plots.

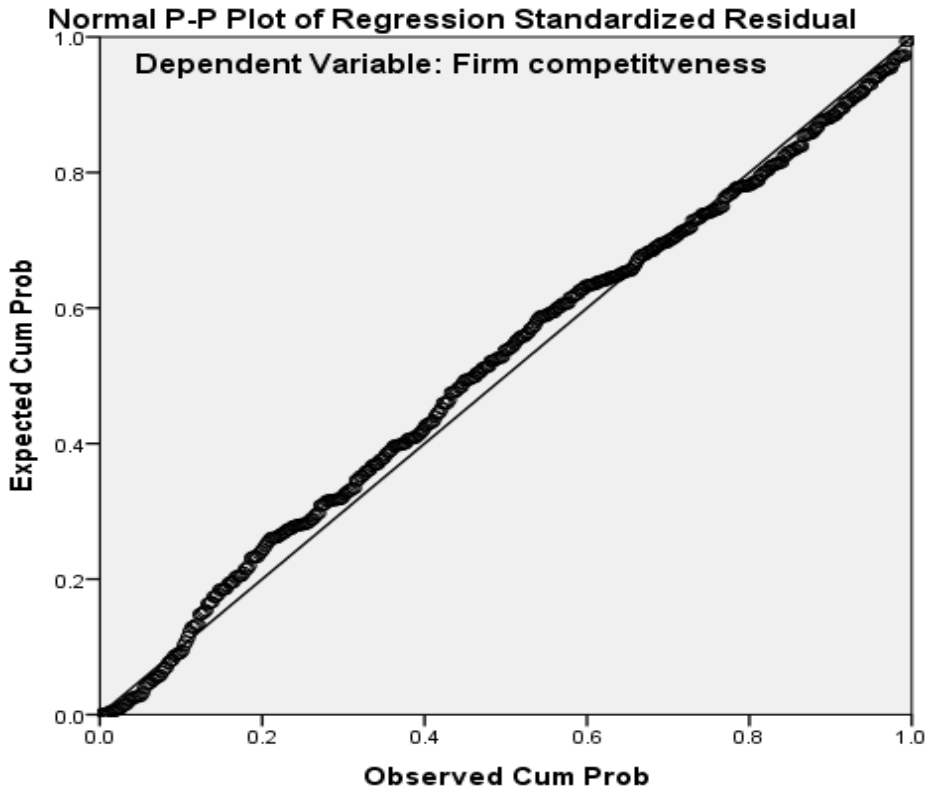

Figure 4.1: Normal P-P Plots Showing Normality in the Data
Source: *Survey data 2022*

4.10.2.3 Jarque-Bera normality test

In order to confirm that the residuals are normality distributed, Jarque-Bera normality tests was done. For Jarque-Bera test, if p-value is lower than the Prob > Chi (2) value, the null hypothesis cannot be rejected implying that the residuals are normally distributed. As per table 4.18, p-value is less than chi (2). Chi (2) is 0.2132 which is greater than 0.05 and therefore, we fail to reject the null hypothesis (*prob> chi (2) = 0.2132>0.05)*. This implies that the residuals are normally distributed.

Table 4.18 Jarque-Bera normality test

Jarque-Bera	Normality test	Chi(2) 0.2132
Jarque-Bera test of normality	Ho: normality	

Source: Survey data 2022

4.10.3 Linearity Test

The purpose of conducting test of linearity is to ensure that there is a linear relationship between the criterion variable (firm competitiveness) and the independent variables (strategic leadership, organizational learning and perceived environmental uncertainty). If the data did not meet the condition of linearity, then it would be transformed to run regression analysis (Tabachnick & Fidell, 2001). To test for linearity, the researcher observed the scatter plots of the standardized residuals of the dependent variable and the independent variables as proposed by Pallant (2010). Figures below reveals that there is linearity between the dependent variable (firm competitiveness) and the independent variables (strategic leadership, organizational learning and perceived environmental uncertainty).

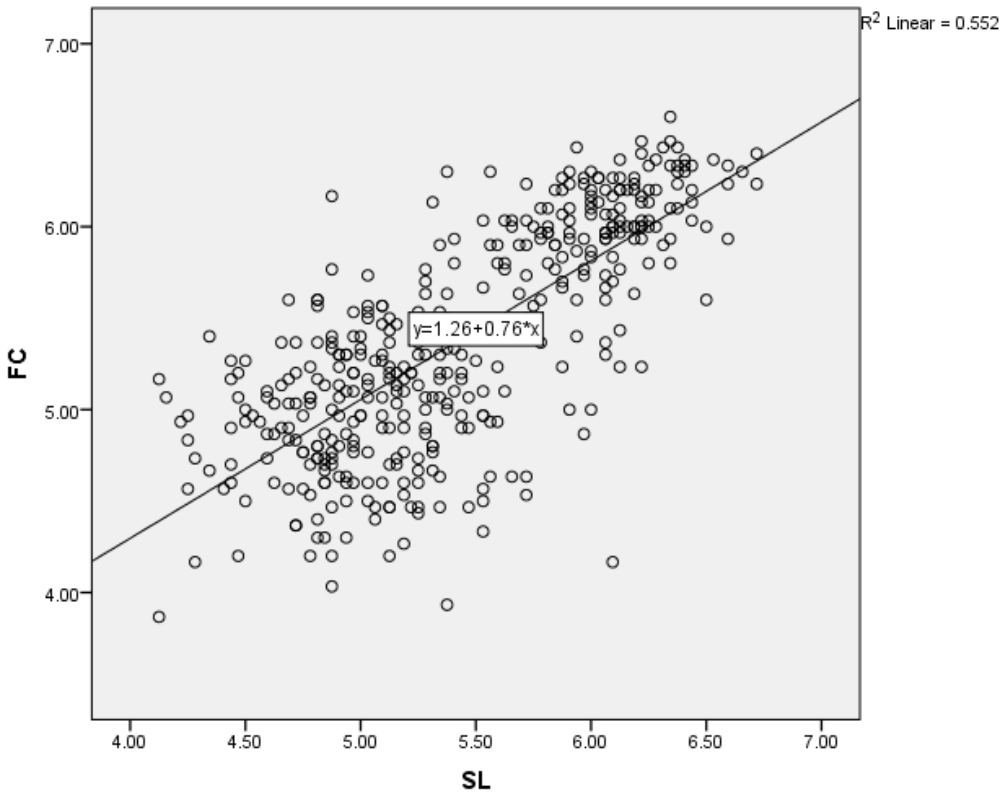

Figure 4.2 Scatter Plots Showing Patterns in the Data between FC & SL

Key:

FC Firm competitiveness SL Strategic leadership

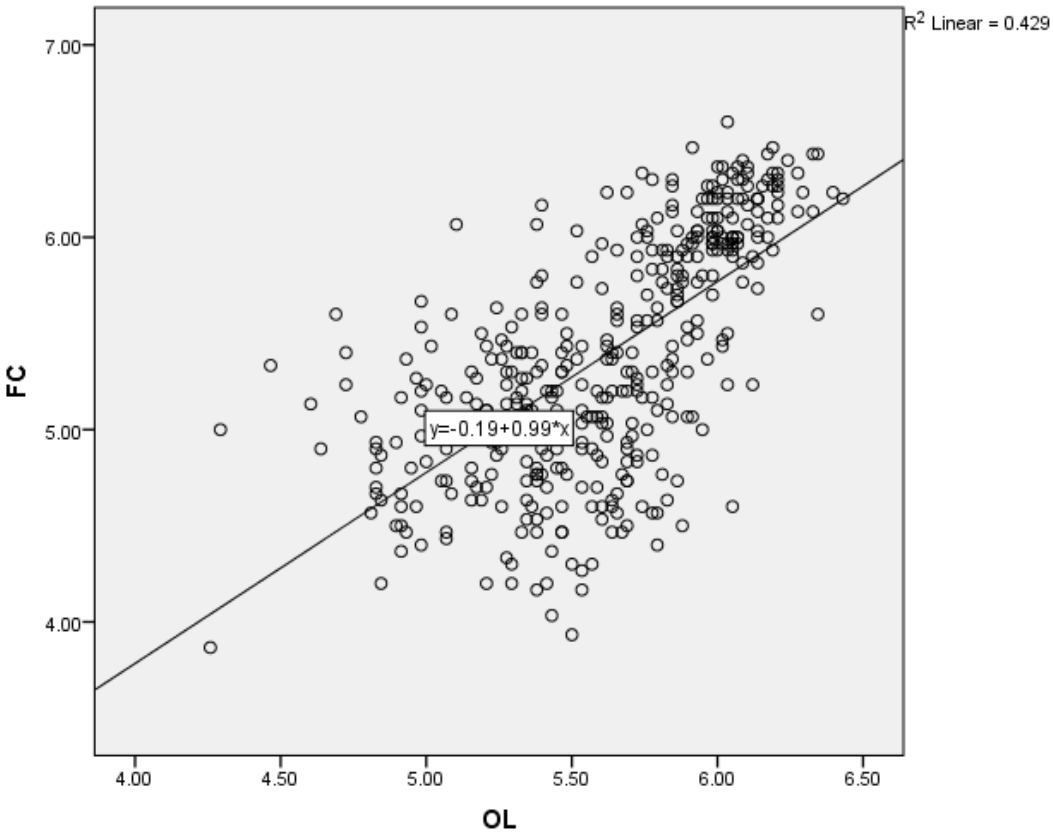

Figure 4.3 Scatter Plots Showing Patterns in the Data between FC & OL
Source: *Survey data 2022*

Key:

FC. Firm competitiveness

OL. Strategic leadership

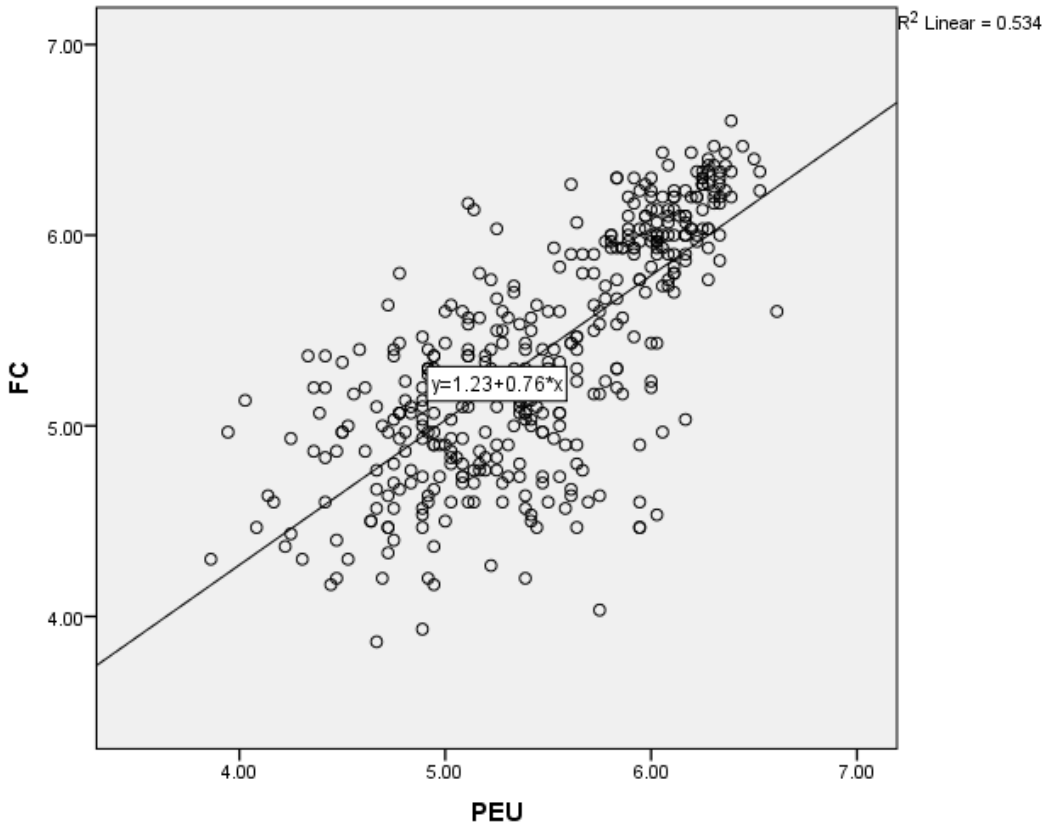

Figure 4.4 Scatter Plots Showing Patterns in the Data between FC and PEU
Source: *Survey data 2022*

Key:

FC Firm competitiveness
PEU Perceived environmental uncertainty

4.10.4 Homoscedasticity Test

Testing for homoscedasticity was conducted with the purpose of ensuring that data is homoscedastic and not heteroscedastic. Homoscedasticity is said to exist when the variance of the residual terms is constant at all levels of the predictor variable (Schutzenmeister, Jensen & Piepho, 2012). The Levene test was used to test whether the variability of firm competitiveness (dependent variable) is uniform across values of the independent variables. Levene's test is used to verify equal variance in the sample using the threshold of (P >.05), which means that in cases where (p< .05), then the data is said to be heteroscedastic and would need to be fast subjected to transformation before applying it for running any regression models (Martin & Bridgmon, 2012). As

is seen in Table 4.19 below, the findings reveal that basing on Levene statistic, the data is homoscedastic and not heteroscedastic since all the test statistic values have a level of significance that is above 5% (p-value > .05). This means that the variability of firm competitiveness (dependent variable) is uniform across values of the independent variables and that the data can be used for running regression analysis.

Table 4.19 Test for homoscedasticity

Variable	Levene Statistic	df1	df2	Sig.
Firm competitiveness	.115	1	408	.734
Strategic leadership	.001	1	408	.982
Organizational learning	2.258	1	408	.134
Perceived environmental uncertainty	1.189	1	408	.276

Source: *Survey data 2022*

4.10.5 Multicollinearity Test

This test was purposely conducted to ensure that the study variables are not Multi-collinearly related. Multi-collinearity is the high correlations between two or more predictor variables (Cooper, Schindler & Sun, 2006). To test for multi-collinearity, tolerance and its reciprocal variance inflation factor (VIF) was used and the cutoff point is a tolerance value greater than 0.10 and a VIF value below 10 (Hair *et al.*, 2010). As seen in Table 4.20 below, the VIF values were less than ten and the tolerance level of more than 0.10 implying absence of multi-collinearity. The foregoing results imply that the data can be subjected to multiple regression analysis as there exists no Multi-collinearity.

Table 4.20 Multicollinearity Test

	Variable	Tolerance	VIF
1	(Constant)		
	Strategic Leadership	.477	2.098
	Organizational Learning	.586	1.705
	Perceived Environmental Uncertainty	.437	2.287
a. **Dependent Variable:** Firm Competitiveness			

Source: *Survey data 2022*

4.10.6 Serial Correlation Test

To enable the researcher, determine whether the regression model is acceptable or not, the researcher carried out a test of auto correlation/serial correlation using Durbin Watson Test. The test results show that the Durbin-Watson value of 1.750 was realized. This implies that there is no serial correlation since the value falls between the 1.5 to 2.5 range as recommended by (White, 1992). Table below shows the test results.

Table 4.21 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.804[a]	.646	.643	.36292	1.750

a. Predictors: (Constant), Perceived environmental uncertainty, Organizational learning, Strategic leadership
b. Dependent Variable: Firm competitiveness

4.11 Correlation analysis

The purpose of conducting correlation analysis was to measure the possibility of any existing linear association between the predictor variables and the dependent variable through determining the magnitude and direction of the possible relationships. In line with Hair *et al.*, (2013) and Field (2009), the study used Pearson Correlation coefficient to ascertain that the study variables are linearly related. The findings in Table 4.22 revealed a positive and statistically significant association between strategic leadership and firm competitiveness (r=0.482, p-value < .05). Similarly, organizational learning and firm competitiveness were positively and significantly associated (r=0.342, p<

0.01). Furthermore, the findings revealed that perceived environmental uncertainty is positively and strongly linked to firm competitiveness (r=0.309, p< 0.01). The linearity findings imply that there is a possibility of a causal effect between strategic leadership, organizational learning, perceived environmental uncertainty and the criterion variable that is firm competitiveness. As such, the next level of analysis calls for executing regression models to prove such casual effects (Martin & Bridgmon, 2012; Hair *et al.*, 2013).

Table 4.22. Correlation for the study variables

Variable	1	2	3	4
Firm Competitiveness (1)	1			
Strategic Leadership (2)	.482**	1		
Organisational Learning (3)	.342**	.273**	1	
Perceived Environmental Uncertainty (4)	.309**	.396**	.270**	1

**. Correlation is significant at the 0.01 level (2-tailed).
***Source**: Survey data 2022*

4.12 Hypotheses testing

Hypothesis testing has been categorized into two types: direct effect hypothesis testing and indirect hypothesis testing. The evaluation of direct effect hypotheses entailed the examination of the impact of strategic leadership, organizational learning, and perceived environmental uncertainty on firm competitiveness. Additionally, the assessment involved the investigation of the influence of strategic leadership on organizational learning. The researcher employed hierarchical regression analysis to examine the direct impact of the hypotheses. The study employed indirect hypothesis testing to examine the potential mediation effect of organizational learning on the association between strategic leadership and firm competitiveness. The study further examined the moderating effect of perceived environmental uncertainty on the

relationship between strategic leadership and both firm competitiveness and organizational learning. Additionally, the indirect effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness through organizational learning was also analyzed.

4.12.1 Testing for the effect of control variables on the Dependent Variable

Control variables were tested to establish their effect on the dependent variable, and this was done to know how the controls affected the dependent variable in comparison with the direct effects (Creswell, 2008). The findings in the Table 4.23 revealed that 0.1% variation in firm competitiveness is predicted by firm age and firm size (R2 = 0.001). The F value (.189, *P* >.05) showed that the joint prediction is not significant. None of the control variables predicted firm competitiveness significantly. Given that these are only control variables, the coefficients do not have a causal interpretation.

Table 4.23 Control variables effect on the dependent variable

	Unstandardized Coefficients		**Standardized Coefficients**			**Collinearity Statistics**	
Model 1	**B**	**Std. Error**	**Beta**	**t**	**Sig.**	**Tolerance**	**VIF**
(Constant)	5.135	.370		13.880	.000		
Firm Size	-.031	.060	-.026	-.514	.607	.996	1.004
Firm Age	.010	.028	.018	.366	.715	.996	1.004
Model summary statistics							
R					.030[a]		
R square					.001		
Adjusted R square					-.004		
Standard error of the estimate							
Change statistics			R square change		.001		
			F change		.189		
			Sig.		.828		

a. Dependent Variable: Firm Competitiveness

Source: Survey data 2022

4.12.2 Direct Effect Hypothesis Testing

Direct effect hypothesis testing involved testing hypotheses H_{01}, H_{02}, H_{03}, H_{04}, which stated that; strategic leadership has no significant effect on firm competitiveness, organizational learning has no significant effect on firm competitiveness, perceived environmental uncertainty has no significant effect on firm competitiveness, and strategic leadership has no significant effect on organizational learning. The direct effect relationship was tested using hierarchical regression in a series of hierarchical blocks.

Table 4.24 presents the concept of R-squared (R^2) as a statistical measure that quantifies the extent to which an independent variable in a regression model accounts for the variance in a dependent variable. Conversely, the adjusted R-squared is a revised version of R-squared that factors in the insignificance of predictors in a regression model. A reduced adjusted R-squared value implies that supplementary input variables do not contribute significantly to the model's efficacy (Hair *et al.,* 2010).

4.12.2.1. Strategic leadership and firm competitiveness.

Hierarchical regression model *2* was run to determine the hypothesis that: *strategic leadership has no significant effect on firm competitiveness among manufacturing firms in Uganda* (**$H_0$1)**. The hypothesis was tested while controlling for the effects of firm size and firm age. The results revealed that firm size ($\beta = .008$, $p > .05$) and firm age ($\beta = -.016$, $p > .05$) were insignificant in predicting firm competitiveness. The result of the study differs from the previous studies (Pattitoni *et al*., 2014; Liargovas and Skandalis 2004; Akben-Selcuk's 2016) who found that firm age, and firm size are related to firm competitiveness. The variability in results can be explained by context of the study and environmental dynamics. The results of the analysis further suggest that strategic

leadership has a significant positive effect on firm competitiveness $\beta = .526$, $\Delta R^2 = .232$, $p < .05$. The findings suggest that a rise in strategic leadership by one unit is associated with a corresponding increase of 0.526 units in firm competitiveness. As a result, the null hypothesis $H_0 1$ was not supported.

Respondents were requested to state how strategic leadership influences the level of competitiveness in their firms. The purpose of the question was to find out whether strategic leadership influences the level of competitiveness among manufacturing firms. The results show that strategic leadership elements such as strategic direction, corporate culture, strategic controls and core competences influences the level of firm competitiveness. The interviewees in Cases 1&4; for instance, submitted that;

> *"Our accounting department is well equipped with computers and relevant software. This enables us to control our distribution, keep proper records. It also enables us understand gaps in the market and respond to such gaps timely, making us to become more competitive in the industry"* ***(Interviewee 1).***

> *"Cultures such as team work, serving of meals at the work place and the spirit of togetherness makes our staff to be more motivated and this improves on the level of efficiency and productivity at the factory hence making us more competitive. During festive seasons it is a culture that all the staff are offered packages and this motivates workers to even work extra hours without complains. Further as a result of togetherness, in case a worker is a way, those around steps in and this makes work to go on without* interruptions*. The other culture is that of understanding our customers well, which enables our firm on a continuous basis to learn the way our customers behave and this enables us know how to serve them better hence gaining from customer loyalty"* ***(Interviewee 4).***

The above results mean that the strategic leadership is very key if firms are to gain any competitive advantage. This will be possible as strategic leaders will ensure that workers understand the corporate intent of their firms. Further, strategic leaders will also ensure that appropriate skills are being possessed by those working in such

organizations. Moreover, such leaders will encourage positive cultures which all combined improves on the level of firm competitiveness.

4.12.2.2: Organizational learning and firm competitiveness.

The hierarchical regression model 3 examined the hypothesis that: *organisational learning has no significant effect of firm competitiveness among manufacturing firms in Uganda* (**$H_0$2)**. The hypothesis was tested while controlling for the effects of firm size and firm age as well as strategic leadership. The analysis revealed that firm size (β = .009, p >.05), firm age (β = -.014, p >.05) of manufacturing firms in Uganda were found to be insignificant in predicting firm competitiveness.

Consequently, strategic leadership (β = .458, *p* <.05) and organisational learning (β = .340, *p* <.05) were significant predictors of firm competitiveness among manufacturing firms in Uganda. Thus, the unique contribution of organisational learning in the model is explained β = .340, ΔR2 = .048, p <.05. Signifying that organisational learning account for 4.8% variance in firm competitiveness. Based on the above results, Hypothesis $H_0$2 was rejected.

Respondents were requested to state how organisational learning influenced the level of competitiveness in their firms. The purpose of the question was to find out whether organisational learning influences the level of competitiveness among manufacturing firms. The results show that organisational learning elements such as information acquisition, dissemination, shared interpretation and organisational memory influences the level of firm competitiveness. The interviewees in Cases 9&7; for instance, submitted that;

> *"When an individual staff member gets information related to improving the performance of the firm, he or she is encouraged to share such information with the rest of the members within the*

> *organization. This makes our firm to be more competitive as a result of the workers becoming more knowledgeable and skillful. The level of productivity of the workers also improves due to the knowledge updates from such shared information which in all makes our firm to gain a competitive advantage over other competitors"* ***(Interviewee 9).***
>
> *"Top management encourages the staff to get information from external sources and once a member of the organization gets any information from an external source such information is normally shared either formally or informally. An example was when a worker shared with me an information on the strategies related to management, this has made me a better manager now compared with the time before i had such an information"* ***(Interviewee 7).***
>
> *"…….knowing the market prices for example makes a firm more competitive as firms will determine their prices knowing what others are charging for their commodities……..****(Interviewee 7)****"*

The above results signify that information acquisition, sharing, dissemination and accumulation among workers and the organizations are key for competitiveness at firm level. It was found that, for example when the firm management is aware of the prices, they set right prices and this will make them remain competitive, while on the other hand if they are not aware, there is a possibility that they will set prices which might be above the market price. This will translate in to an organization being pushed out of competition.

4.12.2.3 Perceived environmental uncertainty and firm competitiveness.

The hierarchical regression model 4 examined the hypothesis that: *perceived environmental uncertainty has no significant effect on firm competitiveness among manufacturing firms in Uganda* ($H_0$3). The hypothesis was tested by holding constant the effects of control variables (firm size and firm age), strategic leadership and organisational learning

The result indicates that firm size (β = .010, p >.05), and firm age (β = -.009, p >.05) among manufacturing firms were not significant predictors of firm competitiveness.

Successively, strategic leadership (β = .420, p <.05), organisational learning (β = .314, p <.05) and perceived environmental uncertainty (β = .109, p <.05) were significant predictors of firm competitiveness of manufacturing firms in Uganda. Therefore, the contribution of perceived environmental uncertainty in the model is explained by β = .109, ΔR2 = .008, p <.05. It implies that perceived environmental uncertainty accounts for 0.8% variance in firm competitiveness. Hence, Hypothesis $H_0$3 was rejected.

Generally, the interviewees noted that when managers understand the environment in which their firms operate, such managers make right decisions, come up with right strategies which results in the improvement of the competitive position of such firms. The interviewees in Case 3 & 5 intimated that;

> *"Yes […] in terms of competitive environment, we are in competition with firms such as; Uganda Breweries Limited, Local waragi producers and the local wine producers. Such competition made us lose a lot of market share especially in the rural areas where local wine is more preferred [….]. To deal with this we had to produce beer that matches the brand that the wine companies were manufacturing, and this enables us regain some market [….]. Further, pricing in our industry is cutthroat as much of the competition is based on pricing and customers are very sensitive to product pricing. For example, we lost the market of one of our brands when our competitors sold a substitute at a lower price than we were offering the product at* ***(Interviewee 3).****"*

> *"Technology such as the use of DMS (data management system) where information on sales is reflected immediately, enables us monitor sales and even profitability [….]." Cameras installed at the factory and in all the branches makes my supervision quite easy as I can monitor and supervise even when I am not within the company premises. While the use of fork lifts simplified work at the factory and this makes us to be more efficient and faster in our activities…."* ***(Interviewee 5).***

The above results mean that when managers are aware of what happens within the competitive, market, and technological environment, they develop strategies which

makes their firms more competitive. But if they are not aware of the environmental changes, they can be caught by surprise and may lose the market share hence, be pushed out of the market. This therefore imply that; top managers need to be aware of the dynamism within the environment if their firms will sustainably manage the competition in an industry.

Table 4.24 Regression Results on the Direct Paths with firm competitiveness as the dependent variable

Predictors	**Model 2 Unstandardized Coefficients**			**Model 3 Unstandardized Coefficients**			**Model 4 Unstandardized Coefficients**		
	B	**t**	**Sig.**	**B**	**t**	**Sig.**	**B**	**t**	**Sig.**
(Constant)	2.354	5.739	.000	.890	1.824	.069	.652	1.306	.192
Firm Size	.008	.148	.883	.009	.177	.860	.010	.205	.838
Firm Age	-.016	-.630	.529	-.014	-.593	.554	-.009	-.367	.714
SL	.526	11.087	.000	.458	9.592	.000	.420	8.259	.000
OL				.340	5.184	.000	.314	4.736	.000
PEU							.109	2.086	.000
Model Summary Statistics									
R	.483[b]			.530[c]			.537[d]		
R Square	.233			.281			.289		
Adjusted R Square	.227			.274			.280		
Std. Error of the estimate	.36279			.35175			.35031		
R Square Change	.232			.048			.008		
F Change	122.930			26.870			4.353		
df1	1			1			1		
df2	406			405			404		
Sig. F Change	.000			.000			.038		

Source: *Survey data 2022* Dependent Variable: Firm Competitiveness
Note: Relationship is significant at p<.05
Predictors: Strategic Leadership (SL), Organisational Learning (OL), Perceived Environmental Uncertainty

4.12.2.4 Strategic leadership and organizational learning

A separate hierarchical regression model was run to establish the hypothesis that: *strategic leadership has no significant effect on organisational learning of manufacturing firms in Uganda* ($H_0$4). The model tested the hypothesis while controlling for the effects of control variables and perceived environmental uncertainty. The preliminary analysis in the model began by testing the effects of control variables

(firm size and firm age) and perceived environmental uncertainty on organisational learning. The results revealed that firm size (β = .008, p >.05), and firm age (β = -.010, p >.05) were insignificant in predicting organisational learning. While perceived environmental uncertainty (β = .012, p <.05) was significant in predicting organisational learning.

Subsequently, model two was developed to test for the effect of strategic leadership on organisational learning while holding constant the effects of control variables and perceived environmental uncertainty. The result revealed that the control variables; firm size (β = -.070, p >.05), and firm age (β = .040, p >.05) were insignificant predictors of organisational learning. Conversely, perceived environmental uncertainty (β = .144, p <.05) and strategic leadership (β = .142, p <.05) were found to be significant predictors of organisational learning. The results for the effect of strategic leadership on organisational learning are shown in Table 4.25. Hence, the effect of strategic leadership on organisational learning in the model is explained by β = .142, p <.05, ΔR^2 = .032, p <.05. Indicating that strategic leadership accounts for 3.2% variance in organisational learning. Thus, Hypothesis $H_0$4 was rejected.

Respondents were asked to state how strategic leadership in their firms influences the level of organizational learning. The results show that strategic leadership influences information acquisition, knowledge dissemination, shared interpretation and organizational memory among their firms. Regarding this, the interviewees in case 3 and case 8 asserted;

> *"Top management in our firm encourages learning by sending some staff members for workshops, short in-house trainings, establishment of a well-stocked resource center and others. Information got from such sources are shared with the rest of the team especially those who might have not attended the training or workshops"* ***(Interviewee 3).***

> *"Our leaders are so passionate of ensuring that the staff get information from whatever sources that we can get them from. For example, our staffs are encouraged to get information from both internal and external sources. In my firm, a common server is established and the employees on a regular basis are encouraged to utilize the server to enable them acquire information* ***(Interviewee 8).***

This infers that strategic leaders need to understand that encouraging learning within their firms is a responsibility they need to undertake. This will make their employees acquire and accumulate information which can be used to better the competitive positions of the manufacturing firms.

Table 4.25 Regression Results on the Direct Paths with organizational learning as the dependent variable

Predictors	**Model 1 Unstandardized Coefficients**			**Model 2 Unstandardized Coefficients**		
	B	**t**	**Sig.**	**B**	**t**	**Sig.**
(Constant)	4.297	14.142	.000	3.855	12.012	.000
Firm Size	.008	-.247	.805	-.002	-.043	.966
Firm Age	-.010	.666	.506	.003	.181	.857
PEU	.012	5.665	.000	.144	3.740	.000
SL				.142	3.791	.000
Model Summary Statistics						
R	.272[a]			.325[b]		
R Square	.074			.106		
Adjusted R Square	.067			.097		
Std. Error of the estimate	.26663			.26235		
R Square Change	.074			.032		
F Change	10.801			14.368		
df1	3			1		
df2	406			405		
Sig. F Change	.000			.000		

Source: *Survey data 2022* Dependent Variable: Organisational Learning (OL)
Note: Relationship is significant at p<.05
Predictors: Strategic Leadership (SL), Perceived environmental Uncertainty

4.12.3 Indirect Effect Hypothesis Testing

4.12.3.1 Test for Hypothesized Mediation

The study assessed the hypothesis that: organisational learning *has no significant mediating effect on the relationship between strategic leadership and firm competitiveness of manufacturing firms in Uganda* ($H_0 5$). The mediation hypothesis was tested using the procedures developed by MacKinnon, Cheong, and Pirlott (2012); MacKinnon and Fairchild (2009); MacKinnon, Fairchild, and Fritz (2007) that provide guidelines on how to arrive at the direct, mediation and the total effects after fulfillment of the following conditions:

i. The first condition require testing for the association between strategic leadership (X) and organisational learning (M) as represented by *a1* part of the conceptual framework and expressed in the mathematical model as: $M = a1X + Ɛ$. It is important to note that for mediation to occur *a1* must be significant. The condition was met since there was a significant association between strategic leadership and firm competitiveness ($\beta = .1985$, $p < .05$).

ii. The second condition necessitate testing for the association between organisational learning (M) and firm competitiveness (Y), represented by *b1* part of the conceptual framework and expressed in the mathematical expression as: $Y = b0 + C + b1M + Ɛ$. It is worth noting that for mediation to happen *b1* must be significant. This condition was satisfied as there was a significant association between organisational learning and firm competitiveness ($\beta = .$ **3395**, $p < .05$).

iii. There is also need to testing for the significant association between strategic leadership (X) and firm competitiveness (Y) as shown in mathematical model: $Y = C0 + C + b1M + C'X + Ɛ$. Even though this is not a necessary

condition for mediation to occur, the study met the requirement as there was significant association between strategic leadership and firm competitiveness (β = .**4583**, p <**.**05.

iv. The next condition involve testing for mediation, which form the basis for testing for mediation. Mediation was computed by M = a1 × b1. Alternatively, mediation can also be computed by M = C (Total Effect) - C' (Direct Effect). The two approaches of testing for mediation yield the same result; the researchers are at liberty to select the approach he/she finds easy to use. Following the multiplicative rule, mediation was computed as **M =.1985x. 3395 = .**0674.

v. The last condition necessitates the computation of the total effect to assess the contribution of the mediation model on the dependent variable in term of its significance. This was calculated by Total Effect = a1× b1 + C' = (.1985x . 3395) + .4583= .5257.

The pathways were integrated in a sequential manner to determine the mediation in accordance to the procedures of MacKinnon *et al,*. (2012) and multiplication rule to estimate the direct and indirect effects in the model. Prior to the steps of mediation, the study tested for the effects of the control variables (firm size and firm age). The results indicate that the control variables were insignificant, implying that the control variables have no influence on strategic leadership and organisational learning in predicting firm competitiveness in the mediation model.

The first step was to test for the association between strategic leadership (X) and organisational learning (M). The result revealed that there was a significant association between strategic leadership and organisational learning (β = .1985, p < .05), since condition is met, then it provided a base to proceed to the next step of testing for the

association between organisational learning (M) and firm competitiveness (Y). The result showed that there was a significant association between organisational learning and firm competitiveness ($\beta = .3395$, $p < .05$).

The study went further to ascertain the association between strategic leadership (X) and firm competitiveness (Y). The result indicated that there was a significant association between strategic leadership and firm competitiveness ($\beta = .4583$, $p < .05$). To assess whether organisational learning mediates the relationship between strategic leadership and firm competitiveness; a product approach i.e. a1 × b1 (.1985 × .226) was applied to ascertain the mediation effect, the result establishes that organisational learning has a significant mediating effect on the relationship between strategic leadership and firm competitiveness ($\beta = .0674$, SE = .0327, CI = .0135, .1400). The total effect was computed by a1× b1 + C' (.1985 x .3395) + .4583 = .5257) and found to be significant ($\beta = .5257$, $p < .05$). The summarized results for the mediating effect of organisational learning on the relationship between strategic leadership and firm competitiveness is shown in Table 4.26. The mediation model accounted for 23.3% variance in firm competitiveness $\beta = .5257$, $p < .05$, $R2 = .2331$, $F = 41.1401$, $p < .05$. Hence, $H_0 5$ was rejected.

Table 4:26 Testing for Hypothesized Mediation

Variables	Model 1 (OL)		Model 2 (Fc)		Model 3 (Total Effect)	
	β	**p**	**β**	**p**	**β**	**p**
Constant	4.3128	.0000	.8897	.0689	2.3540	.0000
Firm Size	-.0036	.9254	.0090	.8599	.0078	.8826
Firm Age	-.0040	.8257	-.0141	.5536	-.0155	.5292
SL	**a_1=.1985**	.0000	**C^1 =.4583**	.0000	**.5257**	.0000
OL	-	-	**b_1 =.3395**	.0000		
R	.2734		.5299		.4828	
R^2	.0747		.2808		.2331	
MSE	.0710		.1237		.1316	
F	10.9329		39.5386		41.1401	
Mediation = a1× b1 = .1985× .3395 =.0674, SE = .0327 CI = .0135, .1400						

Source: Survey data (2022)

Note: The relationship is significant at p<.05, SL = Strategic Leadership, OL = Organisational Learning, FC = Firm Competitiveness

4.12.3.2 Test for Hypothesized Moderation Effect

The study sought to test the hypothesis that: *perceived environmental uncertainty has no moderating effect on the relationship between strategic leadership and organisational learning of manufacturing firms in Uganda* **(**$H_0$6**)**. The step in the analysis of the hypothesis began with the examination of the effects of firm size (β = -.0240, p > .05), and firms age (β = .0089, p > .05) as control variables whose effects were insignificant in the model. Later, the study went further to test for the effect of strategic leadership and perceived environmental uncertainty in the model. The result depicts that strategic leadership (β = .0554, SE = .0360, t = 1.5378, p > .05, CI = -.0236, .1261), and perceived environmental uncertainty (β = .0114, SE = .0387, t = .2949, p > .05, CI = -.0646, .0874) were also insignificant predictors of organisational learning.

While on the other hand, the interaction effect of perceived environmental uncertainty on the relationship between strategic leadership and organisational learning was significant (β = .4415, SE = .0518, t = 8.5287, p < .05, CI = .3397, .5432). The result for the moderating effect of perceived environmental uncertainty on the relationship

between strategic leadership and organisational learning is shown in Table 4.27, where it was observed that the model account for 13.65% variance in organisational learning ($\beta = .4415$, $p < .05$, $\Delta R^2 = .1365$, $F = 72.7391$, $p < .05$). Hence, $H_0 6$ was rejected.

Table 4.27 The result for the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and organisational learning

Variable	β	se	T	p-v	LLCI	ULCI
Constant	5.3583	.2169	24.7027	.0000	4.9319	5.7847
Firm Size	-.0240	.0351	-.6836	.4946	-.0931	.0451
Firm Age	.0089	.0165	.5387	.5904	-.0236	.0414
SL	.0554	.0360	1.5378	.1249	-.0154	.1261
PEU	.0114	.0387	.2949	.7682	-.0646	.0874
SL*PEU	.4415	.0518	8.5287	.0000	.3397	.5432
R^2	.2421					
ΔR^2	.1365 (72.7391, p = .0000)					
F	25.8104					

***Source**:* Survey Data (2022**).** Note: relationship is significant at *p* <.05, SL = strategic leadership, PEU = Perceived environmental uncertainty, OL = Organisational learning

The conditional effect of perceived environmental uncertainty on strategic leadership and organisational learning was further illuminated by probing the mode of interactions that took place between strategic leadership and organisational learning at the three levels of perceived environmental uncertainty. The conditional effect was significant at lower and higher levels, yet it was insignificant at mean level. For instance, perceived environmental uncertainty had a significant moderating effect at lower level ($\beta = -.1079$, $SE = .0453$, $t = -2.3828$, $p < .05$, $CI = -.1970, -.0189$), insignificant at mean level ($\beta = .0554$, $SE = .0360$, $t = 1.5378$, $p > .05$, $CI = -.0154, .1261$) and significant at higher level ($\beta = .2186$, $SE = .0357$, $t = 6.1273$, $p < .05$, $CI = .1485, .2888$) as revealed in Table 4.28.

Table 4.28 The results for the conditional effect of Perceived Environmental Uncertainty on Strategic Leadership and Organisational Learning

Interaction levels	Effect	SE	t	P	BootLLCI	BootULCI
Lower level	-.1079	.0453	-2.3828	.0176	-.1970	-.0189
Mean level	.0554	.0360	1.5378	.1249	-.0154	.1261
Higher level	.2186	.0357	6.1273	.0000	.1485	.2888

Source: Survey data (2022)

4.12.3.3 Testing for the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness

The study sought to test the hypothesis that: *perceived environmental uncertainty has no moderating effect on the relationship between strategic leadership and firm competitiveness of manufacturing firms in Uganda* **(**H07). The test of the hypothesis began by testing for the effects of firm size (β = -.0021, p > .05), and firm age (β = -.0054, p > .05) as control variables whose effects were insignificant in the model. Accordingly, the model went further to test for the effect of strategic leadership, organisational learning, and perceived environmental uncertainty on the model. The test statistics indicated that strategic leadership (β = .3846, SE = .0518, t = 7.4269, p < .05, CI = .2828, .4864), and organisational learning (β = .2300, SE = .0714, t = 3.2234, p < .05, CI = .0897, .3703) were significant predictors of firm competitiveness. While perceived environmental uncertainty (β = .0480, SE = .0807, t = 3.0212, p > .05, CI = -.0611, .1570) was insignificant in predicting firm competitiveness.

The conditional effect of perceived environmental uncertainty in the model was significant (β = .2437, SE = .0807, t = 3.0212, p < .05, CI = .0851, .4022). The result for the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness is shown in Table 4.29, where it

was found that the model account for only 0.9% variance in firm competitiveness (β = .2437, p <.05, ΔR^2 = .0158, F = 9.1279, p <.05). Hence, $H_0$7was rejected.

Table 4.29 The result for the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness

Variable	β	se	T	p-v	LLCI	ULCI
Constant	3.8102	.4930	7.7291	.0000	2.8411	4.7794
Firm Size	-.0021	.0504	-.0413	.9671	-.1013	.0971
Firm Age	-.0054	.0237	-.2271	.8204	-.0520	.0412
SL	.3846	.0518	7.4269	.0000	.2828	.4864
OL	.2300	.0714	3.2234	.0014	.0897	.3703
PEU	.0480	.0555	.8645	.3878	-.0611	.1570
SL*PEU	.2437	.0807	3.0212	.0027	.0851	.4022
R2	.304					
ΔR2	.0158 (9.1279, p = .0000)					
F	29.3734					

Source: **Survey Data (2022).** Note: relationship is significant at *p* <.05, **SL** = strategic leadership, **OL** = Organisational learning and **PEU** = Perceived environmental uncertainty.

The conditional effect of perceived environmental uncertainty on strategic leadership and firm competitiveness is supported by the results in Table 4.30 that examined the mode of interactions that occurred between the strategic leadership and firm competitiveness at three levels of perceived environmental uncertainty. The conditional effect was significant at three levels with a varying degree of strengths. For example, perceived environmental uncertainty had a weaker moderating effect at lower level (β = .2945, SE = .0654, t = 4.5012, p < .05, CI = .1659, .4231), modest at the mean level (β = .3846, SE = .0518, t = 7.4269, p < .05, CI = .2828, .4864) and higher at high level (β = .4747, SE = .0535, t = 8.8721, p < .05, CI = .3695, .5799).

Table 4.30 The results for the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness

Interaction levels	Effect	SE	t	P	BootLLCI	BootULCI
Lower level	.2945	.0654	4.5012	.0000	.1659	.4231
Mean level	.3846	.0518	7.4269	.0000	.2828	.4864
Higher level	.4747	.0535	8.8721	.0000	.3695	.5799

Source: Survey data (2022)

4.12.3.4 Testing for the moderating effect of perceived environmental uncertainty on the mediated relationship between strategic leadership and firm competitiveness through organisational learning

The study sought to test the hypothesis that: *perceived environmental uncertainty has no indirect effect on relationship between strategic leadership and firm competitiveness through organisational learning of manufacturing firms in Uganda* (**$H_0$8**). The conditional indirect effect of strategic leadership on firm competitiveness through organisational learning is contingent on perceived environmental uncertainty. Table 4.31 shows the varying degrees of indirect effects according to levels of perceived environmental uncertainty.

Table 4.31 The results of the conditional indirect effect of perceived environmental uncertainty on strategic leadership and firm competitiveness via organisational learning

Interaction Levels	Effect	BootSE	BootLLCI	BootULCI
Lower level	-.0248	.0199	-.0726	.0031
Mean level	.0127	.0135	-.0068	.0463
Higher level	.0503	.0303	-.0009	.1162
Moderated Mediation Index	.1016	.0588	-.0023	.2275

Source: Survey data (2022)

The indirect effect of strategic leadership on firm competitiveness through organisational learning was insignificant at one standard deviation (-1 SD) below the mean (β = -.0248, SE = .0199, CI = -.0726, .0031), insignificant at the mean (0) level (β = .0127, SE = .0135, CI = -.0068, .0463) and also insignificant at one standard

deviation (+1 SD) above the mean (β = .0503, SE = .0303, CI = -.0009, .1162). The index of the moderated mediation was also found to be insignificant (β = .1016, SE = .0588, CI = -.023, .2275) since there is a zero between the lower and upper confidence intervals. The results show that there was no moderated mediation, which means that perceived environmental uncertainty does not moderate the indirect relationship between strategic leadership and firm competitiveness through organisational learning. Thus, the researcher failed to reject the proposed moderated mediation hypothesis $H_0$8.

4.12.4 Summary of the results of tests hypotheses

The study developed four direct hypotheses and four indirect hypotheses. These hypotheses were tested using β, p-value, F-value, ΔR^2, t-value, and CI. The decision to accept or fail to reject the hypotheses were based on $p \leq .05$, and confidence intervals (CI) that are none zeros. The summary of the hypotheses with the corresponding test statistics, decision point, and decision for each hypothesis is shown in Table 4.32.

Table 4.32. Summary of the Hypotheses Tests

Research Hypotheses		Test Statistics	Decision Point	Decision
		β, p-value, ΔR^2, and CI.	$p \leq .05$, and CI are none-zero.	Reject or Fail to Reject the H0.
H01	Strategic leadership has no significant effect on firm competitiveness	β = .526, ΔR^2 = .232, p <.05	p <.05	**$H_0$1 Rejected**
H02	Organizational learning has no significant effect on firm competitiveness	β = .340, ΔR2 = .048, p <.05	p <.05	**$H_0$2 Rejected**
H03	Perceived environmental uncertainty has no significant effect on firm competitiveness	β = .109, ΔR^2 = .008, p <.05	p <.05	**$H_0$3 Rejected**
H04	Strategic leadership has no significant effect on organizational learning	β = .142, ΔR^2 = .032, p <.05	p <.05	**$H_0$4 Rejected**
$H_0$5	Organizational learning has no significant mediating effect on the relationship between strategic leadership and firm competitiveness	β = .5257, SE = .0327, p <.05, CI = .0135, .1400	CI = .0135, .1400	**$H_0$5 Rejected**
$H_0$6	Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and organizational learning	β = .4415, SE = .0518, t = 8.5287 p <.05, CI = .3397, .5432	CI = .3397, .5432	**$H_0$6 Rejected**
$H_0$7	Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and firm competitiveness	β = .2437, SE = .0807, t = 3.0212 p <.05, CI = .0851, .4022	CI = .0851, .4022	**$H_0$7 Rejected**
$H_0$8	Perceived environmental uncertainty has no significant effect on the indirect relationship between strategic leadership and firm competitiveness via organizational learning	β = .1016, SE = .0588, CI = -.0023, .2275	CI = -.0023, .2275	**$H_0$8 Failed to reject**

Source: **Survey Data (2022)**

4.13 Discussion of Research Findings

To test the study hypotheses, several statistical analyses were carried out. For instance, hierarchical multiple regression models, mediation analysis, moderation, and

moderated mediation analyses were performed and presented above. The study hypotheses were assessed using p-values, t-tests, and confidence intervals at a 5% level of significance. The magnitude of an independent or set of predictor variables' influence on the outcome variable is indicated by the size of the beta coefficient. The study findings are discussed in line with the literature, and the theories that are presented in chapter two. These provide explanations for why the hypotheses are rejected or not rejected.

4.13.1 Impact of strategic leadership on firm competitiveness.

The first objective of the study examined the effect of strategic leadership on firm competitiveness. The study, therefore, tested $H_0 1$: Strategic leadership has no significant effect on firm competitiveness among manufacturing firms in Uganda. The result is not in support of the null hypothesis and has established that strategic leadership significantly affects firm competitiveness ($\beta = .526$, t-value = 11.087, p .000 which is $<.05$). This means that; strategic direction, core competences, corporate culture, and strategic control can improve firm level competitiveness. This hypothesis is discussed based on four emerging themes:

4.13.1.1 Strategic direction and firm competitiveness

The findings of this research indicate that the establishment of a strategic direction plays a significant role in enhancing the competitive advantage of a firm. The concept of strategic direction in this study refers to the fundamental principles or measures that facilitate enhanced coherence in strategy over an extended period. The study's results indicate that firms effectively communicate their strategies, which in turn inform the identification of requisite skills and knowledge for their workforce. In situations where change is deemed imperative, employees demonstrate a willingness to adapt to new

organizational strategies that necessitate modifications. Vignette 4.1 provides support for the significance of strategic direction in attaining firm competitiveness within the manufacturing industry.

Vignette 4.1 Clear directions help in improving the level of competitiveness

> According to the informants, the issuance of directives by leaders, such as the establishment of monthly or weekly objectives, serves as a motivator for employees to exert greater effort in order to attain the designated goals. As a consequence, the company experiences an increase in production output and sales volume, leading to a corresponding rise in profitability.

Vignette 4.1 demonstrates that when firms set clear directions, the level of competitiveness of such firms improves.

The findings of this study are consistent with the results of Akenten, (2019) who posit that strategic direction aids in envisioning of the future, encourages employees to stretch beyond their expectations of accomplishment and this improves on the level of firm competitiveness since significant change and progress is realized. In lieu of the above, Chief Executive Officers are solely responsible for determining the strategic direction of their firms (Hitt *et al.,* 2010), which according Hitt *et al.,* (2010) and Rotemberg *et al*., (2016) refers to the process of developing a long term vision of a firm's strategic intent. Further, Akenten, (2019) opined that strategic intent exist in firms when all the employees are committed to pursuing a specific performance criteria, believe fervently in their product and industry and focus totally on what they do better than competitors.

Similar results were revealed in a research by Odita & Bello, (2015), who points that the dimensions of strategic direction/intent (mission, vision and objectives) significantly and positively relate with firm level competitiveness. Likewise, Strategic intent is about defeating competition and winning the market. It symbolizes and

expresses a process of achieving competitive advantage (Brand, 2010). This is so because for an organization to win it should possess certain capability that others do not have or cannot easily and promptly imitate.

Porter's model can be applied to any segment of the economy to understand the level of competition within the industry and enhance a company's long-term profitability (Nafula & Ku, 2017). The first of the Five Forces refers to the number of competitors and their ability to undercut a company. The larger the number of competitors, along with the number of equivalent products and services they offer, the lesser the power of a company. Suppliers and buyers seek out a company's competition if they are able to offer a better deal or lower prices. Conversely, when competitive rivalry is low, a company has greater power to charge higher prices and set the terms of deals to achieve shigher sales and profits (Baark *et al.*, 2011).

4.13.1.2 Core competence and firm competitiveness

The study further suggested that core competence, as a factor of strategic leadership, would facilitate the improvement of the level of firm competitiveness. Core competence means the harmonized combination of multiple resources and skills that distinguish a firm in the marketplace. As such, firms should systematically work upon identifying their core competencies and developing them for sustainable competitive advantage. Core competencies are valuable capabilities those that are collective and unique in their characteristics, as well as strategically flexible contributing toward the success of potential business. According to this study core competence among manufacturing firms was considered to meet the following criteria:

a) Customer Value: A core competence must make a significant contribution to Customer perceived value.

b) Competitor Differentiation: Any competence across a manufacturing firm cannot be defined as core unless the firm's level of competence is superior to all its competitors and should be difficult for competitors to imitate.

c) Extendibility: The competence must be capable of being applied to new product arenas within a particular manufacturing firm

Vignette 4.2 explains core competence and its relevance in improving the level of competitiveness among manufacturing firms

Vignette 4.2 Core competences helps in improving the level of competitiveness

> According to the informants, firms can enhance their efficiency by focusing on core competencies such as skilled personnel, teamwork, experienced team members, and incentivizing the sales team. Collaborative efforts enhance work efficiency, resulting in expedited delivery of services to customers, thereby providing a competitive edge over rivals. These factors contribute to increased competitiveness among firms as employees exhibit higher levels of motivation and commitment towards their work.

Vignette 4.2 demonstrates that core competences such as skilled personnel, rewards given to staff and possession of experienced workers improves on the level of competitiveness.

In line with these results, scholars such as Prahalad & Hamel (1990); Hafeez *et al.,* (2002); Gupta, Woodside, Dubekaar & Bradmore (2009) found out that core competencies are the backbone of competitiveness of firms in the market place. Moreover, Srivastava (2005) views core competencies as the basis of a firm's competitive advantage. Bani-Hani and AL-Hawary (2009) have demonstrated in their research that a noteworthy and favorable correlation exists between core competencies and competitive advantage. Companies that hold a competitive advantage are likely to achieve better performance outcomes. As per Wernerfelt's (1984) research, companies

that possess resources with the potential to offer a competitive advantage tend to exhibit better performance. According to Porter's (1985) assertion, the attainment of competitive advantage is likely to result in enhanced performance in the marketplace, such as increased customer satisfaction and market share, as well as improved financial performance, including the creation of shareholder wealth and return on investment.

Further, in regards to exploiting and maintaining core competence, Hitt *et al.,* (2010) contend that strategic leaders must work tirelessly to apply the competencies in ways that will improve firm performance which ultimately would better firm level competitiveness. Jaleha & Machuki, (2018) in their study confirmed that strategic leaders or corporate managers need to make decisions intended to help their firm develop, maintain, strengthen, leverage and exploit core competencies by sharing resources across the different units of the firm. These core competencies are most effective when they are based on intangible resources, which are less visible to competitors because they relate to employees' knowledge or skills (Akenten, 2019). Core competencies in many large and certainly diversified firms are effectively exploited when they are developed and applied across different units of the firm to enable create and maintain a competitive advantage in the market place (Nicholson & Howard, 2018). They further emphasized that in many multinational corporations, the development, nurturing and application of core competencies facilitates managing complex relationships across businesses operating in different international markets. Nevertheless, core competencies cannot work well without effective human and social capital development**.**

The Porters' Five Forces Model provides additional support to the results obtained from this study. The model focuses on five forces that shape the competition within an

industry: (a) the threat of new entry, (b) the threat of substitutes, (c) the bargaining power of buyers, (d) the bargaining power of suppliers, and (e) the extent of rivalry between competitors within an industry (Porter, 2008). On the basis of analyzing the five forces, Porter argues that an organization can develop a generic competitive strategy of differentiation or cost leadership, capable of delivering superior performance through an appropriate configuration and coordination of its value chain activities (Stonehouse & Snowdon 2007). To effectively analyze the competitiveness of the manufacturing firms in Uganda, each of the five forces identified by Michael Porter shall be analyzed separately. This is to ensure that a depth empirical review is undertaken.

4.13.1.3 Corporate culture and firm competitiveness

The study further revealed that corporate culture as a factor of strategic leadership influences competitiveness of manufacturing firms in Uganda. The researcher noted in the study that, firm competencies that reside in the culture of the firm help sustain competitive advantage, therefore, the phenomenon of firm's culture and its social complexity plays an important role in defining competitive advantage and the survival of manufacturing firms. Corporate culture is regarded in this study as a set of meanings, created within the firm, but influenced by broader social and historical processes. Firm members use these meanings, norms, roles, plans, ideals and ideas to make sense of the flow of actions and events they experience. Culture represents the prevailing ideology that workers carry inside their heads. Among the manufacturing firms, culture affects the way the staff members think, feel, and behave which ultimately influences the level of competitiveness of such firms. Further, organizational culture which consists of six complex set of ideologies, symbols, and core values that are shared throughout the firm

influences the way businesses are conducted. Vignette 4.3 explains ethical practices and its relevance in improving the level of competitiveness among manufacturing firms.

Vignette 4.3 Ethical practices and firm competitiveness

> Interviewees indicated that, ethical practices such as reporting very early at work enables the firm products to reach the market early hence out competing those competitors who arrive late. Also, being aware of the job description ensures that time wastage is minimized as workers go straight to their job station.

Vignette 4.3 illustrates how ethical practices at firms improves on the level of competitiveness at firm level. The respondents pointed out that ethical practices influence the level of firm competitiveness.

In line with the current study findings, scholars such as Kraśnicka *et al.,* (2018) and Jardioui *et al.,* (2020), argues that organizational culture influences how firms conduct their businesses, helps regulate and control employees' behavior and it can be a very good source of firm competitiveness. They further noted that shaping and implementing organizational culture is a central task of strategic leaders. This argument is in line with the later findings of Ireland & Hitt (2005) who maintains that in the uncertain global economy, strategic leaders capable of learning how to shape a firm's culture in competitively relevant ways will become valued sources of competitive advantage. Cultures according to Akenten, (2019) provides the context within which firm level strategies are formulated and implemented and reflects what the organization has learnt across time through its responses to continuous challenges of growth and survival. It is the responsibility of strategic leaders to develop and nurture an appropriate organizational culture, most especially the one that promotes focused-learning and human development, the sharing of skills and resources among the different units of a

firm, and the entrepreneurial spirits necessary for innovation and firm competitiveness (Adegbile & Sarpong, 2018).

4.13.1.4 Strategic control and firm competitiveness.

Organizational controls refer to the established and structured information-based protocols that are employed by strategic leaders and managers to establish, sustain, and modify the patterns of organizational activities. The contemporary competitive environment poses challenges in implementing controls that inherently restrict the actions of employees. Controls play a crucial role in directing and regulating work activities to ensure the attainment of performance objectives. The contemporary competitive environment is abundant with prospects that can be optimally tackled through the implementation of innovative and creative approaches. Effective strategic leaders possess the ability to establish mechanisms that enable adaptable and inventive employee conduct, thereby generating a competitive advantage for their organizations. The responsibility of developing and utilizing strategic controls effectively lies with top-level managers. Effective implementation of strategic controls necessitates the exchange of information among the Chief Executive Officer (CEO), upper management, team members, and other members of the organization. In order to effectively exercise strategic control, upper-level managers must attain comprehensive comprehension of the competitive circumstances and dynamics of every unit or division under their jurisdiction. Information exchanges take place through both spontaneous, unstructured encounters and pre-arranged, structured interactions. The integration of diverse information sets by strategic leaders can significantly enhance the efficacy of strategic controls, resulting in insights that are relevant to maintaining a competitive edge. Strategic controls prioritize actions over outcomes, thereby motivating lower-level managers to make decisions that integrate moderate and acceptable levels of risk.

Furthermore, prioritizing the substance of strategic initiatives affords managers and other members of high-performing teams the adaptability necessary to capitalize on swiftly emerging competitive prospects within the contemporary competitive milieu. In Vignette 4.4, the concept of control systems is elucidated, along with its significance in enhancing the degree of competitiveness among manufacturing enterprises.

Vignette 4.4 Control systems and firm competitiveness

> Interviewees indicated that, control systems like those in the sales department such as DMS (distributor management system) enables us track sales, purchases while at the same time controlling the stock. By use of this system we are able to coordinate with the field staff in terms of what is demanded by customers. We then can send stock to the various destinations depending on the information we get from the system, so when the sales person returns to office, the system already indicates the total sales made. This enables us get the exact amount of money from the sales hence losses are reduced hence more profits realized.

Vignette 4.4 illustrates how control systems at firm level improves on the level of competitiveness at firm level. The respondents pointed out that control systems influence the level of firm competitiveness.

The finding of this study is similar with that of Akenten, (2019) who contends that strategic managers use strategic controls to frame, maintain and alter patterns in firm activities, which enables firms to build credibility, demonstrate the value of strategies to the different stakeholders of the firm, promote and support strategic changes. Further, Ireland & Hitt (2005) argues that strategic control influences and guides organizational works in ways necessary to achieve firm competitiveness. Moreover, it is the role of strategic leaders to establish controls that facilitate flexible and innovative employee behaviours that earns competitive premiums for their firms (Akenten, 2019).

Iborra *et al.,* (2019) and Sambamurthy *et al.,* (2016) further, argued that controls are necessary for firms to achieve their desired outcomes, as it provides parameters within

which strategies are implemented as well as corrective actions undertaken when implementation related adjustments are required. Successful use of strategic controls by top executives according to Sarpong *et al.,* (2018b) needs to be integrated with appropriate autonomy within the various sub units of firms to help firms gain a competitive advantage in their respective markets. By promoting simultaneous use of strategic control and autonomy, flexibility and innovation will be achieved and this will enable firms take advantage of specific market opportunities (Management & Makori, 2019).

4.13.2 Impact of organizational learning on firm competitiveness.

The study's results indicate that there is a positive relationship between organizational learning and firm competitiveness (β = .340, t-value = 5.184, p .000 which is <.05). Therefore, the null hypothesis $H_0$2 was rejected. Organizational learning is a collaborative and interactive procedure within an organizational context, whereby individuals augment their cognitive abilities and analytical skills by advancing their comprehension and mastery of knowledge and information. This process is aimed at improving decision-making and problem-solving capabilities within the organization. Cummings and Whorley (2009) have provided a definition of organizational learning as a process of change that facilitates the acquisition and development of novel knowledge within an organization. Scholars in the field of organizational learning have acknowledged the strategic significance of organizational learning in terms of facilitating a sustainable competitive advantage and attaining strategic renewal.

According to Bustinza, Molina, and Aranda's (2010) research, organizational learning facilitates the development of novel products, processes, and the provision of customer value by firms. Organizations can effectively adapt to dynamic environments by means

of learning and responding promptly. The field of organizational learning encompasses four fundamental concepts, specifically information acquisition, knowledge dissemination, shared interpretation, and organizational memory. The present discourse is centered on H02 and is approached from four distinct perspectives.

4.13.2.1 Information acquisition and firm competitiveness

In this study, information acquisition means the task of capturing all sorts of relevant information about how things are currently done, including information flow, business processes. New knowledge is critical to firms; they can benefit from integrating new knowledge with existing firm knowledge. This enables a firm to advance more quickly and effectively than its competitors via exploration and exploitation. Acquiring and using new information is important since manufacturing firms can benefit from new understandings. However, if those understandings are incorrect, manufacturing firms can be damaged by implementing action based on flawed information. Vignette 4.5 explains information acquisition and its relevance in improving the level of competitiveness among manufacturing firms.

Vignette 4.5 Information acquisition helps in improving firm competitiveness

> The informants indicated that, information acquisition aids imitation and innovation which results into a firm becoming more competitive in the market place. Lack of information on the contrary could make a firm to miss opportunities that exist in the environment, but if a firm acquires a wrong information, it can be very detrimental to the operation of the firm as the managers will make wrong decisions based on the wrong information that was acquired.

Vignette 4.5 demonstrates that information acquisition improves on the level of competitiveness of a firm by ensuring that a firm imitates new things and this improves on the level of innovation within a firm.

Related to this study, Choo (2002) avers that in real competitions, information plays an important role in decision-making process and he further stated that, firms use information strategically to make sense of changes in its setting, to create new knowledge for innovation and to make decisions about its course of action. In a study on the impact of information and value of information, Jansen (2008) found that when organizations acquire and disclose information, they get more profits. In a similar vein, Huck *et al.,* (2000) investigated the influence of information about rivals' actions and profits on the competitiveness of oligopolistic markets and found that more information results in more competition. Moreover, Nasimi *et al.,* (2013) reiterated that information is an important source for creating an organization's core of competitiveness. In fact, Nah *et al.,* (2005) considered it as the only source of sustainable competitive advantage and is, thus, a key corporate asset.

The research is underpinned by the perspective of organizational learning theory, which posits that a company develops a repository of knowledge regarding the efficacy of specific action-outcome associations, the contextual factors that influence their effectiveness, the potential outcomes, and the degree of uncertainty surrounding their likelihood. The hyperlinks undergo regular updates over time, which may involve the inclusion of new links, exclusion of links based on fresh evidence, or enhancement and broadening of the links through corroborative evidence. There exist several methods to obtain these links, such as experiential, experimental, benchmarking, grafting, and others. However, it is imperative that these methods are employed deliberately to ascertain, validate, or leverage a causal relationship, as opposed to being haphazard actions dependent on fortuitous outcomes. The acquisition of information through such interconnections confers a competitive advantage upon a company relative to those that neglect to engage in such learning.

4.13.2.2 Knowledge dissemination and firm competitiveness

The research additionally posited that the diffusion and exchange of information previously gathered, subsequently scrutinized, and refined enhances the competitive advantage of enterprises. The concept of knowledge dissemination pertains to the proactive approach that organizations adopt to convey their findings to prospective users. This is achieved by customizing and presenting the message in a manner that is suitable for a specific target audience, utilizing techniques such as linkage and exchange events to disseminate pertinent research synopses, creating a dissemination strategy that is user-centric, engaging with media, employing a knowledge broker, and establishing a network of researchers and knowledge users. The transfer of knowledge results in an enhanced capacity to reconfigure pre-existing knowledge, thereby facilitating innovation. Additionally, knowledge can be more efficiently stored, enabling more effective responses to phenomena. Vignette 4.6 elucidates the concept of knowledge dissemination and its significance in enhancing the degree of competitiveness among manufacturing enterprises.

Vignette 4.6 Knowledge dissemination helps in improving firm competitiveness

> The informants indicated that, transfer of knowledge or information from those who know to those who lack knowledge is very key in gaining a competitive advantage over competitors since workers become more effective and efficient in what they do.

Vignette 4.6 demonstrates that knowledge dissemination improves on the level of competitiveness of a firm by ensuring that workers within the organization have right information.

Consistent with these findings, Viviers et al. (2004) asserted that prosperous organizations acknowledge the significance of proficiently and effectively managing their information resources. The proficient management of crucial information

resources can significantly impact a company's ability to withstand competition from assertive rivals and ensure its continued existence. Viviers et al. (2004) assert that in order to maintain competitiveness or even survival in a competitive environment, firms must engage in the acquisition and dissemination of information to optimize the use of available resources. As per the findings of Viviers et al. (2005), as cited by Fleisher and Bensoussan (2002), the contemporary global economy is progressively being identified as a knowledge and innovation-driven economy, wherein knowledge and innovation have emerged as the novel forms of currency. Currently, the task at hand pertains to devising strategies to distinguish one organization from its competitors. According to Porter (2004), in the current era of intense global business competition, it is imperative for companies to possess the ability to interpret competitive environment indicators and leverage them as business opportunities. This intelligence should be utilized in decision-making and devising competitive strategies.

Moreover, it is an established truth that an orientation towards sharing and disseminating information enables swift circulation of information throughout the organization. The act of sharing information among colleagues facilitates the acquisition of novel knowledge, thereby enhancing the ability of employees to effectively fulfill the requirements of the organization.

According to Schein's (1992) perspective, knowledge that is not shared and disseminated would be confined to particular individuals or groups, thereby failing to generate the desired synergy that is crucial for organizations to enhance their core competencies and competitiveness. According to Hult and Ferrell's (1997) definition, information sharing and dissemination pertains to the extent to which knowledge is disseminated within an organization. Interdepartmental communication is a crucial

aspect of enhancing organizational learning capacity, as it facilitates the generation of knowledge. The dissemination of knowledge is a fundamental aspect that contributes to the value of knowledge within an organization, as noted by Idowu (2013). The effectiveness of firms can be enhanced through the sharing and utilization of knowledge across various domains within the organization. The adoption of new technologies and adaptation to various environmental conditions will establish the organizational culture, as suggested by several scholars (Huber, 1991; Nevis et al., 1995; Nonaka & Takeuchi, 1995; Hult & Ferrell, 1997; Teo & Wang, 2005).

4.13.2.3 Shared interpretation and firm competitiveness

As per the findings of this study, the phenomenon of shared interpretation entails a series of actions involving the translation of occurrences, the cultivation of mutual comprehension, and the establishment of conceptual frameworks. Interpretation refers to the cognitive process of rendering events and phenomena into meaningful constructs, which involves the development of conceptual models and the assembly of interpretive frameworks among organizational members. The manner in which interpretation is carried out is subject to fluctuations based on the principles of equivocality reduction and assembly rules, as posited by Starbuck and Whalen in 2008. Equivocality refers to the degree to which data is ambiguous and capable of generating multiple interpretations. This phenomenon is more prevalent in organizations that exhibit undirected viewing. Assembly rules refer to the established protocols employed by organizations to transform data into a unified interpretation. The scope and level of enforcement are contingent upon the specific organization. According to Weick's (1979) observation, as the level of equivocality increases, the employment of rules to reach an interpretation decreases. Organizations tend to have a higher number of rules when equivocality is low, whereas when equivocality is high, information or data is

circulated among members more frequently before a shared interpretation is achieved. The process of interpretation centers on analyzing the surrounding context, distinctive attributes, and anticipated outcomes of the contending entities. The environment is ensured to be conducive for analysis, with a reliance on established procedures for data collection. The seventh vignette illustrates how the act of shared interpretation can enhance the competitive edge of companies.

Vignette 4.7 shared interpretation and firm competitiveness

> Interviewees indicated that, when management staff have common understanding, it becomes easier in coming up with a unified decision which at the end of it, all the members will adhere to hence reducing the level of fights among the organizational management. This improves on the level of competitiveness in that, decisions are faster and, in most cases, implemented.

Vignette 4.7 illustrates how shared interpretation improves on the level of competitiveness at firm level. The respondents pointed out that shared interpretation influences the level of firm competitiveness.

Relating this to prior studies Al Omari *et al.*, (2019) found that sharing interpretation does play a role in empowering organizational staff which at the end improves on the firm level competitiveness. Common understanding results into change which is beneficial to firms. Senge (1994) also noted that a common understanding among firm members results into continuous change of procedures, processes, behaviors patterns and evolving culture which are key in improving the level of firm competitiveness.

4.13.2.4 Organizational memory and firm competitiveness

Organizational memory in this study was conceptualized to mean stored information from an organization's history that can be brought to bear on present decisions. To Jennex & Diego (2004), organizational Memory is the unstructured concepts and information that exist in the organization's culture and the minds of its members, and

that can be partially represented by concrete/physical memory aids such as databases. Knowledge acquired both internally and externally is retained in organizational memory and improves organizational productivity in operations. As experience accumulates among manufacturing firms, tasks become routinized, production control becomes more efficient, equipment design is improved, and material routing is optimized which was found to positively influence competitiveness among manufacturing firms in Uganda.

Like this study, March (1972) posits that for most purposes, good memories make for good choices. Decision making in current situations can usefully build on prior organizational experiences that are retained in different repositories of organizational memory. Prior organizational experience accumulated in operations leads to greater efficiency and productivity, and lowers production costs among manufacturing firms (Argote, 2013). If individual experience and team experience retained in organizational memory contribute to innovative productivity through the assimilation of the experience of others in the organization, then these interaction terms should have positive and significant on firm level competitiveness.

4.13.3 Impact of perceived environmental uncertainty on firm competitiveness.

The findings of this study revealed that perceived environmental uncertainty leads to firm competitiveness (β = .109, t-value = 2.086, p .000 which is <.*05*), hence $H_0 3$ was not supported. Perceived environmental uncertainty means the collective ability of residents to produce social action to meet common goals and to preserve shared values. The concept has three dimensions, namely: market environment, technological environment and Competitive environment. This hypothesis is discussed based on the following viewpoints.

4.13.3.1 Market environment and firm competitiveness

As per the findings of this study, the market environment pertains to factors that are external to a company and exert an impact on its marketing endeavors. This environment is characterized by its ever-changing nature and lies beyond the purview of a firm's direct influence. Hence, it is imperative for a company to remain current and adapt its marketing strategies in accordance with the demands of the marketing landscape. The alteration in the marketing environment poses both risks and prospects for the organization. Having knowledge of such alterations is crucial for the long-term competitiveness of a company. The marketing environment is typically composed of two key components, namely the micro environment and the macro environment. The micro environment pertains to the immediate environment that is intricately connected to the firm and has a direct impact on the firm's operations. The environment in question may be categorized into two distinct components, namely the supply side and demand side. The supply side environment encompasses the entities involved in the provision of raw materials or products, including suppliers, marketing intermediaries, and competitors. Conversely, the demand-side ecosystem encompasses the individuals or entities that engage in the consumption of goods and services. The macro environment encompasses a range of environmental factors that are outside the purview of a firm's control. These variables exert a substantial impact on the operations of firms. The alterations in the macro environment present both prospects and challenges for organizations, thereby influencing the competitiveness of manufacturing firms. The study's results indicate that the competitiveness of a firm is impacted by both macro and micro environmental factors. Therefore, it is imperative for managers to comprehend the market environment and make necessary adjustments to ensure their firms maintain their competitive edge.

4.13.3.2 Technological environment and firm competitiveness

The term "technology" is frequently defined as the systematic application of knowledge, tools, techniques, and actions to convert input into output. Organizations function within a technological environment that is characterized by the managerial perception of technological circumstances, which are classified as either "stable" or "turbulent". It is of paramount importance for senior executives to possess the capacity to identify potential nascent technologies that can be integrated to generate novel concepts for product innovation. The implementation of this approach facilitates enhanced operational efficiency for firms, while also enabling them to achieve heightened levels of production flexibility and rapid responsiveness to consumer demands in the market. The integration of these factors enhances the firm's level of competitiveness. Vignette 4.8 elucidates the significance of the technological environment in enhancing the degree of competitiveness among manufacturing enterprises.

Vignette 4.8 technological environment and firm competitiveness

> Interviewees indicated that, online sales enable firms to get more customers. Even during the lock down as a result of COVID 19, firms that utilized technology were able to remain in business since they could get information from customers and could subsequently distribute products to such customers. Such firms are also in position to deliver to customers on time since they are more efficient in what they do and how they do it as a result of the technology being used by manufacturing firms. This makes firms more efficient, hence more competitive in the market.

Vignette 4.8 illustrates how technological environment influences level of competitiveness at firm level. The respondents pointed out that technological environment influences the level of firm competitiveness.

Related to this study, Banwet *et al.,* (2003) reveals that technology contributes to sustaining competitiveness of firms and serves as an engine of economic progress. Moreover technological capabilities according to Banwet *et al.,* (2003) is achieved when managers are aware and able to adapt to technological changes. This helps firms to secure superiority by producing less expensive products than those competing firms (Banwet *et al.,* 2003).

The findings of this study are further supported by the resource-based view theory which indicates that technological capability is a critical source of competitive advantage (Clark & Fujimoto, 1991; Day, 1994). However, merely having strong technological capability may not improve the level of firm competitiveness unless this capability is properly managed (Lichtenstein & Brush, 2001). For proper management of the technological capability, managers need to be aware of the changes within the technological environment and adjust accordingly (Banwet et al., 2003).

4.13.3.3 Competitive environment and firm competitiveness

A competitive environment is the dynamic external system in which a business competes and functions. The more sellers of a similar product or service, the more competitive the environment in which a firm will compete. A competitive business environment is created when a firm provides products and services that are similar to those provided by other firms. The study reveals that there are many promotion wars in the manufacturing industry and price competition is the hallmark of the industry. The many promotional wars affect the level of firm competitiveness. Managers of firms therefore need to be aware of such promotional wars because this will enable them come up with strategies that will enable their firms to remain competitive within the

changing business environment. Vignette 4.9 explains competitive environment and its relevance in improving the level of competitiveness among manufacturing firms.

Vignette 4.9 Competitive environment and firm competitiveness

> Interviewees indicated that, Market environment in terms of changes in the prices set by other competitors, changes in the quality of goods offered, customer preferences etc affects the level of competitiveness of firms in that if you are not aware, the company can be forced out of the market. Example an interviewee noted that in their firm, the price of one product was increased while not knowing whether those manufacturing a similar product had also increased the price of theirs. The firm lost all the market for the product since competitors sold theirs cheaply. This was because the firm did not know the prices in the market.

Vignette 4.9 illustrates how competitive environment influences level of competitiveness at firm level. The respondents pointed out that competitive environment influences the level of firm competitiveness.

This result corroborated the findings by Manley, (2015) on competitive intelligence as an enabler for firm competitiveness in South Africa, where it was found that understanding the competitive environment has become central to the survival of manufacturing firms. As Frederick the Great once said, "It is pardonable to be defeated, but never to be surprised" (Bergeron and Hiller, 2002). With today's information resources, occurrences in the market should be minimized by manufacturing firms.

4.13.4 Impact of strategic leadership on organizational learning

The study established a statistically significant positive relationship between strategic leadership and organizational learning ($\beta = .142$, t-value = 3.791, p .000 which is $<.05$), which means that $H_0 4$ was not supported. The regression coefficient of 0.142 implies that, a unit increase in strategic leadership would lead to 0.142 increase in organizational learning. This also implies that the dimensions of strategic leadership

of strategic direction, core competence, corporate culture and strategic control influences the level of organizational learning among manufacturing firms in Uganda.

The findings are consistent with those of earlier studies (Lear, 2012; Malewska & Sajdak, 2014; Caylan & District, 2014; Goleman *et.al*, 2001). Firms lead by strategic leaders will acquire more knowledge, workers will have shared interpretation, disseminate more information and have better organizational memory. According to Vera *et al.,* (2004), strategic leaders encourage individuals to break through learning boundaries and to share their learning experiences both within and across the organization. Vera *et al.,* (2004) further noted that such leaders, by requesting contributions from members at different management levels of the firm help create an environment of information sharing. Strategic leaders' focus on changes within firms facilitates the learning flow from individuals to groups, and also facilitating learning flow from the group to the firm (Vera *et al.,* 2004).

Furthermore, as per Lear's (2012) findings, entities that are headed by strategic leaders exhibit greater success in terms of acquiring knowledge, at the individual, collective, and institutional levels. Research conducted by Caylan and District (2014) and Watermarks (2009) has demonstrated that effective organizational learning initiatives require both managerial and visionary leadership qualities. According to Vera *et al.,* (2004), the enunciation of a vision by a strategic leader has the potential to modify a firm's institutionalized learning, while their managerial approach can facilitate the dissemination and reinforcement of ongoing learning endeavors. The amalgamation of learning new knowledge and integrating newly discovered avenues of learning is deemed essential for firms (Malewska & Sajdak, 2014).

The study findings also echo widely accepted theoretical literature that link strategic leadership to organizational learning. Rightful strategies need to be adapted by managers of firms if the level of learning is to be improved. It is however prudent that for firms to improve their level of learning, they need also to consider other factors that include perceived environmental uncertainty. This study's findings reveal that even-though strategic leadership had positive significant effect on organizational learning, it accounted for less than 50% of the variation. The low explanatory power of strategic leadership though significant can be explained by different factors. One explanation is that several other factors other than strategic leadership contribute to organizational learning and strategic leadership is just one of the factors. Based on literature reviewed, such factors include; market environment, technological environment and competitive environment. Lear (2012) posits that entities that are helmed by strategic leaders tend to achieve greater success in the realm of learning, encompassing the individual, group, and organizational levels. Research conducted by Caylan and District (2014) and Watermarks (2009) has demonstrated that effective organizational learning initiatives require both visionary and managerial leadership skills. According to Vera *et al.*, (2004), the communication of a vision by a strategic leader has the potential to modify a firm's established patterns of learning, while their managerial approach can facilitate the dissemination and reinforcement of ongoing learning efforts.

4.13.5 Indirect influence of organizational learning on the relationship between strategic leadership and firm competitiveness

The results of this hypothesis test show that organizational learning is a mediator in the relationship between strategic leadership and firm competitiveness. This means that H_05 was not supported by the findings. Bootstrapped results demonstrate that the mediating impact of organisational learning on firm competitiveness via strategic

leadership was statistically significant since the confidence interval were none zero (a*b), β = .5257, SE = .0327, 95% CI = .0135 to .1400 as shown on table 4.29 model 3. The results indicate that there is a partial mediation in the relationship between the strategic direction, core competences, corporate culture, and strategic control of strategic leadership and the competitiveness of the firms as shown in Figure 4.1. This means that strategic leadership elements of (strategic direction, core competences, corporate culture, and strategic control can improve firm level competitiveness) go through organizational learning (information acquisition, knowledge dissemination, shared interpretation and organizational memory) to lead to the competitiveness of firms.

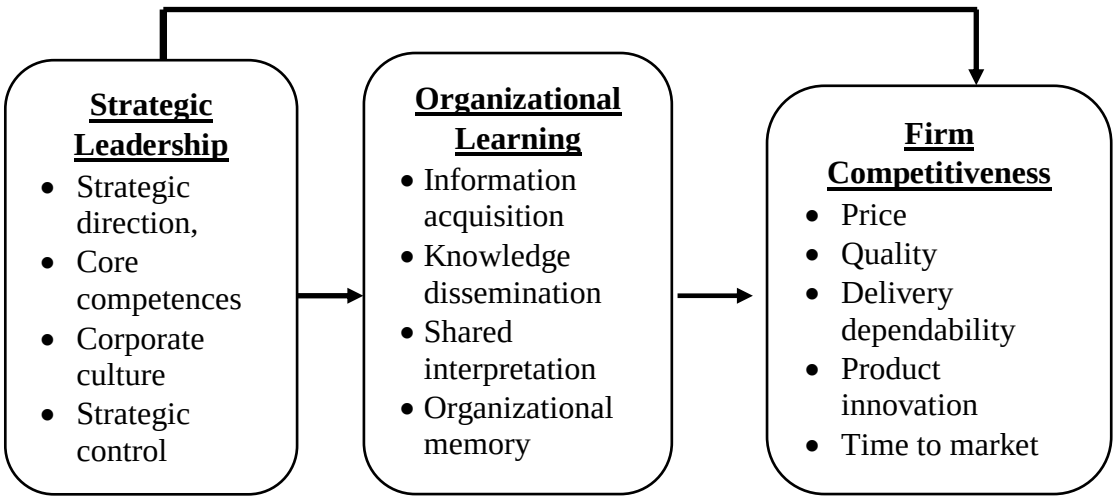

Figure 4.5 A Flow Diagram Showing the Centrality of organizational learning in the Relationship between strategic leadership and firm competitiveness.

The findings suggest that manufacturing firms can enhance their competitiveness in various aspects, such as pricing, quality, delivery dependability, product innovation, and time to market, by adopting certain strategic practices. Specifically, the study highlights the importance of leaders' strategic direction, acquisition of core competences, promotion of positive corporate culture, and strategic control of

organizational activities and processes. The optimal approach to achieve this objective is by means of acquiring information, disseminating knowledge, interpreting information collaboratively, and maintaining organizational memory.

This is consistent with the earlier findings of Rezaei *et al.*, (2018), Naranjo-Valencia *et al.*, (2011) who found that organizational learning and organizational innovation greatly contributed to organizational competitiveness. In the same vein, the later study by Naranjo-Valencia *et al.*, (2011) where they argued that organizational competitiveness increased based on factors such as increased communication between the personnel, unity towards common objectives and risk-taking, which mostly occur depending on organizational learning. Relatedly, the findings lend support to organizational learning theory which looks at how learning influences the level of competitiveness among firms.

4.13.6 Moderating impact of perceived environmental uncertainty on the relationship between strategic leadership and organisational learning.

The study results confirmed that there is a significant positive moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and organizational learning, therefore, hypothesis $H_0 6$ is not supported. Results indicate that the conditional impact of perceived environmental uncertainty on strategic leadership and organisational learning was positive and significant since zero in non-inclusive in the confidence interval $\beta=0.4415$, $P < .05$, CI = .3397, .5432. The R-square value was 0.2421 which indicates that the model explains 24.21% of the variance.

The study result is in line with the study by Mahmood Hosseini in (2012), who found that perceived environmental uncertainty moderates the link between leadership and market performance, leadership and financial performance, and differentiation and

customer satisfaction. Further, prior studies have suggested that perceived environmental uncertainty and task uncertainty moderate the connection between performance management system practices and organizational performance. Although a firm might face different levels of perceived environmental uncertainty and task uncertainty, additionally to performance management system practices, its performance also relies on the interactions between these two contingent variables and performance management system practices (Burkert et al. 2014; Granlund and Lukka 2017).

4.13.7 Moderating impact of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness.

To investigate the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness. The study findings reveal that there is a positive significant moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness β=0.2437, $P < .05$, CI = .0851, .4022. The R-square value was 0.304 which indicates that the model explains 30.4% of the variance. Basing on the results, hypothesis **$H_0$7** was rejected.

The finding supports that of Witts, (2016); Omotayo *et al.*, (2018); Devi & Mahajans, (2019). who demonstrated that strategic leadership is critical to firm competitiveness Similarly, strategic leadership will be most effective during environmental uncertainties (Jansen *et al.*, 2009). Other literature reviewed also indicate a positive influence of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness which would then lead to firm performance (Gime, 2007).

4.13.8 The conditional indirect influence of perceived environmental uncertainty on the relationship between strategic leadership firm competitiveness via organizational learning

To investigate the moderating effect of perceived environmental uncertainty on the indirect relationship between strategic leadership and firm competitiveness via organizational learning. The results indicate that the conditional indirect impact of perceived environmental uncertainty on the link between strategic leadership and firm competitiveness through organisational learning was not significant (β= .1016, SE = .0588, CI = -.0023, .2275) therefore, the researcher failed to reject hypothesis $H_0$8.

The study findings disagreed with the earlier studies by scholars such as Sahadev (2008), who in his study of the moderating effect of perceived environmental uncertainty, established that the interaction between perceived environmental uncertainty and lower manager participation in setting organizational performance targets has a significantly positive association with organizational performance. Further, in a study by Sahadev, (2008), perceived environmental uncertainty was found to have both a direct as well as an indirect impact on relationship commitment. While on the other hand Nguyen et al., (2021) noted that, there is no statistical significance for the moderating effect of perceived environmental uncertainty on the relationship between adopting non-financial performance measures and organizational performance.

Moreover, as environmental uncertainty negatively impacts relationship commitment, it also moderates the relationship between economic satisfaction and relationship commitment. This indicates that under greater levels of environmental uncertainty, any increase in economic satisfaction will not lead to a considerable increase in relationship

commitment. While under less environmental uncertainty, higher perceived economic satisfaction will lead to greater relationship commitment (Sahadev, 2008).

CHAPTER FIVE

SUMMARY, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary of the study findings in line with the study hypotheses that were tested. It also entails the study's conclusions and implications for practice and theory as well as recommendations for future research.

5.1 Summary of Research Findings of the Hypothesized Tests Results

Eight objectives guided this research, of which seven were attained and only one was not achieved. The first objective sought to examine the effect of strategic leadership on firm competitiveness. This objective was attained since a significant positive impact of strategic leadership on firm competitiveness was determined ($\beta = .526$, $t = 2.086$, $p = .000$). Therefore, the hypothesis which stated that strategic leadership has no significant effect on firm competitiveness was rejected. Similarly, the second objective sought to determine the effect of organisational learning on firm competitiveness. According to the findings, organisational learning has a significant positive influence on firm competitiveness ($\beta = .340$, $t = 5.184$, $p = .000$). Thus, the hypothesis that organizational learning has no significant effect on firm competitiveness was not supported.

Thirdly, the study aimed at establishing the effect of perceived environmental uncertainty on firm competitiveness. Nonetheless, this study was successful in meeting this goal, as a a significant positive impact was found ($\beta = .109$, $t = 2.086$, $p = .000$). Consequently, the hypothesis that Perceived environmental uncertainty has no significant effect on firm competitiveness was not supported.

Determining the effect of strategic leadership on organisational learning was the fourth objective. This goal was met because there was a significant positive impact of strategic

leadership on organisational learning (β = .142, t = 3.791, p = .000). For that reason, the hypothesis that Strategic leadership has no significant effect on organizational learning was not held up.

Besides, objective five was to assess the mediating effect of organizational learning on the relationship between strategic leadership and firm competitiveness. Accordingly, it was hypothesized that Organizational learning has no significant mediating effect on the relationship between strategic leadership and firm competitiveness. The hypothesis was rejected because a partial mediating effect of organisational learning between strategic leadership and firm competitiveness was discovered (β = .0674, SE = .0327, CI = .0135, .1400).

Objective six was to examine the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and organizational learning. Therefore, it was hypothesised that Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and organizational learning. This research objective was attained, and the hypothesis was rejected since the result was significant (β = .4415, SE = .0518, t = 8.5287, p = .000, CI = .3397, .5432).

Objective seven was to investigate the moderating effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness. This was achieved since the results were statistically significant (β = .2437, SE = .0807, t = 3.0212, p = .0027, CI = .0851, .4022). Consequently, the study rejected the hypothesis which stated that Perceived environmental uncertainty has no significant moderating effect on the relationship between strategic leadership and firm competitiveness

Finally, objective eight investigated the moderating effect of perceived environmental uncertainty on the indirect relationship between strategic leadership and firm competitiveness via organizational learning. This was guided by the hypothesis that "Perceived environmental uncertainty has no significant effect on the indirect relationship between strategic leadership and firm competitiveness via organizational learning". This objective was not attained because the results were not statistically significant (β = .1016, SE = .0588, CI = -.0023, .2275).

5.2 Conclusion

The findings of this study generally contribute significantly to the body of competitiveness literature by determining the extent to which strategic leadership influence the level of firm competitiveness. The purpose of this study was to specifically examine the intervening role of organizational learning and perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness. Specifically, the study established the effect of strategic leadership on firm competitiveness of Manufacturing in Uganda as mediated and moderated by organizational learning and perceived environmental uncertainty respectively. On the basis of the findings, the study made the following conclusions.

First, the findings of this study show that strategic leadership have a significant and positive effect on firm competitiveness. The study, therefore, concludes that enhancing the strategic leadership elements of strategic direction, strategic control, corporate culture and core competences of manufacturing firms can increase the level of firm competitiveness of such firms.

Second, the study also revealed that organizational learning has a positive and significant influence on the level of firm competitiveness. The study therefore

concludes that if firms so wishes to improve on their level of competitiveness, then they need to acquire information, disseminate information, have similar interpretation of information and have a stock of knowledge at their disposal.

Third, the study results showed that there was a significant positive effect of perceived environmental uncertainty on firm competitiveness. The study therefore, concludes that firms need to be aware of the dimensions of perceived environmental uncertainty (technological environment, competitive environment and market environment) since they have influences on the prices set by firms, quality, delivery dependability, product innovation and time to market.

Fourth, the study revealed that strategic leadership positively and significantly influences organisational learning. This implies that strategic direction, corporate culture, strategic control and core competences are very key in improving learning in firms. Managers of firms must therefore ensure that right directions, positive cultures, proper controls and core competences are encouraged for these firms to improve on the level of their learning. The study therefore concludes that strategic leadership influences organisational learning among manufacturing firms in Uganda.

Fifth, organizational learning was found to have a significant positive mediating effect on the relationship between strategic leadership and firm competitiveness. This implies that, manufacturing firms can improve on the impact of strategic leadership on firm competitiveness by acquiring information, dissemination of information, accumulating knowledge and having shared interpretation of information. The study therefore concludes that organizational learning partially mediates the relationship between strategic leadership and firm competitiveness.

Sixth, the study revealed that perceived environmental uncertainty moderates the relationship between strategic leadership and firm competitiveness. This signifies that the influence of strategic leadership on firm competitiveness can be improved through knowledge acquisition information dissemination, organizational memory and shared interpretation. The study therefore infers that perceived environmental uncertainty moderates the relationship between strategic leadership and firm competitiveness among manufacturing firms in Uganda.

Seventh, the study results also shows that perceived environmental uncertainty has a positive moderating effect on the relationship between strategic leadership and organizational learning. This signifies that, the influence of strategic leadership on organizational learning can be improved through knowledge acquisition information dissemination, organizational memory and shared interpretation. The study therefore infers that perceived environmental uncertainty moderates the relationship between strategic leadership and organizational learning among manufacturing firms in Uganda.

Eighth, the results of the study show that perceived environmental uncertainty moderates the indirect relationship between strategic leadership and firm competitiveness via organizational learning. This study therefore infers that, the influence of strategic leadership on organizational learning can be improved through knowledge acquisition information dissemination, organizational memory and shared interpretation. The study therefore infers that perceived environmental uncertainty moderates the indirect relationship between strategic leadership and organizational learning among manufacturing firms in Uganda.

5.3 Implications of the Study

The findings of this study have theoretical and practical implications for researchers and policy makers who want to ensure that manufacturing firms become competitive both nationally and internationally. Furthermore, these implications are practically relevant in a developing country like Uganda.

5.3.1 Theoretical implications

The present research employed a concurrent application of established theoretical frameworks, namely the Porter's five force model, transformational leadership theory, and organizational learning theory, in order to gain insights into the competitive advantage of firms. The study's metaphors were derived from a theoretical review of three distinct concepts, namely strategic leadership, organizational learning, and perceived environmental uncertainty, which were used to examine firm competitiveness. The amalgamation of constructs originating from the three theories under review presents a fresh elucidation for the competitiveness of manufacturing firms in Uganda. Utilizing a multi-theoretical approach provides a more comprehensive elucidation of the competitive advantage of firms operating within Uganda's manufacturing industry when juxtaposed with singular theoretical frameworks.

The explanatory model obtained by this study shows how strategic leadership, organizational learning and perceived environmental uncertainty interact to lead to the improvement in the level of competitiveness among manufacturing firms in Uganda. The current investigation suggests that the approaches developed in the liberal western contexts when combined are utilizable in other settings. Firm competitiveness until now lacks an integrated theoretical foundation and guidance for success, which partly contributes to the low level of competitiveness, especially in the developing world

(O'Toole, 2000). This study is thus a contribution towards the theoretical explanation of firm competitiveness and an effort towards producing a substantial theory to guide firm competitiveness. The results are evident that the use of a multi theoretical approach is invaluable in investigating firm competitiveness among manufacturing firms in Uganda.

The results of this study provide theoretical evidence of the mediating role of organizational learning in the relationship between strategic leadership and firm competitiveness. Further, the results also provide theoretical evidence on the moderating role of perceived environmental uncertainty in the relationship between strategic leadership and firm competitiveness and also the moderating role of perceived environmental uncertainty in the relationship between strategic leadership and organizational learning. Moreover, the study also provides theoretical evidence on the indirect moderating effect of perceived environmental uncertainty in the relationship between strategic leadership and firm competitiveness through organizational learning. Figure 5.1 below shows that final model fit for the study variables.

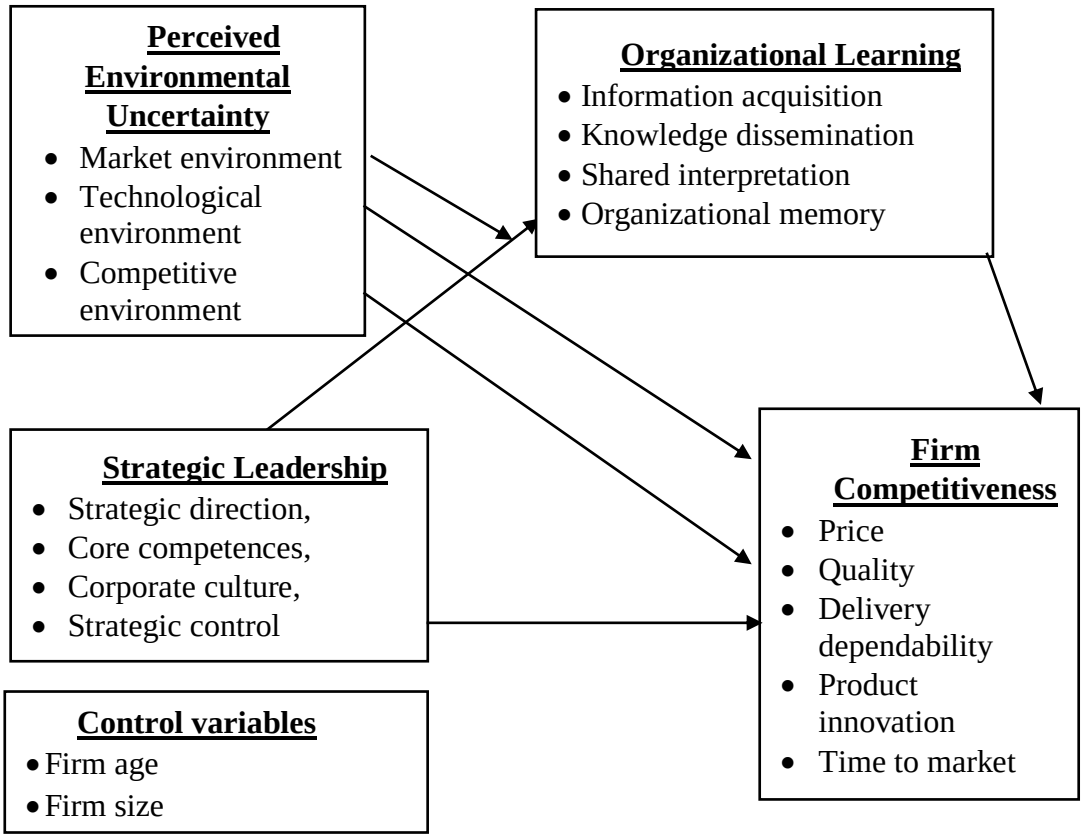

Figure 5.1: Final Model

SOURCE: Adapted from Andrew F. Hayes Model 8

5.3.2 Methodological Implications

This research makes a valuable contribution to the field of philosophy through the utilization of mixed methods, which offers a more comprehensive approach to examining the competitiveness of firms operating within Uganda. The investigator employed a mixed methods approach by gathering and analyzing both quantitative and qualitative data. The utilization of mixed methods presents a valuable opportunity to obtain a variety of perspectives from participants involved in a study. Apart from the measurable data, the study also gathered subjective experiences and perspectives from the participants, thereby enhancing the outcomes.

The research also implemented and adapted the assessment tools that were employed in previous studies. This was found to be beneficial in comprehending the competitiveness of manufacturing firms within the Ugandan context. The aforementioned proposition posits that it is imperative to subject the measurement instruments employed by prior researchers to rigorous assessments of their validity and reliability in order to facilitate their efficacious application in comprehending the competitive standing of firms.

The study employed the explanatory sequential method to gather data of both quantitative and qualitative nature, thereby facilitating a more comprehensive elucidation of the relationship between the variables. The aforementioned statement suggests that the utilization of the explanatory sequential approach is of utmost importance in conducting research on firm competitiveness, as it allows for the qualitative data to provide an explanation for the quantitative findings.

The research employed SPSS version 23 and NVIVO version 11 pro for the examination of quantitative and qualitative data, respectively. It can be inferred that the utilization of SPSS version 23 software and NVIVO version 11 pro is suitable for conducting data analysis in the context of researching firm competitiveness.

5.3.3 Policy implications

Based on the results and the subsequent discussions, the study offers the following policy implications. First, the study confirmed a positive effect of strategic leadership on firm competitiveness. This implies that relevant strategic leadership dimensions of strategic direction, corporate culture, core competences and strategic controls are essential for bettering the level of competitiveness among manufacturing firms in Uganda. Thus, in order to improve on the level of firm competitiveness, top managers

should be required to have undertaken short executive courses in strategic leadership so as to equip them with relevant knowledge to govern such manufacturing firms.

Second, the study reveals that organizational learning has a positive significant effect on firm competitiveness. It is therefore imperative that management ensures that strategies that encourages information acquisition, shared interpretations, organizational memory and knowledge dissemination are instituted among manufacturing firms so that they achieve the desired level of competitiveness.

Perceived environmental uncertainty was equally significant in predicting firm competitiveness among manufacturing firms in Uganda. Consequently, effective and better strategies should be deployed among manufacturing firms to ensure proper understanding of the technological, market and competitive environment. This will make such firms more competitive and whatsoever is produced by such firms will get the desired market.

5.3.4 Managerial Implications

The study results have important implications for practicing managers and leaders. The results guide CEOs and firm stakeholders in the manufacturing sector on how to improve on the level competitiveness of their firms. From the study, it was found that application of strategic leadership results in increase in the level of competitiveness of firms. First, strategic directions, core competences, corporate culture and strategic control have direct effects on firm competitiveness. It was therefore concluded that firms need to set right visions, develop positive cultures, put in place proper controls and develop core competences for them to remain competitive.

Second, the results highlighted the importance of organizational learning in fostering the level of competitiveness of manufacturing firms in Uganda. In order to improve the level of competitiveness of manufacturing firms, firm owners and managers should recruit encourage information acquisition, knowledge dissemination, shared interpretation and accumulation of relevant information if they are to be more competitive.

Third, the findings are useful to other manufacturing firms outside Uganda or firms in other sectors within Uganda. If these Ugandan manufacturing firms are not assisted to improve their leadership, their low levels of competitive patterns will have spill-over effects to those firms that are directly or indirectly associated. This will also have a serious impact on the competitiveness of Uganda's industrial sector regionally and internationally. It will mean Uganda will keep on losing a lot of money in imports and yet if these firms are made to be more competitive, they would help the country Uganda limit the level of foreign expenditure.

The study results provided an important corroboration that, when managers understand the competitive, market & technological environment, they can develop strategies which makes their firms more competitive than those who don't understand.

5.4 Contributions to Knowledge

The study makes significant, contextual, methodological and theoretical contributions to the body of knowledge.

5.4.1 Contextual contribution

Manufacturing firms in developing countries have adapted strategic leadership as a means of improving on the competitiveness of their firms. In Uganda, strategic

leadership is being practiced in most manufacturing firms. However, there is limited empirical evidence on the impact of strategic leadership on firm competitiveness among manufacturing firms in Uganda. Literature is dominated by studies from the developed world. For instance, a systematic review by Princess *et al.*, (2018), indicates that three quarter of the publications in this area between 2017 and 2022 were from Asia. As such, this study makes a contextual contribution by investigating the impact of strategic leadership on firm competitiveness in a developing country like Uganda.

5.4.2 Methodological contributions

Following the disagreements in the literature concerning the influence of strategic leadership on firm competitiveness. The study makes significant methodological contributions by performing different interactions between the study variables.

Given that the majority of previous research has concentrated on the direct impact of strategic leadership on firm competitiveness, the current study contributes to the body of knowledge be examining the indirect influence of strategic leadership on firm competitiveness through organisational learning. The study reports a partial mediating effect, whereby the total effect of strategic leadership on firm competitiveness is high as compared to the direct effect. As such, knowledge acquisition and sharing in organisations is more effective in stimulating strategic leadership which ultimately will improve on the competitiveness of such firms.

The study also performed a moderated mediation effect of perceived environmental uncertainty on the relationship between strategic leadership and firm competitiveness through organisational learning. The study provides preliminary evidence by establishing that perceived environmental uncertainty has an antagonistic impact on the indirect relationship between strategic leadership and firm competitiveness. The study

contributes to the debate in literature by revealing that where firm management are aware of the external environment, strategic leadership will not result to an improvement in the level of firm competitiveness, and also where perceived environmental uncertainty is low, negative results will be reported.

5.4.3 Theoretical contribution

Theoretically, the study adopted a multi-theoretical approach with Porters' Five Forces Model being the main theory. This was complemented by transformational leadership theory and organisational learning theory in explaining firm competitiveness among manufacturing firms. To better understand the ways of improving competitiveness of manufacturing firms, study findings support the integration of Porters' Five Forces Model, transformational leadership theory and organisational learning theory. Porters' Five Forces Model introduces strategic leadership as an antecedent to the predictors of firm competitiveness as put forward by the transformational leadership theory and organisational leadership theory. Lastly, the study also suggest that these theories should take into consideration the indirect effect of organisational learning on firm competitiveness.

5.5 Study limitations

Despite the contributions made by this study, there are still limitations. First, the study used western-based theories and measures and yet western ethical ideas may be more or less applicable in Africa. Notwithstanding, the study preferred to use the theories simultaneously (multi-theoretical strategy) due to the limited studies in Africa. In any case, the multi-theoretical approach and the mixture of subjects from different researchers were used only where it was considered appropriate. The items also had to be rewritten to suit the context of the study and quantitative data was reinforced with

qualitative data that explored the actual experiences. All these have been integrated to ensure applicability. However, the questionnaire and the interview guide were equally tested for reliability and validity.

One additional constraint encountered during the study was the insufficient level of cooperation exhibited by participants, particularly due to their hesitancy in divulging potentially sensitive information that could be deemed strategic. To address this constraint, the investigator obtained a letter of introduction from Moi University to facilitate the execution of the study. The researcher provided the respondents with an assurance that the data collected from them would be handled with confidentiality and solely utilized for academic objectives. The participants were provided with the guarantee that they would receive a copy of the study's results if they expressed interest in doing so.

An additional constraint that was encountered pertained to the incapacity to convene with certain participants at their respective places of employment. In order to mitigate this issue, the participants were contacted via telephone and asked to propose a suitable schedule for allocating time towards the study.

An additional constraint pertained to the insufficiency of prior research conducted in Uganda that specifically examined the competitiveness of manufacturing enterprises. In order to address this issue, the researcher conducted an analysis of the competitive strategies employed by firms in Uganda, as documented by reputable international organizations such as the World Bank.

The contextual setting of the manufacturing industry, particularly within the private sector, constrains the extent to which the present findings can be extrapolated to other

government entities. It is noteworthy that a considerable number of manufacturing enterprises in Uganda and other developing nations operate within the private sector, as highlighted in the works of Calabrese et al., (2019) and McDade and Spring (2005)

5.6 Recommendations for Further Research

First, the study used a cross-sectional design which cannot reflect the lag time or long-term effects of strategic leadership, organizational learning and perceived environmental uncertainty on firm competitiveness. Therefore, future studies could take longitudinal approach, to examine the relationship between these variables over a long time-series context.

Second, the study may also be extended to a regional or continental study to get a good perspective of firm competitiveness in Africa, which would subsequently provide an opportunity for comparative studies between sectors, regions and continents. The study can as well be replicated in other developing countries to determine whether the same results can be obtained. This infers that a study in a different firm competitiveness setting brings a deeper understanding of the combination of variables that constitute a perfect model fit. A replicated or similar study in other cultural-social settings or a cross-country comparative study may extend the generalizability of the findings.

Subsequently, the hypotheses underwent testing while accounting for significant variables, namely firm size and firm age, in order to ensure internal validity of the findings. Subsequent studies could potentially explore the impact of these controlling variables and broaden the range of industries examined, thereby reaffirming the model's applicability.

Fourth, the study recommends further research on the effect of strategic leadership on competitiveness of organizations in the service sector in Uganda. In this regard, the study suggests further investigation of the effect of strategic leadership on the competitiveness of firms in the transport sector where there seems to be a lot of competition.

REFERENCES

Abraham, L. C. D. and I. L. (1993). *Nature of Inquiry: Linking quantitative to qualitative research*.

Abubakar, A. M., Elrehail, H., Alatailat, M. A., & Elçi, A. (2019). Knowledge management, decision-making style and organizational performance. *Journal of Innovation and Knowledge*, *4*(2), 104–114. https://doi.org/10.1016/j.jik.2017.07.003

Adebayo, L., & Mudashiru, M. (2019). *Effect of Strategic Leadership on Competitive Advanta g e of Selected Quoted Insurance Companies in Nigeria*. *9*(2), 70–78.

Adegbile, A., & Sarpong, D. (2018). Disruptive innovation at the base-of-the-pyramid: Opportunities, and challenges for multinationals in African emerging markets. *Critical Perspectives on International Business*, *14*(2–3), 111–138. https://doi.org/10.1108/cpoib-11-2016-0053

Adeoye, I. (2019). *Strategic Leadership Dimensions and Competitive Advantage : Perspective of Service Firms in Lagos and Ogun States , Nigeria Strategic Leadership Dimensions and Competitive Advantage : Perspective of Service Firms in Lagos and Ogun States , Nigeria*. *June*, 58–67.

Adeoye, I. A. (2019). Purpose: The relationship between strategic leadership and organisational performance of selected service firms in Lagos and Ogun States, Nigeria. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS*, *24*(4). https://doi.org/10.9790/0837-2404020106

African Development Bank Group. (2014). *Eastern Africa's Manufacturing Sector - Uganda Country Report*. *November*, 1–37.

Ahuja, R. K. and G. (2002). *Something Old , Something New : A Longitudinal Study of Search Behavior and New Product Introduction Author (s): Riitta Katila and Gautam Ahuja Published by : Academy of Management Stable URL : https://www.jstor.org/stable/3069433 REFERENCES Linked refe*. *45*(6), 1183–1194.

Aiginger, K., Bärenthaler-Sieber, S., & Vogel., J. (2013). Competitiveness under New Perspectives. *WWW for Europe, Working Paper no 44*, 97. www.foreurope.eu

Ajitabh, A., & Momaya, K. (2003). Competitiveness of Firms: Review of Theory, Frameworks and Models. *Singapore Management Review*, *26*(1), 45–61.

Akben-Selcuk, E. (2016a). Factors Affecting Firm Competitiveness: Evidence from an Emerging Market. *International Journal of Financial Studies*, *4*(2), 9. https://doi.org/10.3390/ijfs4020009

Akben-Selcuk, E. (2016b). *www.econstor.eu*. 0–10. https://doi.org/10.3390/ijfs4020009

Akenten, W. N. (2019). *Strategic Leadership and Why is it is Critical for Businesses / Organizations in РОЗДІЛ 3 Економіка підприємства та організація виробництва Strategic Leadership and Why is it is Critical for Businesses / Organizations in Ghana*. *April*.

Aksu, A. A., & Özdemir, B. (2005). Individual learning and organization culture in learning organizations: Five star hotels in Antalya region of Turkey. *Managerial Auditing Journal*, *20*(4), 422–441. https://doi.org/10.1108/02686900510592098

Al Omari, G. I., Maraqa, M. R., & Al-Jarrah, M. A. (2019). Organisational memory and its impact on competitive strategies in IT companies in Jordan. *International Journal of Sociotechnology and Knowledge Development*, *11*(4), 52–70. https://doi.org/10.4018/IJSKD.2019100104

Albrecth., S., Arnold B, B., Jamie A, G., William H, M., & Alan M, S. (2015). Journal of Organizational Effectiveness: People and Performance. *Journal of Organizational Effectiveness: People and Performance*, *2*(1), 261–280.

Andersson, J., Zbirenko, A., & Medina, A. (2014). *Effect of organizational structure, leadership and communication on efficiency and productivity-A qualitative study of a public health-care organization*. 71. https://www.diva-portal.org/smash/get/diva2:735889/fulltext01.pdf

Andrews, R., & Andrews, R. (2014). *Perceived Environmental Uncertainty in Public Organizations : An Empirical Exploration Uncertainty in Public Organizations An Empirical Exploration*. *9576*. https://doi.org/10.2753/PMR1530-9576320102

Argyris. (1967). *MICHIGAN BUSINESS PAPERS Number 64* (Issue 64).

Authors, F. (2013). *Article information : To cite this document :*

Baark et al., 2011. (2011). *Innovation Sources, Capabilities and Competitiveness: Evidence from Hong Kong Firms By Erik Baark*. *April 2015*, 1–40.

Babbie, E. (2013). *the practice of social research*.

Bang Nguyen Dilip S. Mutum. (2015). Knowledge transfer, governance mechanisms in alliance and environmental uncertainty. *The Eletronic Library*, *34*(1), 1–5.

Banmore, O. O., Adebayo, L., Mudashiru, M., Oluwatooyin, G., Falilat, A., & Olufunke, O. (2019). Effect Of Strategic Leadership On Competitive Advantage Of Selected Quoted Insurance Companies In Nigeria. *The Journal of Accounting and Management*, *9*(2), 70–78. https://search.proquest.com/docview/2319823102?accountid=32819

Banwet, D. K., Momaya, K., & Shee, H. K. (2003). Competitiveness through technology management: An empirical study of the Indian software industry. *International Journal of Services, Technology and Management*, *4*(2), 131–155. https://doi.org/10.1504/IJSTM.2003.002575

Battistella, C., Cicero, L., & Preghenella, N. (2020). Sustainable organisational learning in sustainable companies. *Learning Organization*, *28*(1), 15–31. https://doi.org/10.1108/TLO-05-2019-0074

Battor, M., & Battour, M. (2013). Can organizational learning foster customer relationships? Implications for performance. *Learning Organization*, *20*(4–5), 279–290. https://doi.org/10.1108/TLO-11-2012-0073

Bavarsad, B., Rahimi, F., & Seyfi, M. (2014). A study of the relationship between organizational learning, strategic flexibility, competitive strategy and firm's performance. *International Journal of Psychology and Behavioral Research*, *3*(3), 198–210.

Beer, M., Voelpel, S. C., Leibod, M., & Tekie, E. B. (2005). Strategic management as organizational learning: Developing fit and alignment through a disciplined process. *Long Range Planning*, *38*(5), 445–465. https://doi.org/10.1016/j.lrp.2005.04.008

Bello, B. (2006). *No Title（表示不可能）*.

Berson, Y., Nemanich, L. A., Waldman, D. A., Galvin, B. M., & Keller, R. T. (2006). Leadership and organizational learning: A multiple levels perspective. *Leadership Quarterly*, *17*(6), 577–594. https://doi.org/10.1016/j.leaqua.2006.10.003

Bhattacherjee, A. (2012). Nomenclature for automated and mechanised analysis. In *Pure and Applied Chemistry* (Vol. 61, Issue 9). https://doi.org/10.1351/pac198961091657

Boa, K. B. (2007). *CHAPTER 5 STRATEGIC LEADERSHIP , ORGANIZATIONAL LEARNING , AND NETWORK TIES*. *4*(07), 69–86. https://doi.org/10.1016/S1479-3571(07)04004-7

Borau, S., El Akremi, A., Elgaaied-Gambier, L., Hamdi-Kidar, L., & Ranchoux, C. (2015). Analysing moderated mediation effects: Marketing applications. *Recherche et Applications En Marketing (English Edition)*, *30*(4), 88–128. https://doi.org/10.1177/2051570715606278

Bragdon, J., & Karash, R. (2002). Living-Asset Stewardship: How Organizational Learning Leads to Exceptional Market Returns. *Reflections: The SoL Journal*, *4*(1), 55–65. https://doi.org/10.1162/152417302320467562

Brass, D. J., & Butterfield, K. D. (2016). *Relationships and Unethical Behavior : A Social Network Perspective Author (s): Daniel J . Brass , Kenneth D . Butterfield and Bruce C . Skaggs Source : The Academy of Management Review , Vol . 23 , No . 1 (Jan ., 1998), pp . 14-31 Published by : Acad*. *23*(1), 14–31.

Brennan, M. J., & Cao, H. H. (1997). International portfolio investment flows. *Journal of Finance*, *52*(5), 1851–1880. https://doi.org/10.1111/j.1540-6261.1997.tb02744.x

Brown, D. T., Fee, C. E., & Thomas, S. E. (2009). Financial leverage and bargaining power with suppliers: Evidence from leveraged buyouts. *Journal of Corporate Finance*, *15*(2), 196–211. https://doi.org/10.1016/j.jcorpfin.2008.10.004

Bryman, A. (2004). *Leadership and Corporate Culture*.

Bryman, A., & Stephens, M. (1996). *HE IMPO RT ANC E O F C O NT EXT Q UALIT AT RESEARC H AND HE ST UDY O F LEADERSHIP*. *7*(3), 353–370.

Buchko, A. A. (1994). Conceptualization and Measurement of Environmental Uncertainty : An Assessment of the Miles and Snow Perceived Environmental Uncertainty Scale Author (s): Aaron A . Buchko Source : The Academy of Management Journal , Vol . 37 , No . 2 (Apr ., 1994), p. *Academy of Management Journal*, *37*(2), 410–425.

Burrell, G., & Morgan, G. (2019). Assumptions about the Nature of Social Science. *Sociological Paradigms and Organisational Analysis*, 1–9. https://doi.org/10.4324/9781315609751-1

C. Marlene Fiol and Marjorie A. Lyles. (2006). Linked references are available on JSTOR for this article. *Academy of Management Review*, *31*(2), 386–408.

Calabrese, L., Mutebi, F. G., & Parra, M. M. (2019). *INDUSTRIAL DEVELOPMENT IN UGANDA An assessment of the policy framework*. *December*.

Cangelosi, V. E., & Dill, W. R. (2016). *Organizational Learning : Observations Toward a Theory Linked references are available on JSTOR for this article : Organizational Learning : Observations Toward a Theory*. *10*(2), 175–203.

Cano, J., Garton, B. L., & Raven, M. R. (1992). Learning Styles, Teaching Styles And Personality Styles Of Preservice Teachers Of Agricultural Education. *Journal of Agricultural Education*, *33*(1), 46–52. https://doi.org/10.5032/jae.1992.01046

Carnahan, S., Agarwal, R., & Campbell, B. (2017). The Effect of Firm Compensation Structures on the Mobility and Entrepreneurship of Extreme Performers. *Business*, *1154*(March), 1–43. https://doi.org/10.1002/smj

Carvalho, A. M., Sampaio, P., Rebentisch, E., Carvalho, J. Á., & Saraiva, P. (2019). Operational excellence, organisational culture and agility: the missing link? *Total Quality Management and Business Excellence*, *30*(13–14), 1495–1514. https://doi.org/10.1080/14783363.2017.1374833

Caylan, D. O., & District, A. (2014). *THE IMPORTANCE OF STRATEGIC LEADERSHIP FOR PORT MANAGEMENT : A DELPHI RESEARCH ON TOP MANAGERS OF*. 5–16. https://doi.org/10.20460/JGSM.2014815637

Chandra, P. (2016). *Competitiveness of Indian Manufacturing : Findings of the Third National Manufacturing Survey 2009 Competitiveness of Indian Manufacturing : Findings of the Third National Manufacturing Survey by : Professor of Operations & Technology Management and India*. *February*. https://doi.org/10.13140/RG.2.1.1786.2166

Chaudhuri, S., Ray, S., & Ray, S. (1997). *The Competitiveness Conundrum : Literature Review and Reflections The Competitiveness Conuncdrum*. *32*(48).

Child, J. (1972). Organizational structure, Enviroment and performance: The role of Strategic Choice. *Sociology*, *6*(1), 1–22.

Chin, T. A., Hamid, A. B. A., Rasli, A., & Tat, H. H. (2014). A Literature Analysis on the Relationship between External Integration, Environmental Uncertainty and Firm Performance in Malaysian SMEs. *Procedia - Social and Behavioral Sciences*, *130*, 75–84. https://doi.org/10.1016/j.sbspro.2014.04.010

Christian, D. S., P, A., & Piggot. (2015). Provided by the author(s) and University College Dublin Library in accordance with publisher policies. Please cite the published version when available. *Psychology of Sport & Exercise*, *16*(1), 3–14.

Clarke, G. R. G. (2012). *Munich Personal RePEc Archive Manufacturing firms in Africa : Some stylized facts about wages and productivity Manufacturing Firms in Africa : Some Stylized Facts about Wages and Productivity*. *36122*, 0–39.

Coad, A., Holm, J. R., Krafft, J., & Quatraro, F. (2018). *Firm age and performance*. 1–11. https://doi.org/10.1007/s00191-017-0532-6

Coker, C., Greene, E., Shao, J., Enclave, D., Tula, R., Marg, R., Jones, L., Hameiri, S., Cansu, E. E., Initiative, R., Maritime, C., Road, S., Çelik, A., Yaman, H., Turan, S., Kara, A., Kara, F., Zhu, B., Qu, X., … Tang, S. (2018). COMPETITIVENESS IN THE TELECOMMUNICATION SECTOR IN KENYA USING PORTERS FIVE FORCES MODEL. *Transcommunication*, *53*(1), 1–8. http://www.tfd.org.tw/opencms/english/about/background.html%0Ahttp://dx.doi.org/10.1016/j.cirp.2016.06.001%0Ahttp://dx.doi.org/10.1016/j.powtec.2016.12.055%0Ahttps://doi.org/10.1016/j.ijfatigue.2019.02.006%0Ahttps://doi.org/10.1016/j.matlet.2019.04.024%0A

Crestani, A. H., de Moraes, A. B., & de Souza, A. P. R. (2017). Content validation: Clarity/relevance, reliability and internal consistency of enunciative signs of language acquisition. *Codas*, *29*(4), 1–6. https://doi.org/10.1590/2317-1782/201720160180

Creswell, J.W. and Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297–334. https://doi.org/10.1007/BF02310555

Daniel, E. (2016). The Usefulness of Qualitative and Quantitative Approaches and Methods in Researching Problem-Solving Ability in Science Education Curriculum. *Journal of Education and Practice*, *7*(15), 91–100. https://doi.org/2222-288X

Darroch, J. (2005). Knowledge management, innovation and firm performance. *Journal of Knowledge Management*, *9*(3), 101–115. https://doi.org/10.1108/13673270510602809

Davies, B. J., & Davies, B. (2004). Strategic leadership. *School Leadership and Management*, *24*(1), 29–38. https://doi.org/10.1080/1363243042000172804

de Medeiros, S. A., Magalhães Christino, J. M., Gonçalves, C. A., & Gonçalves, M. A. (2020). Relationships among dynamic capabilities dimensions in building competitive advantage: A conceptual model. *Gestao e Producao*, *27*(1), 1–15. https://doi.org/10.1590/0104-530X3680-20

Delİce, A. (2001). The sampling issues in quantitative research. *Educational Sciences: Theory & Practices*, *10*(4), 2001–2019.

Devi, S., & Mahajans, D. R. (2019). Impact of Transformational Leadership on Employee Engagement. *International Journal of Psychosocial Rehabilitation*, *23*(4), 1107–1116. https://doi.org/10.37200/ijpr/v23i4/pr190437

Díaz-Chao, Á., Sainz-González, J., & Torrent-Sellens, J. (2016). The competitiveness of small network-firm: A practical tool. *Journal of Business Research*, *69*(5), 1769–1774. https://doi.org/10.1016/j.jbusres.2015.10.053

Dickson, M. (2003). Research on leadership in a cross-cultural context: Making progress, and raising new questions. *The Leadership Quarterly*, *14*, 729–768. https://doi.org/10.1016/j.lequa.2003.09.002

Dikko, M. (2016). Establishing construct validity and reliability: Pilot testing of a qualitative interview for research in takaful (Islamic insurance). *Qualitative Report*, *21*(3), 521–528. https://doi.org/10.46743/2160-3715/2016.2243

Dobbs, M. E. (2014). Guidelines for applying Porter's five forces framework: A set of industry analysis templates. *Competitiveness Review*, *24*(1), 32–45. https://doi.org/10.1108/CR-06-2013-0059

Doellgast, V. (2008). Collective bargaining and high-involvement management in comparative perspective: Evidence from U.S. and German call centers. *Industrial Relations*, *47*(2), 284–319. https://doi.org/10.1111/j.1468-232X.2008.00521.x

Edeh, E., Lo, W.-J., & Khojasteh, J. (2023). Review of Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook. In *Structural Equation Modeling: A Multidisciplinary Journal* (Vol. 30, Issue 1). https://doi.org/10.1080/10705511.2022.2108813

Egri, C. P., & Herman, S. (2000). Leadership in the North American Environmental Sector : Values , Leadership Styles , and Contexts of Environmental Leaders and Their Organizations Author (s): Carolyn P . Egri and Susan Herman Source : The Academy of Management Journal , Vol . 43 , No . *Academy of Management Journal*, *43*(4), 571–604.

Egwakhe, J. A., & Adeoye, I. (2019). *Strategic Leadership Dimensions and Competitive Advantage : Perspective of Service Firms in Lagos and Ogun States , Nigeria Strategic Leadership Dimensions and Competitive Advantage : Perspective of Service Firms in Lagos and Ogun States , Nigeria*. *May*.

Ellström, P. E. (2010). Organizational learning. *International Encyclopedia of Education*, 47–52. https://doi.org/10.1016/B978-0-08-044894-7.00006-3

Etim, E. O. (2019). Management Accounting System, Perceived Environmental Uncertainty and Corporate Performance in the Nigeria Breweries Sector. *Archives of Business Research*, *7*(7), 255–268. https://doi.org/10.14738/abr.77.6550

Evans, L. (2007). The learning organization. *Web-Weaving: Intranets, Extranets and Strategic Alliances*, *59*(3), 47–54. https://doi.org/10.1515/cks-2016-0005

Falciola, J., Jansen, M., & Rollo, V. (2020). Defining firm competitiveness: A multidimensional framework. *World Development*, *129*, 104857. https://doi.org/10.1016/j.worlddev.2019.104857

Fang, Y. H., Chiu, C. M., & Wang, E. T. G. (2011). Understanding customers' satisfaction and repurchase intentions: An integration of IS success model, trust, and justice. *Internet Research*, *21*(4), 479–503. https://doi.org/10.1108/10662241111158335

Farrell, J., & Klemperer, P. (2011). Coordination and Lock-In: Competition with Switching Costs and Network Effects. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.917785

Fay, D. L. (2012). 済無No Title No Title No Title. *Angewandte Chemie International Edition, 6(11), 951–952.*, *36*(3), 787–810.

Fiedler, F. E. (2016). *The Effects of Leadership Training and Experience : A Contingency Model Interpretation Author (s): Fred E . Fiedler Published by : Sage Publications , Inc . on behalf of the Johnson Graduate School of Management , Stable URL : http://www.jstor.org/stabl*. *17*(4), 453–470.

Fitza, M. A. (2017). How much do CEOs really matter? Reaffirming that the CEO effect is mostly due to chance. *Strategic Management Journal*, *38*(3), 802–811. https://doi.org/10.1002/smj.2597

Führer, C., & Michel, J. (2004). An Empirical Study of Firm Size and Competitiveness in German Life Insurance. *Zeitschrift Für Die Gesamte Versicherungswissenschaft*, *93*(2), 251–267. https://doi.org/10.1007/bf03191410

Fukunishi, T. (2014). *International Competitiveness of Manufacturing Firms in sub-Saharan Africa*. *May*.

Gehlhar, M., Regmi, A., Stefanou, S. E., & Zoumas, B. (2006). *Managing Firm Competitiveness in Global Markets Managing Firm Competitiveness in Global Markets*. 1–13.

GHISELLI, E. E. (1955). A Scale for the Measurement of Initiative. *Personnel Psychology*, *8*(2), 157–164. https://doi.org/10.1111/j.1744-6570.1955.tb01195.x

Gime, C. (2007). *Drivers and sources of supply flexibility : an exploratory study*. https://doi.org/10.1108/01443570710820657

Goh, S. C., Elliott, C., & Quon, T. K. (2012). The relationship between learning capability and organizational performance: A meta-analytic examination. *The Learning Organization*, *19*(2), 92–108. https://doi.org/10.1108/09696471211201461

Golooba-mutebi, F. (2019). *An assessment of the policy framework Linda Calabrese , Frederick Golooba - Mutebi and Maximiliano Mendez - Parra*. *May 2020*. https://doi.org/10.13140/RG.2.2.24594.89285

Gul, F. A., & Chia, Y. M. (1994). The effects of management accounting systems, perceived environmental uncertainty and decentralization on managerial performance: A test of three-way interaction. *Accounting, Organizations and Society*, *19*(4–5), 413–426. https://doi.org/10.1016/0361-3682(94)90005-1

Hagen, A. F. (1998). *Critical strategic leadership components: An empirical investigation*.

Henricsson, J. P. E. P. E., Ericsson, S., Flanagan, F., Jewell, & Flanagan, J. (2004). Rethinking Competitiveness for the Construction Industry. *Association of Researchers in Construction Management*, *1*(September), 1–3.

Hitt, M. A. (2001). Direct and Moderating Effects of Human Capital on Strategy and Performance in Professional Service Firms : A Resource-Based Perspective Author (s): Michael A . Hitt , Leonard Bierman , Katsuhiko Shimizu and Rahul Kochhar Source : The Academy of Manageme. *Academy of Management Journal*, *44*(1), 13–28.

Hitt, M. A., Haynes, K. T., & Serpa, R. (2010). Strategic leadership for the 21 century. *Business Horizons*, *53*(5), 437–444. https://doi.org/10.1016/j.bushor.2010.05.004

Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2008). The Management Of Strategy: Concepts and Cases. In *Nelson Education Ltd.* (Vol. 42, Issue 4).

Holan, P. M., & Phillips, N. (2004). Organizational forgetting as strategy. *Strategic Organization*, *2*(4), 423–433. https://doi.org/10.1177/1476127004047620

Hong, A. H., & Sullivan, F. R. (2013). Towards an idea-centered, principle-base design to as creation approach support learning knowledge. *Educational Technology Research and Development*, *57*(5), 613–627. https://doi.org/10.1007/sl

House, Q. E. (2001). *Competitiveness Indices and Developing Countries : An Economic Evaluation of the Global Competitiveness Report*. *29*(9).

Hsu, Y. H., & Fang, W. (2009). Intellectual capital and new product development performance: The mediating role of organizational learning capability. *Technological Forecasting and Social Change*, *76*(5), 664–677. https://doi.org/10.1016/j.techfore.2008.03.012

Huber, G. P. (1991). *George P. Huber*. *2*(1), 88–115.

Hult, G. T. M., Ketchen, D. J., & Nichols, E. L. (2003). Organizational learning as a strategic resource in supply management. *Journal of Operations Management*, *21*(5), 541–556. https://doi.org/10.1016/j.jom.2003.02.001

Iborra, M., Safón, V., & Dolz, C. (2019). Chapter 6 Strategic Responsiveness of Medium-sized Enterprises During an Economic and Financial Crisis: Antecedents of Resilience. *Strategic Responsiveness and Adaptive Organizations: New Research Frontiers in International Strategic Management*, 81–95. https://doi.org/10.1108/978-1-78973-011-120191006

Idowu, A. (2013). Organizational Learning , Innovativeness and Financial Performance of Small And Medium Enterprises (Smes) In Nigeria. *European Journal of Business and Managemen*, *5*(2), 179–187.

Inderst, R. (2003). *Bargaining , Mergers , and Technology Choice in Bilaterally Oligopolistic Industries Author (s): Roman Inderst and Christian Wey Published by : Wiley on behalf of RAND Corporation Stable URL : http://www.jstor.org/stable/3087440 Bargaining , mergers , a*. *34*(1), 1–19.

Ireland, R. D., & Hitt, M. A. (1999). Achieving and maintaining strategic competitiveness in the 21st century: The role of strategic leadership. *IEEE Engineering Management Review*, *27*(4), 51–64. https://doi.org/10.5465/ame.1999.1567311

Ireland, R. D., & Hitt, M. A. (2005). Achieving and maintaining strategic competitiveness in the 21st century: The role of trategic leadership. *Academy of Management Executive*, *19*(4), 63–77. https://doi.org/10.5465/AME.2005.19417908

Jaleha, A. A., & Machuki, V. N. (2018). Strategic Leadership and Organizational Performance: A Critical Review of Literature. *European Scientific Journal ESJ*, *14*(35). https://doi.org/10.19044/esj.2018.v14n35p124

Jansen, J. J. P., Vera, D., & Crossan, M. (2009). Strategic leadership for exploration and exploitation: The moderating role of environmental dynamism. *Leadership Quarterly*, *20*(1), 5–18. https://doi.org/10.1016/j.leaqua.2008.11.008

Jardioui, M., Garengo, P., & El Alami, S. (2020). How organizational culture influences performance measurement systems in SMEs. *International Journal of Productivity and Performance Management*, *69*(2), 217–235. https://doi.org/10.1108/IJPPM-10-2018-0363

Jennex, M. E., & Diego, S. (2004). Handbook on Knowledge Management 1. *Handbook on Knowledge Management 1*, *February 2016*. https://doi.org/10.1007/978-3-540-24746-3

Jerez-Gómez, P., Céspedes-Lorente, J., & Valle-Cabrera, R. (2005). Organizational learning capability: A proposal of measurement. *Journal of Business Research*, *58*(6), 715–725. https://doi.org/10.1016/j.jbusres.2003.11.002

Jerez Gómez, P., Céspedes Lorente, J. J., & Valle Cabrera, R. (2004). Training practices and organisational learning capability: Relationship and implications. *Journal of European Industrial Training*, *28*, 234–256. https://doi.org/10.1108/03090590410527636

Jiang, G., Kotabe, M., Zhang, F., Hao, A. W., Paul, J., & Wang, C. L. (2020). The determinants and performance of early internationalizing firms: A literature review and research agenda. *International Business Review*, *29*(4). https://doi.org/10.1016/j.ibusrev.2019.101662

Jooste, C., & Fourie, B. (2009). The role of strategic leadership in effective strategy implementation: Perceptions of South African strategic leaders. *Southern African Business Review*, *13*(3), 51–68.

Joseph F. Hair, Marko Sarstedt, T. M. P. and C. M. R. (2012). *Oops ! It looks like you ' re in the wrong*.

Kabetu, D. G. (2018). Influence of strategic leadership on performance of international humanitarian organizations in Kenya. *International Academic Journal of Innovation, Leadership and Entrepreneurship*, *2*(2), 113–135.

Kadhim, R. I., Mohammed, M. A., & Gremikh, H. G. (2018). *Management Science Letters*. *8*, 903–912. https://doi.org/10.5267/j.msl.2018.6.008

Kafetzopoulos, D., Psomas, E., & Skalkos, D. (2019). Innovation dimensions and business performance under environmental uncertainty. *European Journal of Innovation Management*, *23*(5), 856–876. https://doi.org/10.1108/EJIM-07-2019-0197

Kagaari, J. R. K., Munene, J. C., & Ntayi, J. M. (2013). Agency relations and managed performance in public universities in Uganda. *SA Journal of Industrial Psychology*, *39*(1), 1–11. https://doi.org/10.4102/sajip.v39i1.916

KAGATHI, K. K. (2013). *STRATEGIC DECISION MAKING AT JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY KENYA*. *November*.

Kalmuk, G., & Acar, A. Z. (2015). The Mediating Role of Organizational Learning Capability on the Relationship Between Innovation and Firm's Performance: A Conceptual Framework. *Procedia - Social and Behavioral Sciences*, *210*, 164–169. https://doi.org/10.1016/j.sbspro.2015.11.355

Kamya, M. T., & Ntayi, J. M. (2011). *Organisational learning and competitive advantage : Testing for the interacting influence of knowledge management and innovation Organisational learning and competitive advantage : testing for the interacting influence of knowledge management and innovati*. *October*. https://doi.org/10.1504/IJIL.2011.043097

Kandemir, D., & Hult, G. T. M. (2005). A conceptualization of an organizational learning culture in international joint ventures. *Industrial Marketing Management*, *34*(5), 430–439. https://doi.org/10.1016/j.indmarman.2004.10.002

Kandie, P. Y. (2001). *A study of the strategic responses by Telkom Kenya Limited in a competitive environment*. http://erepository.uonbi.ac.ke/handle/11295/103802%0Ahttp://erepository.uonbi.ac.ke/bitstream/handle/11295/103802/KANDIE_PAUL_YATICH_MBA_2001.pdf?sequence=4

Kaya, R., Öncü, M. A., & Mescİ, M. (2020). *Journal of Economy Culture and Society The Mediating Effect of Organizational Learning on the Relationship between the Cost Leadership Strategy and Business Performance : A Study on Travel Agencies* *. 323–343. https://doi.org/10.26650/JECS2020-0085

Khandekar, A., & Sharma, A. (2006). Organizational learning and performance: Understanding Indian scenario in present global context. *Education and Training*, *48*(8–9), 682–692. https://doi.org/10.1108/00400910610710092

Khurshid, M. M., Shafique, M. N., & Ahmad, H. (2016). Do or Die: A challenging state of for strategic leaders in globalization. *Journal of Contemporary Management Sciences*, *2*(2), 127–150.

Kia, N., Halvorsen, B., & Bartram, T. (2019). Ethical leadership and employee in-role performance: The mediating roles of organisational identification, customer orientation, service climate, and ethical climate. *Personnel Review*, *48*(7), 1716–1733. https://doi.org/10.1108/PR-12-2018-0514

Kim, M. S., & Thapa, B. (2018). Relationship of ethical leadership, corporate social responsibility and organizational performance. *Sustainability (Switzerland)*, *10*(2). https://doi.org/10.3390/su10020447

Kitonga D.K. (2017). *STRATEGIC LEADERSHIP PRACTICES AND ORGANIZATIONAL PERFORMANCE IN NOT-FOR-PROFIT ORGANIZATIONS IN NAIROBI COUNTY IN KENYA (Business Administration) JOMO KENYATTA UNIVERSITY OF*.

Kiveu, M. N., Namusonge, M., & Muathe, S. (2019). Effect of innovation on firm competitiveness: The case of manufacturing SMEs in Nairobi County, Kenya. *International Journal of Business Innovation and Research*, *18*(3), 307–327. https://doi.org/10.1504/IJBIR.2019.098251

Kivunja, C., & Kuyini, A. B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, *6*(5), 26. https://doi.org/10.5430/ijhe.v6n5p26

Knight, S. A., & Cross, D. (2012). Using contextual constructs model to frame doctoral research methodology. *International Journal of Doctoral Studies*, *7*, 39–62. https://doi.org/10.28945/1559

Kofman, F., & Senge, P. (2001). *Communities and commitments: The heart of learning organizations*. http://ac.els-cdn.com.ezp3.lib.umn.edu/009026169390050B/1-s2.0-009026169390050B-main.pdf?_tid=4515f066-0786-11e7-abe7-00000aab0f6b&acdnat=1489366072_42acbffc399deb6cb96b8643d839363f

Köseoglu, M. A., Topaloglu, C., Parnell, J. A., & Lester, D. L. (2013). Linkages among business strategy, uncertainty and performance in the hospitality industry: Evidence from an emerging economy. *International Journal of Hospitality Management*, *34*(1), 81–91. https://doi.org/10.1016/j.ijhm.2013.03.001

Kostadinović, I., & Stanković, S. (2021). Organizational Learning and Innovation in the Tourism Industry as a Basis for Creating Value for Tourists. *Economic Themes*, *59*(1), 153–172. https://doi.org/10.2478/ethemes-2021-0009

Kraśnicka, T., Głód, W., & Wronka-Pośpiech, M. (2018). Management innovation, pro-innovation organisational culture and enterprise performance: testing the mediation effect. *Review of Managerial Science*, *12*(3), 737–769. https://doi.org/10.1007/s11846-017-0229-0

Kyu Kim, K., Yul Ryoo, S., & Dug Jung, M. (2011). Inter-organizational information systems visibility in buyer-supplier relationships: The case of telecommunication equipment component manufacturing industry. *Omega*, *39*(6), 667–676. https://doi.org/10.1016/j.omega.2011.01.008

Lalinsky, T. (2015). Firm Competitiveness Determinants: Results of a Panel Data Analysis. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2548947

Lau, L. J. (1994). The Competitive Advantage of Taiwan. *Asia Pacific Business Review*, *1*(1), 90–112. https://doi.org/10.1080/13602389400000006

Laureti, T., & Viviani, A. (2011). Competitiveness and productivity: A case study of Italian firms. *Applied Economics*, *43*(20), 2615–2625. https://doi.org/10.1080/00036840903357439

Lear, L. W. (2012). *The relationship between strategic leadership and strategic alignment in high-performing companies in South Africa*. *February*.

Lee, S. Y., & Klassen, R. D. (2016). Firms' Response to Climate Change: The Interplay of Business Uncertainty and Organizational Capabilities. *Business Strategy and the Environment*, *25*(8), 577–592. https://doi.org/10.1002/bse.1890

Leguina, A. (2015). A primer on partial least squares structural equation modeling (PLS-SEM). *International Journal of Research & Method in Education*, *38*(2), 220–221. https://doi.org/10.1080/1743727x.2015.1005806

Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, *21*(3), 243–255. https://doi.org/10.1016/j.hrmr.2010.07.001

Leonidou, L. C., Fotiadis, T. A., Christodoulides, P., Spyropoulou, S., & Katsikeas, C. S. (2015). Environmentally friendly export business strategy: Its determinants and effects on competitive advantage and performance. *International Business Review*, *24*(5), 798–811. https://doi.org/10.1016/j.ibusrev.2015.02.001

Liao, S. H., Chen, C. C., Hu, D. C., Chung, Y. C., & Liu, C. L. (2017). Assessing the influence of leadership style, organizational learning and organizational innovation. *Leadership and Organization Development Journal*, *38*(5), 590–609. https://doi.org/10.1108/LODJ-11-2015-0261

Liargovas, P. G., & Skandalis, K. S. (2012). The impact of leverage and other key variables on business performance: evidence from Greece. *International Journal of Economics and Business Research*, *4*(4), 472. https://doi.org/10.1504/ijebr.2012.047423

Liargovas, P., & Skandalis, K. (2004). Factors Affecting Firm Competitiveness: The Case of Greek Industry. *Research Paper University of Peloponnese, Department of Economics*, 1–29. http://www.lse.ac.uk/europeanInstitute/research/hellenicObservatory/pdf/3rd_Symposium/PAPERS/SKANDALIS_KONSTANTINOS.pdf

Licsandru, T. C., & Cui, C. C. (2019). Ethnic marketing to the global millennial consumers: Challenges and opportunities. *Journal of Business Research*, *103*(February), 261–274. https://doi.org/10.1016/j.jbusres.2019.01.052

Liu, C. H. (2017). The relationships among intellectual capital, social capital, and performance - The moderating role of business ties and environmental uncertainty. *Tourism Management*, *61*, 553–561. https://doi.org/10.1016/j.tourman.2017.03.017

Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance Author (s): G . T . Lumpkin and Gregory G . Dess Published by : Academy of Management Stable URL : http://www.jstor.com/stable/258632 REFERENCES Linked references are ava. *Academy of Management Review*, *21*(1), 135–172.

Madhavaram, S. R., & Hunt, S. D. (2008). *Madhavaram and Hunt 2008*.

Madinda, A. S. (2015). the Uncertainty of Organizational Environment in Developing Countries. *Researchgate.Net*, *January 2014*, 774–782. https://www.researchgate.net/profile/Alexander_Madinda/publication/283052983_THE_UNCERTAINTY_OF_ORGANIZATIONAL_ENVIRONMENT_IN_DEVELOPING_COUNTRIES/links/5627b0e408aee6327230d5ff/THE-UNCERTAINTY-OF-ORGANIZATIONAL-ENVIRONMENT-IN-DEVELOPING-COUNTRIES.pdf

Mahdi, O. R., & Almsafir, M. K. (2014). The Role of Strategic Leadership in Building Sustainable Competitive Advantage in the Academic Environment. *Procedia - Social and Behavioral Sciences*, *129*, 289–296. https://doi.org/10.1016/j.sbspro.2014.03.679

Mahmood Hosseini, S., Azizi, S., & Sheikhi, N. (2012). An Investigation on the Effect of Supply Chain Integration on Competitive Capability: An Empirical Analysis of Iranian Food Industry. *International Journal of Business and Management*, *7*(5). https://doi.org/10.5539/ijbm.v7n5p73

Malewska, K., & Sajdak, M. (2014). The Intuitive Manager and the Concept of Strategic Leadership. *Management*, *18*(2), 44–58. https://doi.org/10.2478/manment-2014-0041

Malter, A. J., & Dickson, P. R. (2001). The effect of individual learning on competitive decision-making and firm performance. *International Journal of Research in Marketing*, *18*(1–2), 99–117. https://doi.org/10.1016/S0167-8116(01)00034-9

Management, S., & Makori, N. N. (2019). *Effect Of Strategic Direction On Strategy Implementation At The Selected Multinational Effect Of Strategic Direction On Strategy Implementation At The Selected MultinationaL*. *4*(5), 16–31.

Manley, L. (2015). of Governance and Regulation. *Journal of Governance and Regulation*, *4*(4), 3–90.

Margaret Oloko, Enos Bernabas Anene, Patrick Gitonga Kiara, Irene Kathambi, J. M. (2021). *Marketing Strategies for Profitability: A Case of Safaricom Ltd in Kenya Telecommunication Industry*. *11*(10).

Martin G Evans. (1996). R.J. House's "A Path Goal Theory of Leader Effectiveness." *Leadership Quarterly*, *7*(3), 305–309.

Maurer, T. J., & Lord, R. G. (1991). An Exploration of Cognitive Demands in Group Interaction as a Moderator of Information Processing Variables in Perceptions of Leadership. *Journal of Applied Social Psychology*, *21*(10), 821–839. https://doi.org/10.1111/j.1559-1816.1991.tb00445.x

Mauri, A. J., & Michaels, M. P. (1998). Firm and industry effects within strategic management: An empirical examination. *Strategic Management Journal*, *19*(3), 211–219. https://doi.org/10.1002/(SICI)1097-0266(199803)19:3<211::AID-SMJ947>3.0.CO;2-T

McDade, B. E., & Spring, A. (2005). The "new generation of African entrepreneurs": Networking to change the climate for business and private sector-led development. *Entrepreneurship and Regional Development*, *17*(1), 17–42. https://doi.org/10.1080/0898562042000310714

Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. (1978). Organizational Strategy, Structure, and Process The Academy of Management Review Organizational Strategy, Structure, and Process1. *Source: The Academy of Management Review*, *3*(3), 546–562.

Milliken, F. J. (1987). Uncertainty Published by : Academy of Management Linked references are available on JSTOR for this article : Three Types of Perceived Uncertainty About the Environment : State , Effect , and Response Uncertainty. *Academy of Management Review*, *12*(1), 133–143.

Milliken, F. J. (1990). Perceiving and Interpreting Environmental Change: An Examination of College Administrators' Interpretation of Changing Demographics. *Academy of Management Journal*, *33*(1), 42–63. https://doi.org/10.5465/256351

Moen, Ø. (1999). The relationship between firm size, competitive advantages and export performance revisited. *International Small Business Journal*, *18*(1), 53–72. https://doi.org/10.1177/0266242699181003

Moon, H., & Lee, C. (2015). Strategic learning capability: through the lens of environmental jolts. *European Journal of Training and Development*, *39*(7), 628–640. https://doi.org/10.1108/EJTD-07-2014-0055

Mung'atia, A. (2019). Effect of Strategic Intent of Patient Relationship Management on the Competitiveness of Public Health Facilities in Kilifi County, Kenya. *The International Journal of Business & Management*, *7*(7). https://doi.org/10.24940/theijbm/2019/v7/i7/bm1907-038

Muwanguzi, A. J. B., Olowo, P., Guloba, A., & Muvawala, J. (2018). Industrialisation as a Vehicle for Uganda to Achieve a 1st World Economy by 2040: A Review of Uganda's Industrialisation Efforts. *American Journal of Industrial and Business Management*, *08*(03), 496–513. https://doi.org/10.4236/ajibm.2018.83033

Nafula, K. M., & Ku, M. B. A. (2017). *Effect Of Innovation On Firm Competitiveness : A Study Of Small And Medium Enterprises In The Manufacturing Sector In Nairobi City County , Kenya A Thesis Submitted To The School Of Business In*.

Nagaaba, N. (2020). *Agile Enablers And Outcomes: Empirical Validation Of Agile Manufacturing Model In Developing Countries Context-Ugandan SME's Experience*. *5*(Ii), 1–21.

Namada, J. M. (2018a). Organizational learning and competitive advantage. *Handbook of Research on Knowledge Management for Contemporary Business Environments*, *May 2018*, 86–104. https://doi.org/10.4018/978-1-5225-3725-0.ch006

Namada, J. M. (2018b). Organizational learning and competitive advantage. *Handbook of Research on Knowledge Management for Contemporary Business Environments*, *1978*, 86–104. https://doi.org/10.4018/978-1-5225-3725-0.ch006

Namada, J. M. (2018c). Organizational learning and competitive advantage. *Handbook of Research on Knowledge Management for Contemporary Business Environments*, *August*, 86–104. https://doi.org/10.4018/978-1-5225-3725-0.ch006

Naranjo-Valencia, J. C., Jiménez-Jiménez, D., & Sanz-Valle, R. (2011). Innovation or imitation? The role of organizational culture. *Management Decision*, *49*(1), 55–72. https://doi.org/10.1108/00251741111094437

Nath, P., Nachiappan, S., & Ramanathan, R. (2010). The impact of marketing capability, operations capability and diversification strategy on performance: A resource-based view. *Industrial Marketing Management*, *39*(2), 317–329. https://doi.org/10.1016/j.indmarman.2008.09.001

Nemanich, L., Banks, M., & Vera, D. (2009). Enhancing Knowledge Transfer in Classroom Versus Online Settings: The Interplay Among Instructor, Student, Content, and Context. *Decision Sciences Journal of Innovative Education*, *7*(1), 123–148. https://doi.org/10.1111/j.1540-4609.2008.00208.x

Nguyen, O. T. K., Liu, L. Y. J., Haslam, J., Mclaren, J., Nguyen, O. T. K., Liu, L. Y. J., Haslam, J., & The, J. M. (2021). The Management of Operations The moderating effect of perceived environmental uncertainty and task uncertainty on the relationship between performance management system practices and organizational performance : evidence from Vietnam. *Production Planning & Control*, *0*(0), 1–20. https://doi.org/10.1080/09537287.2021.1934586

Nica, M., Grayson, M., & Gray, G. T. (2015). Taxonomy of the determinants of entrepreneurial activity. *Journal of Economics and Economic Education Research*, *16*(3), 119–144.

Nicholson, J., & Howard, K. (2018). A Study of Core Competencies for Supporting Roles in Engagement and Impact Assessment in Australia. *Journal of the Australian Library and Information Association*, *67*(2), 131–146. https://doi.org/10.1080/24750158.2018.1473907

Odita, A. O., & Bello, A. (2015). Strategic Intent and Organizational Performance A Study of Banks in Asaba , Delta State Nigeria. *Information and Knowledge Management*, *5*(4), 60–72.

Odor, H. O. (2018). Organisational Culture and Dynamics. *International Journal of Scientific Research and Management*, *18*(1), 23–29.

Ofunya Afande, F., & Mathenge Paul Maina, F. (2015). Effect of Promotional Mix Elements on Sales Volume of Financial Institutions in Kenya: Case Study of Kenya Post Office Savings Bank. *Journal of Marketing and Consumer Research Journal*, *11*, 64–92.

Olaka, M. H., Lewa, P. P., & Kiriri, D. P. (2017). Strategic Leadership and Strategy Implementation in Commercial Banks in Kenya. *Journal of Strategic Management*, *2*(1), 70. https://doi.org/10.47672/jsm.285

OLIVER SCHILKE. (2014). 済無No Title No Title No Title. *Angewandte Chemie International Edition, 6(11), 951–952.*, *28*(4), 368–380.

Omotayo, O., Michael, O., & Andre, A. (2018). Strategic Planning and Corporate Performance in the Nigerian Banking Industry. *Asian Journal of Economics, Business and Accounting*, *7*(2), 1–12. https://doi.org/10.9734/ajeba/2018/36118

Paper, C., & Amani, A. (2016). *Investigation of the Relationship between Differentiation Strategies & Cost Leadership and Organizational Learning*. *December*.

Peter Ayeni, Peter Ball, T. B. (2010). 기사 (Article) 와 안내문 (Information) [. *The Eletronic Library*, *34*(1), 1–5.

Petrus, B. (2019). Environmental dynamism: the implications for operational and dynamic capabilities effects. *Management Sciences*, *24*(1), 28–36. https://doi.org/10.15611/ms.2019.1.04

Philippon, G. G. and T. (2018). *Author (s): Germán Gutiérrez and Thomas Philippon Published by : American Economic Association Linked references are available on JSTOR for this article : Ownership , Concentration , and Investment*. *108*(May).

Pittman, J., & Bakas, T. (2010). Measurement and instrument design. *Journal of Wound, Ostomy and Continence Nursing*, *37*(6), 603–607. https://doi.org/10.1097/WON.0b013e3181f90a60

Podsakoff, P. M. (1993). *Do substitutes for leadership really substitute for leadership.pdf*.

Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, *14*(1), 15–34. https://doi.org/10.1177/089124240001400105

Porter, M., & Siggelkow, N. (2008). Contextuality within activity systems and sustainability of competitive advantage. *Academy of Management Perspectives*, *22*(2), 34–56. https://doi.org/10.5465/AMP.2008.32739758

Prahalad, C. K., & Hamel, G. (1994). Strategy as a Field of Study: Why Search for a New Paradigm? C. K. Prahalad; Gary Hamel Strategic Management Journal, Vol. 15, Special Issue: Strategy: Search for New Paradigms. (Summer, 1994), pp. 5-16. *Search*, *15*, 5–16.

Princess, H., Agwu, E., Ohaegbu, A. V., & Agumadu, M. (2018). Strategic Implications of Glass Ceiling on the Professional Leadership of Career Women Development in the West African Sub-Region. *SSRN Electronic Journal*, *January 2016*. https://doi.org/10.2139/ssrn.3122437

Public, U. (2020). *BUSINESS IMPACT*.

Rahmawati, A. S., & Dewi, R. P. (2020). View metadata, citation and similar papers at core.ac.uk. *Pengaruh Penggunaan Pasta Labu Kuning (Cucurbita Moschata) Untuk Substitusi Tepung Terigu Dengan Penambahan Tepung Angkak Dalam Pembuatan Mie Kering*, *3*, 274–282.

Raj, R., & Srivastava, K. B. L. (2013). The Mediating Role of Organizational Learning on the Relationship among Organizational Culture, HRM Practices and Innovativeness. *Management and Labour Studies*, *38*(3), 201–223. https://doi.org/10.1177/0258042x13509738

Real, J. C., Roldán, J. L., & Leal, A. (2014). From entrepreneurial orientation and learning orientation to business performance: Analysing the mediating role of organizational learning and the moderating effects of organizational size. *British Journal of Management*, *25*(2), 186–208. https://doi.org/10.1111/j.1467-8551.2012.00848.x

Report, S. O. (2012). Skills for Competitiveness A Synthesis Report. *Report*.

Rezaei, A., Allameh, S. M., & Ansari, R. (2018). Impact of knowledge creation and organisational learning on organisational innovation: An empirical investigation. *International Journal of Business Innovation and Research*, *16*(1), 117–133. https://doi.org/10.1504/IJBIR.2018.091087

Ricciardi, F., Cantino, V., & Rossignoli, C. (2019). Organisational learning for the common good: an emerging model. *Knowledge Management Research and Practice*, *00*(00), 1–14. https://doi.org/10.1080/14778238.2019.1673676

Rohof, J. W. (2013). *Strategic choice theory in purchasing*. http://essay.utwente.nl/74678/

Rosli, M. M., & Sidek, S. (2013). The Impact of Innovation on the Performance of Small and Medium Manufacturing Enterprises: Evidence from Malaysia. *Journal of Innovation Management in Small & Medium Enterprise*, *April 2020*, 1–16. https://doi.org/10.5171/2013.885666

Rotemberg, J. J., Saloner, G., & Rotemberg, J. J. (2016). *Visionaries , Managers , and Strategic Direction Published by : Wiley on behalf of RAND Corporation Stable URL : http://www.jstor.org/stable/2696355 Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use , available at Vi*. *31*(4), 693–716.

Ryan, A. M., & Powers, C. (2012). Workplace Diversity. *The Oxford Handbook of Personnel Assessment and Selection*. https://doi.org/10.1093/oxfordhb/9780199732579.013.0035

Sahadev, S. (2008). Economic satisfaction and relationship commitment in channels: The moderating role of environmental uncertainty, collaborative communication and coordination strategy. *European Journal of Marketing*, *42*(1–2), 178–195. https://doi.org/10.1108/03090560810840961

Sahlan, R. N., Saunders, J. F., Fitzsimmons-Craft, E. E., & Taravatrooy, F. (2020). The validity and reliability of the Farsi version of the Body, Eating, and Exercise Comparison Orientation Measure (F-BEECOM) among Iranian male and female students. *Body Image*, *34*, 72–84. https://doi.org/10.1016/j.bodyim.2020.05.006

Sambamurthy, V., Ko, D., & Purvis, R. L. (2016). *Controlling Information Systems Development Projects : The View from the Client Author (s): Laurie J . Kirsch , V . Sambamurthy , Dong-Gil Ko and Russell L . Purvis Published by : INFORMS Stable URL : http://www.jstor.org/stable/822547 REFERENCES Linked*. *48*(4), 484–498.

Santos-vijande, M. L., López-sánchez, J. Á., & Antonio, J. (2012). *How organizational learning affects a fi rm ' s fl exibility , competitive strategy , and performance ☆*. *65*, 1079–1089. https://doi.org/10.1016/j.jbusres.2011.09.002

Sarmah, H. K., Bora Hazarika, B., & Choudhury, G. (2013). an Investigation on Effect of Bias on Determination of Sample Size onthe Basis of Data Related To the Students of Schools of Guwahat. *International Journal of Applied Mathematics and Statistical Sciences*, *2*(1), 33–48. https://www.researchgate.net/publication/303014899

Sarpong, P., Odoi, A., Akenten, W. N., & Adu, S. (2018). Strategic Leadership and Why is it is Critical for Businesses/Organizations in Ghana. *Mechanism of an Economic Regulation*, *3*(81). https://doi.org/10.21272/mer.2018.81.04

Schulz, S. A., & Flanigan, R. L. (2016). Developing competitive advantage using the triple bottom line: a conceptual framework. *Journal of Business and Industrial Marketing*, *31*(4), 449–458. https://doi.org/10.1108/JBIM-08-2014-0150

Schumpeter, J. (1950). *"Creative Destruction."*

Serfontein, J. J. (2010). The Impact of Strategic Leadership on the Operational Strategy and Performance of Business Organizations in South Africa. *Journal of Modern African Studies*, *2*(2), 98–105.

Shamir, Boas; House, Robert J.; Arthur, M. B. (1993). The Motivational Effects of Charismatic Leadership : A Self-Concept Based Theory Author (s): Boas Shamir , Robert J . House and Michael B . Arthur Published by : INFORMS Stable URL : https://www.jstor.org/stable/2635081. *The Institute of Management Sciences*, *4*(4), 577–594.

Shrestha, M. (2019). Contribution of Job Nature on Leadership Style among Academia. *SEISENSE Journal of Management*, *2*(4), 1–13. https://doi.org/10.33215/sjom.v2i4.156

Simon, H. A. (1991). *Bounded Rationality and Organizational Learning Author (s): Herbert A . Simon Source : Organization Science , 1991 , Vol . 2 , No . 1 , Special Issue : Organizational Learning : Papers in Honor of (and by) James G . March (1991), pp . 125-134 Publis*. *2*(1), 125–134.

Singh, S. K. (2016). *Leadership & Organizational Learning in Knowledge Management Practices in Global Organizations Author (s): Sanjay Kumar Singh Published by : Shri Ram Centre for Industrial Relations and Human Resources Stable URL : http://www.jstor.org/stable/23070582 L*. *47*(2), 353–365.

Singh, S. K., Chen, J., Del Giudice, M., & El-Kassar, A. N. (2019). Environmental ethics, environmental performance, and competitive advantage: Role of environmental training. *Technological Forecasting and Social Change*, *146*(May), 203–211. https://doi.org/10.1016/j.techfore.2019.05.032

Slater, S. F., & Narver, J. C. (1995). Market Orientation and the Learning Organization. *Journal of Marketing*, *59*(3), 63. https://doi.org/10.2307/1252120

Slater, S. F., & Olson, E. M. (2000). Strategy type and performance: The influence of sales force management. *Strategic Management Journal*, *21*(8), 813–829. https://doi.org/10.1002/1097-0266(200008)21:8<813::aid-smj122>3.0.co;2-g

Snell, S. A., & Youndt, M. A. (1995). Human Resource Management and Firm Performance: Testing a Contingency Model of Executive Controls. *Journal of Management*, *21*(4), 711–737. https://doi.org/10.1177/014920639502100407

Srivastava, S., Sultan, A., & Chashti, N. (2017). Influence of innovation competence on firm level competitiveness: an exploratory study. *Asia Pacific Journal of Innovation and Entrepreneurship*, *11*(1), 63–75. https://doi.org/10.1108/apjie-04-2017-021

Stam, W., & Elfring, T. (2008). Entrepreneurial Orientation and New Venture Performance : The Moderating Role of Intra- and Extraindustry Social Capital Linked references are available on JSTOR for this article : Entrepreneurial Orientation And New Venture Performance : The Moderating R. *Academy of Management Journal*, *51*(1), 97–111.

Stonehouse, G., & Snowdon, B. (2007). Competitive advantage revisited Michael Porter on strategy and competitiveness. *Journal of Management Inquiry*, *16*(3), 256–273. https://doi.org/10.1177/1056492607306333

Susan Wanjugu, G., Jesse Maina, K., & Nkanata Mburugu, K. (2020). The Influence of Value Innovation Strategy on the Financial Performance of Manufacturing Firms in Kenya. *The Journal of Social Sciences Research*, *6*(612), 995–1000. https://doi.org/10.32861/jssr.612.995.1000

Swart, J., & Harcup, J. (2013). "If I learn do we learn?": The link between executive coaching and organizational learning. *Management Learning*, *44*(4), 337–354. https://doi.org/10.1177/1350507612447916

Taherdoost, H., & Group, H. (2017). Validity and Reliability of the Research Instrument ; How to Test the Validation of a Questionnaire / Survey in a Researchfile:///C:/Users/admin/Desktop/RISACHI REPORT 2021/reference B/2190-8050-1-PB-1 SOCIO.pdf. *International Journal of Sport, Exercise & Training Sciences*, *5*(3), 27–36.

Thomas, T., Schermerhorn Jr., J. R., Dienhart, J. W., & Bartles, D. L. (2004). Strategic Leadership of Ethical Behavior in Business [and Executive Commentary]. *The Academy of Management Executive (1993-2005)*, *18*(2), 56–68. http://www.jstor.org/stable/4166062

Thwaites, R. (2020). Research design and methodology. *Changing Names and Gendering Identity*, 32–42. https://doi.org/10.4324/9781315571256-9

Tomas, G., Hult, M., Nichols, E. L., Giunipero, L. C., & Hurley, R. F. (2000). Global organizational learning in the supply chain: A low versus high learning study. *Journal of International Marketing*, *8*(3), 61–83. https://doi.org/10.1509/jimk.8.3.61.19628

Tsai, T., Young, M. N., & Cheng, B. shiuan. (2011). Confucian business practices and firm competitiveness: The case of Sinyi Real Estate. *Frontiers of Business Research in China*, *5*(3), 317–343. https://doi.org/10.1007/s11782-011-0133-4

Ukil, M. I. (2016). The impact of employee empowerment on employee satisfaction and service quality: Empirical evidence from financial enterprizes in Bangladesh. *Business: Theory and Practice*, *17*(2), 178–189. https://doi.org/10.3846/btp.2016.651

van den Berghe, D. (2003). UNCTAD World Investment Report 2002: transnational corporations and export competitiveness. In *International Business Review* (Vol. 12, Issue 3). https://doi.org/10.1016/s0969-5931(03)00022-2

Vera, D., Crossan, M., & Character, L. (2004). *Strategic Leadership and Organizational Learning ORGANIZATIONAL LEARNING*. *January 2016*. https://doi.org/10.5465/AMR.2004.12736080

Vera, D., Crossan, M., Vera, D., & Crossan, M. (2004). *Published by : Academy of Management STRATEGIC LEADERSHIP AND ORGANIZATIONAL LEARNING University of Houston*. *29*(2), 222–240.

Waldman, D. A. (2016). *Does Leadership Matter ? CEO Leadership Attributes and Profitability under Conditions of Perceived Environmental Uncertainty Author (s): David A . Waldman , Gabriel G . Ramírez , Robert J . House and Phanish Puranam Published by : Academy of Management* . *44*(1), 134–143.

Walker, C., & Baxter, J. (2019). Method Sequence and Dominance in Mixed Methods Research: A Case Study of the Social Acceptance of Wind Energy Literature. *International Journal of Qualitative Methods*, *18*, 1–14. https://doi.org/10.1177/1609406919834379

Wang, G., Holmes, R. M., Oh, I. S., & Zhu, W. (2016). Do CEOs Matter to Firm Strategic Actions and Firm Performance? A Meta-Analytic Investigation Based on Upper Echelons Theory. *Personnel Psychology*, *69*(4), 775–862. https://doi.org/10.1111/peps.12140

Wang, H., Tsui, A. S., & Xin, K. R. (2011). CEO leadership behaviors, organizational performance, and employees' attitudes. *Leadership Quarterly*, *22*(1), 92–105. https://doi.org/10.1016/j.leaqua.2010.12.009

Watermarks, D. (2009). *strategic leadership theory and research on executives, top management teams, and boards*.

Watts, R. (2015). Adler's Individual Psychology: The Original Positive Psychology. *Revista de Psicoterapia*, *26*(102), 123–131.

White, K. J. (1992). *The Durbin-Watson Test for Autocorrelation in Nonlinear Models Author (s): Kenneth J . White Source : The Review of Economics and Statistics , Vol . 74 , No . 2 (May , 1992), pp . 370-373 Published by : The MIT Press Stable URL : http://www.jstor.org/*. *74*(2), 370–373. http://www.jstor.org/stable/2109675

Witts, J. O. (2016). *the Role of Strategic Leadership in Digital*. *August*, 150. https://scholarworks.waldenu.edu/dissertations

World Bank. (2020). *Uganda Economic Update - Strengthening Social Protection to Reduce Vulnerability and Promote Inclusive Growth. 14th Edition February 2020*, 65.

Www.ugandainvest.go.ug, P. of foreign ownership (2017). (2020). *Why Uganda ?* 1–8.

Yin. (2009). *Yin_2009_Case-Studies_Data-collection.pdf*.

Yoon, J., Kim, Y., Vonortas, N. S., & Han, S. W. (2018). Corporate foresight and innovation: the effects of integrative capabilities and organisational learning. *Technology Analysis and Strategic Management*, *30*(6), 633–645. https://doi.org/10.1080/09537325.2017.1395407

Yukl, G., Mahsud, R., Prussia, G., & Hassan, S. (2019). Effectiveness of broad and specific leadership behaviors. *Personnel Review*, *48*(3), 774–783. https://doi.org/10.1108/PR-03-2018-0100

Zulkarnain, N. N., Alam, M., Abdullah, N. H. N., & Said, J. (2019). *Organizational Learning Orientation and Sustainable Competitive Advantage: Towards More Accountable Government-Linked Companies*. *11*(1), 95–114. https://doi.org/10.31235/osf.io/yt4xd

APPENDICES

Appendix I: Questionnaire

MOI UNIVERSITY

SCHOOL OF BUSINESS AND ECONOMICS

Strategic Leadership, Organisational Learning, Perceived Environmental Uncertainty and Firm Competitiveness among manufacturing firms in Uganda

Dear Respondent,

I am **Oguta James**, a PhD Student of Business Management from Moi University. I am collecting data for my final thesis. The main objective of the study is to examine the interaction effect of Strategic Leadership, organisational learning and perceived environmental uncertainty on firm competitiveness among manufacturing firms in Uganda.

As a key informant in the manufacturing firm, your views are of prime importance to the study and I request for your responses to items raised on the questionnaire according to section **A, B, C, D** and **E** following the guidelines provided in each section. I kindly request for **30-45** minutes of your time to fill the questionnaire. The study is purely academic and all information provided shall be treated with utmost confidentiality. You are requested **NOT** to share your identity or any information relating to your identity on the questionnaire.

Thank you for your time, co-operation and contribution to the study. I shall be pleased to send a copy of the final thesis to your organisation.

Yours Faithfully,

OGUTA JAMES

PhD Student, Moi University

SECTION A: PERSONAL INFORMATION

Tick on the most appropriate as applicable to you

1. Company Number_____

2. **How many people work for this organisation?**

   5-9 [ ] 10-14 [ ] 15-19 [ ] 20-24 [ ] 25-29 [ ] 30 and above [ ]

3. **What is the nature of your firm**

   1. Food processing 2. Non-food processing

4. Which region is the firm located

   1. Central 2. Eastern 3. Northern 4. Southern

5. **How long has this firm been in operation?**

   0-4 years [ ] 5-9 years [ ] 10-14 years [ ] 15-19 years [ ] 20 and above [ ]

6. **State the name of the department where you work in the firm**

   1. Marketing department 2. Human resource department

SECTION B: FIRM COMPETITIVENESS

The statements in the table below relate to firm competitiveness among manufacturing firms. State the level of your agreement or disagreement on the following listed items by ticking on numbers **1-7** in the table below. **Where: 1** = Much worse than competitors, **2** = *Worse*, **3** = *Somewhat Worse*, **4** = *Neutral*, 5 = *Somewhat Better*, ***6*** = *Better*, ***7*** = *Much better than competitors*.

	Price/cost:	**1**	**2**	**3**	**4**	**5**	**6**	**7**
PC1	We offer competitive prices	1	2	3	4	5	6	7
PC2	We are able to offer prices as low or lower than our competitors	1	2	3	4	5	6	7
	Quality:	1	2	3	4	5	6	7
QO1	We are able to compete based on quality	1	2	3	4	5	6	7
QO2	We offer products that are highly reliable	1	2	3	4	5	6	7
QO3	We offer products that are very durable	1	2	3	4	5	6	7
QO4	We offer high quality products to our customer	1	2	3	4	5	6	7
	Delivery dependability:	1	2	3	4	5	6	7
DD1	We deliver the kind of products needed	1	2	3	4	5	6	7
DD2	We deliver customer order on time	1	2	3	4	5	6	7
DD3	We provide dependable delivery	1	2	3	4	5	6	7
	Product innovation:	1	2	3	4	5	6	7
PI1	We provide customized products	1	2	3	4	5	6	7
PI2	We alter our product offerings to meet client needs	1	2	3	4	5	6	7
PI3	We respond well to customer demand for "new" features	1	2	3	4	5	6	7
	Time to market:	1	2	3	4	5	6	7
TM1	We deliver product to market quickly	1	2	3	4	5	6	7
TM2	We are first in the market in introducing new products	1	2	3	4	5	6	7
TM3	We have time-to-market lower than industry average	1	2	3	4	5	6	7
TM4	We have fast product development	1	2	3	4	5	6	7

Source: *Li et al*. (2006)

SECTION C: Strategic Leadership

The statements in the table below relate to strategic leadership at manufacturing firms. State the level of your agreement or disagreement on the following listed items by ticking on numbers **1-7** in the table below. **Where: 1** = *Strongly Disagree*, **2** = *Disagree*, **3** = *Somewhat Disagree*, **4** = *Neutral*, 5 = *Somewhat Agree*, ***6*** = *Agree*, ***7*** = *Strongly Agree*.

SD	**Determining strategic direction (SD)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
SD1	Organisational strategies are clearly communicated to me	1	2	3	4	5	6	7
SD2	Organisational strategies guide the identification of the skills and knowledge I need to have	1	2	3	4	5	6	7
SD3	People here are willing to change when new organisational strategies require it	1	2	3	4	5	6	7
SD4	Our senior managers agree on the organisational strategy	1	2	3	4	5	6	7
CC	**Exploiting and maintaining core competencies (CC)**	1	2	3	4	5	6	7
CC1	For each product/service, our organization provides, there is an agreed upon, prioritized list of what customers care about	1	2	3	4	5	6	7
CC2	People in this organization are provided with useful information about customer complaints	1	2	3	4	5	6	7
CC3	Strategies are periodically reviewed to ensure the satisfaction of critical customer needs	1	2	3	4	5	6	7
CC4	Processes are reviewed to ensure they contribute to the attainment of customer satisfaction	1	2	3	4	5	6	7
CC5	Our organization collects information from employees about how well things work	1	2	3	4	5	6	7
CC6	My work unit or team is rewarded for our performance as a team	1	2	3	4	5	6	7
EC	**Sustaining effective corporate culture**	1	2	3	4	5	6	7
EC1	Groups in the organization cooperate to achieve customer satisfaction	1	2	3	4	5	6	7
EC2	When processes are changed, the impact on employee satisfaction is measured	1	2	3	4	5	6	7
EC3	Our managers care about how work gets done as well as about the results	1	2	3	4	5	6	7
EC4	We review our work processes regularly to see how well they are functioning	1	2	3	4	5	6	7

SC	**Establishing strategic controls**	1	2	3	4	5	6	7
SC1	When something goes wrong, we correct the underlying reasons so that the problem will not happen again	1	2	3	4	5	6	7
SC2	Processes are reviewed to ensure they contribute to the achievement of strategic goals	1	2	3	4	5	6	7

Source: Ireland & Hitt, (1999), Serfontein, (2010) and Jooste & Fourie, (2009)

SECTION D: Organizational Learning

The statements in the table below relate to organisational learning at manufacturing firms. State the level of your agreement or disagreement on the following listed items by ticking on numbers **1-7** in the table below. **Where: 1** = *Strongly Disagree*, **2** = *Disagree*, **3** = *Somewhat Disagree*, **4** = *Neutral*, 5 = *Somewhat Agree, **6** = Agree, **7** = Strongly Agree*.

IA	**Information acquisition (IA)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
IA1	The employees are informed of how the firm was created and its philosophy of work.	1	2	3	4	5	6	7
IA2	We collect and use the information generated during organizational changes.	1	2	3	4	5	6	7
IA3	Employees' interaction and participation to gather information about possible changes are encouraged.	1	2	3	4	5	6	7
IA4	We constantly evaluate the need to adapt to the business environment.	1	2	3	4	5	6	7
IA5	The members of the organization use informal means to find out about the most recent events regarding the market or the environment.	1	2	3	4	5	6	7
IA6	As a result of the knowledge acquired in the course of time the employees are more efficient in exercising their responsibilities.	1	2	3	4	5	6	7
IA7.	We collect information about what our competitors do through different means	1	2	3	4	5	6	7
IA8	When we do not have the specific knowledge required we look for it and acquire it outside the organization.	1	2	3	4	5	6	7
IA9	We periodically check whether our strategy is aligned with the business environment.	1	2	3	4	5	6	7
IA10	Problems are approached proactively, that is, we learn from other entities to be able to respond to these problems before they arise.	1	2	3	4	5	6	7

IA11	We use formal and reiterative procedures to evaluate our results and compare them with those of the competition.	1	2	3	4	5	6	7
KD	**Knowledge dissemination (KD)**	1	2	3	4	5	6	7
KD1	We have a meeting schedule among departments to integrate the existing information.	1	2	3	4	5	6	7
KD2.	We devote some time to discussions about the organization's future needs	1	2	3	4	5	6	7
KD3	We use databases and organizational files to support our work.	1	2	3	4	5	6	7
KD4	The company's general objectives are communicated throughout the organization.	1	2	3	4	5	6	7
KD5	We are really interested in providing employees with an overall view of the company's operations, even with personnel turnover.	1	2	3	4	5	6	7
KD6	There are people responsible for collecting the proposals made by the staff and for distributing them internally.	1	2	3	4	5	6	7
KD7.	Vital information is transmitted quickly to all employees	1	2	3	4	5	6	7
SI	**Shared interpretation (SI)**	1	2	3	4	5	6	7
SI1	We systematically examine and update our opinion about the business environment.	1	2	3	4	5	6	7
SI2	We try to develop an interpretation as uniform as possible of relevant information.	1	2	3	4	5	6	7
SI3	The employees have at their disposal a wide variety of communication tools (telephone, e-mail, fax, intranet, etc.).	1	2	3	4	5	6	7
SI4	We generate concise reports intended to avoid excess information that may limit our capacity to interpret it adequately.	1	2	3	4	5	6	7
SI5	Before a decision is taken the different alternatives are thoroughly analyzed.	1	2	3	4	5	6	7
SI6	We review relevant information periodically in case it is obsolete or may lead to error.	1	2	3	4	5	6	7
SI7	We do not oppose changes in the way of doing things.	1	2	3	4	5	6	7
OM	**Organizational memory (OM)**	1	2	3	4	5	6	7
OM1	We have our own expert personnel in the most essential aspects of the organizational operations.	1	2	3	4	5	6	7
OM2.	Personnel turnover does not risk our capacity to create new knowledge and solve problems	1	2	3	4	5	6	7

OM3	We carry out training programs (for example: workshops, seminars, etc.) for the members of the organization.	1	2	3	4	5	6	7
OM4	We are aware of who has the specific abilities and the experience to intervene when an opportunity or problem arises.	1	2	3	4	5	6	7
OM5	Key employees when the organization faces a new opportunity or problem can be conveniently contacted.	1	2	3	4	5	6	7
OM6	People in the organization who are helpful when an opportunity or problem arise are actively committed to looking for possible solutions.	1	2	3	4	5	6	7
OM7	There is an atmosphere of trust and collaboration among the personnel of the company to cooperate when opportunities or problems arise	1	2	3	4	5	6	7

Source: Santos-vijande *et al*., (2012)

SECTION E: Perceived Environmental Uncertainty

The statements in the table below relate to Perceived Environmental Uncertainty at manufacturing firms. State the level of your agreement or disagreement on the following listed items by ticking on numbers **1-7** in the table below. **Where: 1** = *Strongly Disagree*, **2** = *Disagree*, **3** = *Somewhat Disagree*, **4** = *Neutral*, 5 = *Somewhat Agree, **6** = Agree, **7** = Strongly Agree*.

ME	**Market environment**	1	2	3	4	5	6	7
ME1	In our kind of business, customers' product preferences change quite a bit over time	1	2	3	4	5	6	7
ME2	Our customers tend to look for new products all the time	1	2	3	4	5	6	7
ME3	Sometimes our customers are very price-sensitive, but on other occasions price is relatively unimportant	1	2	3	4	5	6	7
ME4	New customers tend to have product-related needs that are different from those of our existing customers	1	2	3	4	5	6	7
ME5	We cater to many of the same customers that we used to in the past	1	2	3	4	5	6	7

ME6	It is very difficult to predict any changes in the marketplace	1	2	3	4	5	6	7
TE	**Technological environment**	1	2	3	4	5	6	7
TE1	The technology in our industry is changing rapidly	1	2	3	4	5	6	7
TE2	Technological changes provide big opportunities in our industry	1	2	3	4	5	6	7
TE3	It is very difficult to forecast where the technology in our industry will be in the next two years	1	2	3	4	5	6	7
TE4	A large number of new product ideas have been made possible through technological breakthroughs in our industry	1	2	3	4	5	6	7
TE5	Technological developments in our industry is cutthroat	1	2	3	4	5	6	7
TE6	The technological changes in this industry are frequent	1	2	3	4	5	6	7
CE	**Competitive environment**	1	2	3	4	5	6	7
CE1	Competition in our industry is cutthroat	1	2	3	4	5	6	7
CE02	There are many promotion wars in our industry	1	2	3	4	5	6	7
CE3	Anything that one competitor can offer others can match readily	1	2	3	4	5	6	7
CE4	Price competition is a hallmark of our industry	1	2	3	4	5	6	7
CE5	One hears of a new competitive move almost everyday	1	2	3	4	5	6	7
CE6	Our competitors are relatively weak	1	2	3	4	5	6	7

Source: Miles *et al.*, (1978)

Appendix II: Interview Guide

Strategic Leadership and Firm Competitiveness

1. What is the effect of strategic leadership on firm competitiveness of manufacturing firms in Uganda?
2. Does Strategic direction have an impact on production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
3. How does Core competences affect production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
4. What is the effect of ethical practices on production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
5. What is the effect of strategic control on production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
6. What is the relationship between corporate culture and production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
7. How do development of human capital impact on production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?

Strategic Leadership and Organizational Learning

1. What is the effect of strategic leadership on organizational learning?
2. Does strategic leadership have an influence on information acquisition, Knowledge dissemination, Shared interpretation, and Organizational memory of manufacturing firms in Uganda?
3. What is the effect of Core competences on information acquisition, Knowledge dissemination, Shared interpretation, and Organizational memory of manufacturing firms in Uganda?
4. What is the effect of ethical practices on information acquisition, Knowledge dissemination, Shared interpretation, and Organizational memory of manufacturing firms in Uganda?
5. What is the effect of strategic control on information acquisition, Knowledge dissemination, Shared interpretation, and Organizational memory of manufacturing firms in Uganda?
6. What is the effect of corporate culture on information acquisition, Knowledge dissemination, Shared interpretation, and Organizational memory of manufacturing firms in Uganda?
7. What is the effect of human capital on information acquisition, Knowledge dissemination, Shared interpretation, and Organizational memory of manufacturing firms in Uganda?

Organizational Learning and firm competitiveness

1. What is the effect of organizational learning on firm competitiveness of manufacturing firms in Uganda?
2. Does information acquisition affect production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
3. How does Knowledge dissemination affect production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
4. What is the effect of Shared interpretation on production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
5. What is the effect of Organizational memory on production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?

Perceived environmental uncertainty and firm competitiveness

1. What is the effect of perceived environmental uncertainty on firm competitiveness of manufacturing firms in Uganda?
2. Does Market environment affect production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
3. How does Technological environment affect production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?
4. What is the effect of Competitive environment on production efficiency, Product quality, Innovation, Production flexibility and Market response of manufacturing firms in Uganda?

Source: Questionnaire items

Appendix III: Mediation results

Run MATRIX procedure:

********** PROCESS Procedure for SPSS Version 4.2 beta **********

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 4
Y : FC
X : SL
M : OL

Covariates:
Firm Size Firm Age

Sample
Size: 410

****
OUTCOME VARIABLE: OL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2734	.0747	.0710	10.9329	3.0000	406.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.3128	.3013	14.3122	.0000	3.7204	4.9051
SL	.1985	.0348	5.7002	.0000	.1301	.2670
FSize	-.0036	.0386	-.0937	.9254	-.0796	.0723
FAge	-.0040	.0181	-.2204	.8257	-.0395	.0316

Standardized coefficients

	coeff
SL	.2738
FSize	-.0045
FAge	-.0106

****
OUTCOME VARIABLE: FC

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5299	.2808	.1237	39.5386	4.0000	405.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.8897	.4878	1.8237	.0689	-.0694	1.8487
SL	.4583	.0478	9.5923	.0000	.3643	.5522
OL	.3395	.0655	5.1836	.0000	.2108	.4683
FSize	.0090	.0510	.1766	.8599	-.0912	.1092
FAge	-.0141	.0239	-.5929	.5536	-.0611	.0328

Standardized coefficients

	coeff
SL	.4227
OL	.2271

```
FSize      .0075
FAge      -.0251

Test(s) of X by M interaction:
         F       df1       df2         p
   43.8624    1.0000  404.0000     .0000

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 FC

Model Summary
         R       R-sq        MSE          F       df1       df2          p
     .4828      .2331      .1316    41.1401    3.0000  406.0000      .0000

Model
                    coeff       se         t         p       LLCI      ULCI
constant           2.3540    .4102    5.7388    .0000    1.5477    3.1604
SL                 .5257     .0474   11.0874    .0000     .4325     .6189
FSize              .0078     .0526    .1478     .8826    -.0956     .1111
FAge              -.0155     .0246   -.6298     .5292    -.0639     .0329

Standardized coefficients
          coeff
SL        .4849
FSize     .0064
FAge     -.0275
************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
    Effect        se         t         p      LLCI      ULCI      c_cs
     .5257      .0474   11.0874    .0000     .4325     .6189     .4849

Direct effect of X on Y
    Effect        se         t         p      LLCI      ULCI     c'_cs
     .4583      .0478    9.5923    .0000     .3643     .5522     .4227

Indirect effect(s) of X on Y:
      Effect    BootSE  BootLLCI  BootULCI
OL     .0674     .0334     .0141     .1434

Completely standardized indirect effect(s) of X on Y:
      Effect    BootSE  BootLLCI  BootULCI
OL     .0622     .0297     .0136     .1270

*********************** ANALYSIS NOTES AND ERRORS ************************
Level of confidence for all confidence intervals in output:
  95.0000
Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Appendix IV: Moderation and Moderated mediation Results

Run MATRIX procedure:

********** PROCESS Procedure for SPSS Version 4.2 beta **********

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 8
Y : FC
X : SL
M : OL
W : PEU

Covariates:
FSize FAge

Sample
Size: 410

****
OUTCOME VARIABLE:
OL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4920	.2421	.0585	25.8104	5.0000	404.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	5.3583	.2169	24.7027	.0000	4.9319	5.7847
SL	.0554	.0360	1.5378	.1249	-.0154	.1261
PEU	.0114	.0387	.2949	.7682	-.0646	.0874
Int_1	.4415	.0518	8.5287	.0000	.3397	.5432
FSize	-.0240	.0351	-.6836	.4946	-.0931	.0451
FAge	.0089	.0165	.5387	.5904	-.0236	.0414

Product terms key:
Int_1 : SL x PEU

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.1365	72.7391	1.0000	404.0000	.0000

Focal predict: SL (X)
Mod var: PEU (W)

Conditional effects of the focal predictor at values of the moderator(s):

PEU	Effect	se	t	p	LLCI	ULCI
-.3698	-.1079	.0453	-2.3828	.0176	-.1970	-.0189
.0000	.0554	.0360	1.5378	.1249	-.0154	.1261
.3698	.2186	.0357	6.1273	.0000	.1485	.2888

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
  SL       PEU       OL       .
BEGIN DATA.
    -.3807    -.3698    5.2949
     .0000    -.3698    5.2539
     .3807    -.3698    5.2128
    -.3807     .0000    5.2370
     .0000     .0000    5.2581
     .3807     .0000    5.2792
    -.3807     .3698    5.1790
     .0000     .3698    5.2623
     .3807     .3698    5.3455
END DATA.
GRAPH/SCATTERPLOT=
 SL      WITH     OL       BY       PEU      .

*************************************************************************
OUTCOME VARIABLE:
 FC

Model Summary
        R        R-sq       MSE         F          df1        df2          p
     .5516      .3043      .1203    29.3734     6.0000   403.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3.8102      .4930     7.7291      .0000     2.8411     4.7794
SL           .3846       .0518     7.4269      .0000      .2828      .4864
OL           .2300       .0714     3.2234      .0014      .0897      .3703
PEU          .0480       .0555      .8645      .3878     -.0611      .1570
Int_1        .2437       .0807     3.0212      .0027      .0851      .4022
FSize       -.0021       .0504     -.0413      .9671     -.1013      .0971
FAge        -.0054       .0237     -.2271      .8204     -.0520      .0412

Product terms key:
 Int_1    :       SL       x        PEU

Test(s) of highest order unconditional interaction(s):
           R2-chng         F        df1        df2          p
X*W         .0158     9.1279     1.0000   403.0000      .0027
----------
   Focal predict: SL       (X)
         Mod var: PEU      (W)

Conditional effects of the focal predictor at values of the moderator(s):

      PEU     Effect         se          t          p       LLCI       ULCI
    -.3698      .2945      .0654     4.5012      .0000      .1659      .4231
     .0000      .3846      .0518     7.4269      .0000      .2828      .4864
     .3698      .4747      .0535     8.8721      .0000      .3695      .5799

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
  SL       PEU       FC       .
BEGIN DATA.
    -.3807    -.3698    4.8580
     .0000    -.3698    4.9701
     .3807    -.3698    5.0823
```

```
    -.3807     .0000    4.8414
     .0000     .0000    4.9879
     .3807     .0000    5.1343
    -.3807     .3698    4.8249
     .0000     .3698    5.0056
     .3807     .3698    5.1864
END DATA.
GRAPH/SCATTERPLOT=
 SL      WITH     FC       BY       PEU      .


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Conditional direct effects of X on Y
      PEU     Effect        se         t             p       LLCI       ULCI
    -.3698     .2945     .0654    4.5012     .0000     .1659     .4231
     .0000     .3846     .0518    7.4269     .0000     .2828     .4864
     .3698     .4747     .0535    8.8721     .0000     .3695     .5799

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 SL         ->    OL         ->    FC

      PEU     Effect    BootSE   BootLLCI   BootULCI
    -.3698    -.0248     .0199    -.0726     .0031
     .0000     .0127     .0135    -.0068     .0463
     .3698     .0503     .0303    -.0009     .1162

     Index of moderated mediation:
       Index     BootSE   BootLLCI   BootULCI
PEU     .1016     .0588    -.0023     .2275

************************ ANALYSIS NOTES AND ERRORS *************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

W values in conditional tables are the mean and +/- SD from the mean.

NOTE: The following variables were mean centered prior to analysis:
        PEU      SL

------ END MATRIX -----
```

Appendix V: Data collection letter from Moi University school of Business and Economics office of post graduate studies

MOI UNIVERSITY
SCHOOL OF BUSINESS AND ECONOMICS
OFFICE OF POSTGRADUATE STUDIES

Tel: 0722271134
0722685969

P.O. Box 3900
Eldoret.
KENYA

Fax No: (053) 43047
Telex No. MOIVARSITY 35047

RE: SBE/PGR/REC/11 **DATE:** 18th November, 2021

TO WHOM IT MAY CONCERN:

Dear Sir/Madam,

RE: OGUTA JAMES – SBE/PhD/BM/015/18

The above named is a bonafide student of Moi University School of Business and Economics, pursuing a Doctor of Philosophy in Business Management degree; specializing in **Strategic Management**. He has completed coursework, defended his proposal, and currently he is proceeding to the field to collect data for his research titled:"***Strategic Leadership, Organizational learning, Perceived environmenta uncertainty and Firm competitiveness among Manufacturing Firms in Uganda.***"

Any assistance accorded to him will be highly appreciated.

Yours faithfully,

DEAN
School of Business and Economics
MOI UNIVERSITY

DR. RONALD BONUKE
CHAIR POSTGRADUATE,
SCHOOL OF BUSINESS AND ECONOMICS.

RB/ms

Appendix VI: Permission to Collect Data from Uganda Manufacturers' Association (UMA)

UGANDA MANUFACTURERS' ASSOCIATION (UMA)

20th November 2022

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: PERMISSION TO COLLECT DATA FROM UGANDA MANUFACTURES' ASSOCIATION (UMA) MEMBERS.

We are glad to grant Mr. JAMES OGUTA a student pursuing a Doctor of Philosophy in Business Management program at Moi University permission to collect data from members of the Uganda Manufacturers' Association (UMA). The data collected shall be used for only the study as a requirement for the PhD.

This is therefore to consent on behalf of the members of UMA that Mr. OGUTA JAMES can collect data in order to complete his dissertation titled '' Strategic Leadership, Organisational learning, Perceived environmental uncertainty and firm competitiveness among manufacturing firms in Uganda''

Furthermore, the findings and learning from this particular research as courtesy should be disseminated to Uganda Manufacturers' Association (UMA) as may be important for decision making in the Association.

Any support rendered to him will be highly appreciated.

Yours faithfully

20 NOV 2022

Veronica Namwanje
Executive Secretary.

Uganda Manufacturers' Association
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