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**THE EFFECTS OF FINANCIAL LITERACY ON THE PERFORMANCE OF
AGRO PROCESSING COMPANIES IN NAIROBI COUNTY, KENYA.**

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MDF/114671

**A research project submitted to the School of Business in partial fulfillment for
the degree of Master of Science in Development Finance at Strathmore
University**



Strathmore University

Nairobi, Kenya

March 2023

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the Research project contains no material previously published or written by another person except where due reference is made in the research project itself.

Diana Mwirichia

Signature

Date.....

Approval

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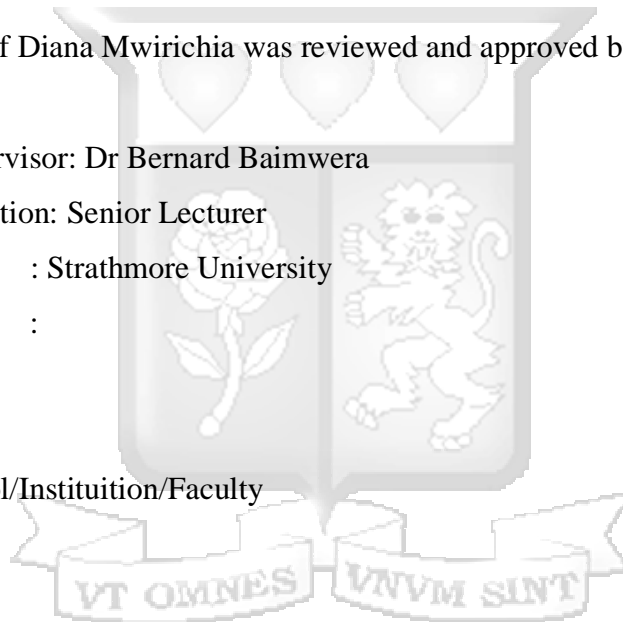
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ABSTRACT

Globally, financial literacy has gained attention in the business industry due to its significant impact on the sustainability of a business. This study sought to assess the effects of financial literacy on the performance of Agro processing companies in Nairobi County. The specific objectives of the study were: to determine the effects of financial budgeting literacy on the performance of Agro processing companies in Nairobi County; to establish the effects of financial risk management literacy on the performance of the Agro processing firms and to determine the effects of debt management literacy on the performance of Agro processing firms in Nairobi County. The study was anchored on financial literacy theory and used a descriptive correlational research design. The study target population comprised of all the 112 Agro processing companies in Nairobi County with the target respondents being the financial officers, chief accountants and other senior individuals in the firms' finance and accounting departments. The study used census survey approach to obtain information from the 112 Agro processing companies in Nairobi County. Data was collected using questionnaires which were online administered using Google Docs. Gathered data was cleaned and then analyzed qualitatively and quantitatively. Qualitative data was analyzed thematically while quantitative data was analyzed by the aid of statistical software SPSS version 24. The study found that is a significant positive relationship between financial budgeting literacy, financial risk management literacy and debt management literacy as evidenced by the positive correlation. Further the model of the study concluded that financial budgeting literacy has a statistically significant impact on performance of Agro processing companies. The study recommends that Agro processing companies should move with speed in enhancing their staff members' knowledge on emerging and disruptive financial concepts in relation to financial budgeting in order to maintain steady financial growth.

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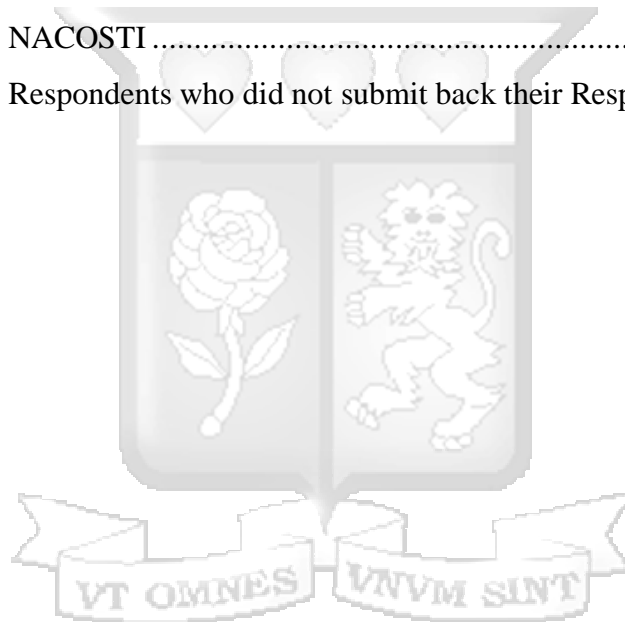


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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
B.COM	Bachelor of Commerce
CFA	Certified Financial Analysts
CFPB	Consumer Financial Protection Bureau
CPA	Certified Public Accountant
FAME	Financial Analysis Made Easy
FSDC	Financial Stability and Development Council
GDP	Gross Domestic Product
ICT	Information Communication Technology
KAM	Kenya Association of Manufacturers
KNBS	Kenya National Bureau of Statistics
NACOSTI	National Commission for Science, Technology, and Innovation
NACOSTI	National Commission for Science, Technology, and Innovation
NGO	Non-Governmental Organization
OFE	Office of Financial Education
SME	Small and Medium Enterprises
SPSS	Statistical Package for Social Science
UK	United Kingdom
US	United States
USAID	United States Agency for International Development

DEDICATION

This dissertation is dedicated to my husband and My mom for motivating, inspiring and relentlessly encouraging me to go on and complete the Master of Science in Development Finance degree. They never wavered.



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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Financial literacy has gained considerable attention in the business industry due to its significant impact on the sustainability of business enterprises over the past few years. Knowledge on financial management has been shown to enhance firm's ability to achieve strategic goals, mission, and profitability targets. Financial decisions play critical roles on the financial cost of an enterprise implying that the right financial decisions are vital for the sustainability of a business (Ye & Kulathunga, 2019). Therefore, having vast knowledge, skills, experience, and abilities are essential for the survival of business entities of all kinds (Zou & Hassan 2017).

On the other hand, inadequate financial literacy is a leading cause of solvency among most small and medium enterprises (Florio & Leoni 2017). According to Otari (2018), 80% of new businesses often survive their first year of operation. However, the success rates fall sharply by the end of the fifth year. That is, between 45.4% and 51% live to see their fifth anniversary. In Kenya, millions of upcoming businesses are struggling to stay afloat due to either financial mismanagement or lack of competent accountants, financial managers, and risk managers. As Omondi (2016) cites, statistic by Kenya National Bureau of Statistics (KNBS) showed that 2.2 million SMEs were closed between 2011 and 2016. The owners were unable to appropriately use the monetary resources to achieve growth.

The emergence of coronavirus pandemic and the recession triggered by the civil war between Russia and Ukraine has exacerbated the challenges facing the upcoming firms. In the UK, 7% of businesses permanently closed down during the first wave of the pandemic (Amankwah-Amoah et al., 2021). The situation was worse off in Kenya. In fact, the Central Bank projected that 75% of the SMEs were at risk of collapsing if they were not supported by the government. Similarly, inflation triggered by the Russo-Ukrainian has exceeded 7.1%. Only the firms with creative, well trained, and skilled executives secured the success of their business through strengthening ties with financiers, launching cost control procedures and diversifying sources of income. The critical sectors of the economy such as agribusiness are expected to cushion the country from such economic shocks. Further on, the cost of living is skyrocketing hence most stakeholders are concerned about food security and employment rate. Within the food value chain, improvements to the food processing industry have the most significant multiplier effect towards food security

and the health of Agro processing industry goes a long way to determine the production of good, quality, and affordable food while preventing losses following harvests, hence boosting the farmers. Therefore, this project concentrated on the relevance of financial literacy in boosting the performance of Agro processing firms.

1.1.1. Financial Literacy

Financial literacy has been vastly defined by various researchers. Tuffour et al. (2020) defines financial literacy as the level to which an individual understands the essential financial management concepts and his/her capacity and confidence to manage funds by making both long term and short-term financial planning. According to Usama and Yusoff (2019), financial literacy is the capacity or capability of an individual to objectively gather facts with an aim of formulating comprehensive financial decisions based on the available financial resources. Based on the various definitions of financial literacy therefore, a financially literate business manager is the one who has the capacity of making the most appropriate financial decisions for a business organization at its different stages of growth (Agyei, 2018).

A growing concern on financial literacy has gained global attention in the recent past. Different nations have created frameworks towards the implementation of financial education aiming at improving financial literacy of their citizens. This results from the consideration of financial literacy as an important life skill essential for good financial conduct in the current world and as an essential foundation for financial and economic stability of both the society and country at large (Tali, 2016). According to survey conducted by the Standard & Poor's Ratings Services Global Financial Literacy Survey (S&P Global Fin Lit Survey) in a wide range of nations, 3.5 billion adults in world, mostly from developing nations do not understand basic financial concepts. In addition, countries like United Kingdom, Australia, Sweden, Denmark, Canada, Germany, Finland, Netherlands, Norway, and Israel have highest rates of financial literacy with about 65% of adults being financially literate (Leora, Lusardi, & Peter, 2015).

Research has also been done in African Countries for instance Agyei (2018) in a study on financial literacy, SME Performance and Culture in Ghana, concluded that the relationship between financial literacy and SME growth is cultural-context dependent. The study recommends that

religious bodies should inculcate financial education in their teachings; financial literacy training programs for SME-Owners should be tailored to meet their needs; and cultural beliefs of SME-Owners should be of prime consideration in designing financial literacy programs. Further on, Mmbengwa et al (2019) in a study in South Africa revealed that factors such as education Level, Land tenure, Agro processing Training and information have a positive influence on the decision of smallholder farmers to participate in Agro processing.

In 2009, the Ghana Government in collaboration with international organizations appreciated the need for increased financial literacy among its people and developed international frameworks for consumer education and financial literacy aimed at training business managers on financial management. The Malaysian government as well came up with the two-pronged strategy through establishment of a financial working committee tasked with managing financial literacy programs for managers of business enterprises. The committee focuses on proper sensitization and dissemination of information on financial matters and spearheads the implementation of institutional programs on financial management in the education system (Ketley, Lightfoot, Jakubec, & Little, 2012). It is however worth noting that the least developing African nations have little or no information on the levels of financial literacy. Countries in sub-Saharan Africa like Nigeria, Malawi, and Mozambique most of its citizens lack unawareness of basic concepts in financial management (Refera, Dhaliwal, & Kaur, 2016).

Research conducted in Kenya shows that we have made remarkable steps towards achieving financial literacy, but we still have gaps. In Kenya, most Agro processing companies start off with simple and efficient financial processes but always require more complex financial mechanisms as the company begins to grow and expand and at this point most of the enterprises find it difficult to keep up with the changes (Njuguna and Wanjohi, 2021) the Agro processing industry, Participants need the financial know-how to be able to operate their enterprises employing a financial model that is able to lead the firm towards profit maximization. Firms should invest in knowledge management, invest in information technology tools, and should adequately train their staff to achieve lower costs of operation, improve quality, enhance efficiency among other advantages to the Firm (Njuguna & Wanjohi, 2021).

Financial literacy has an overall effect of enabling business organizations to realize their short- and long-term goals by having good decision-making processes. The skills such as budgeting, risk and debt management are critical in the firms' overall financial health (Mutegi, 2015). Budgeting involves estimation of the monetary and other resources needed to accomplish particular objectives such as sales growth targets and expansion in operations in line with the prevailing economic conditions. In the view of Nunden et al. (2022), budgets are not only compass but also guiding light for firms. Therefore, SMEs with excellent budgeting skills enjoy competitive advantage over their rivals. The skills are handy in capital investment, product costing and allocation of resources to new marketing opportunities. Mbogo et al. (2021) also found that the budgeting practices were positively correlated with the performance of the manufacturing SMEs in Nairobi County. In our study we seek to understand how well the firms under study are versed with preparing and forecasting of the organizational budgets and the prudence in spending against the set budget.

Financial risk management skills also enable the managers to proactively use the fluctuations in the states of the economy to their advantage. Skilled financial managers who are able to identify, assess, diversify, and monitor financial risk in their business are an asset. Dvorsky et al. (2021) found that the comprehensive risk management measures reduce uncertainty that may scare investors, increases stability in production and trading in the market thereby ensuring steady inflow of income. Competency in financial risk management significantly improves the chances of success. According to Van den Boom et al. (2020), studies have showed that the financial risks dysfunctions contribute to about 15% of all bankruptcies. The manifestation of such financial risks among the growing Agro processing firms include the difficulty in securing adequate capital to finance the firms' needs. The financial institutions are often reluctant to grant loan to the businesses due to lack of collateral security. The entities are also prone to rising operating costs in response to the running inflation characterizing the economy thereby causing shrinking profits (Ślusarczyk & Grondys, 2019). The firms, therefore, need skilled personnel to increase their access to funds.

The debt management extends to issuing of credit facilities to clients that may lead to bad debts. Debt management practices applied in small businesses and in this case in the Agro processing companies affect the ability of the business to grow and move with the dynamics in the business environment. The success or failure of firm is dependent on the ability to secure adequate funding.

Mazzarol, Reboud and Clark (2015) posit that small and medium sized firms suffer from lack of adequate cash flow and working capital at large. While these issues also affect big firms, small firms are often at bigger risk since small firms have greater scarcity of cash flows and have limited sources of capital since they cannot manage to raise extra capital through equity by issuing shares to the public. Raising debt capital is also not easy due to lack of collateral. They also lack professional staff to manage the financial aspects (Mazzarol, Reboud and Clark, 2015).

1.1.2. Business Performance

Business performance relates to ability of a firm to utilize the available resources to achieve both financial and non-monetary goals. According to Jackson (2021), the term refers to an entity's achievements as measured by metrics known as key performance indicators (KPIs). There are different KPIs depending on a firm's sector such as profitability, productivity, customer satisfaction ratings, improved market share and many others. Like in Agro processing industry the major KPIs are profit margins, sales growth, and customer's satisfaction levels. Past studies have derived conflicting results on the impacts of financial literacy on business performance (Eniola & Entebang, 2017). Some have found that the firms' growth has been constant despite the limited financial literacy of the founders. For example, effective utilization of entrepreneurial skills in building rare, inimitable, non-substitutable and superior products or services can lead to long term success even when the founders lack some relevant financial literacy skills (Scott et al., 2018). The success stories of entrepreneurs such as Bill Gates, Mark Zuckerberg, Richard Branson, and many others show that individuals must not necessarily have professional certificates or degrees to run successful business. In contrast, other scholars such as Jackson (2021) and Khan et al. (2021) attribute the high rates of business failure particularly among the small and medium enterprises to the low literacy levels. Kimundu and Erick (2021) also showed that business managers must be proficient in critical areas such as budgeting, working capital management, risk management and debt management in order for the businesses to run smoothly. Therefore, there is a research gap as to the real effects of financial literacy on the growth prospects of the firms. This project aimed at filling this gap by exploring the experiences of Agro processing Companies in Nairobi County.

1.1.3. Agro Processing Industry

The study focused on the effects of financial literacy on the performance of Agro processing companies, which falls under the manufacturing sector in Kenya. The choice of Agro processing industry was informed by the fact that under the government's 'Big 4 agenda', the country seeks to increase the contribution of manufacturing sector to GDP from 16% to 50%. Agro processing controls the largest share of the Manufacturing sector (KNBS, 2013) hence the findings of this study can be inferred to the entire manufacturing industry in addition, the critical roles played by the Agro processing firms in the global food supply chain is facing unprecedented threats. According to Mthombeni et al. (2022), the Agro processing industry enhances food security by decreasing food spoilage and waste management. The processed foods have longer life spans leading to stability in prices, as well as lucrative opportunities in the international markets. At the same time, MITC through the KITP and Vision 2030, manufacturing sector agenda stated that their focus sector was Agro processing with the rationale being the ability of these sectors to generate employment and positively contribute to GDP using assets present in Kenya. (Were, 2016).

Despite their importance, Agro SMEs are faced by global competition, market liberalization, rapid technological advances and the introduction of stricter quality and Safety regulations. This dynamic requires SMEs to be entrepreneurial if they are to survive, grow and have superior performance. The country is targeting to establish 1000 SME's that will in turn generate part of the 200,000 jobs (KAM, 2018). The managers at the firms need exceptional financial management skills so as to navigate the disruptions such as recession and running inflations.

However, such visions may not be accomplished if the Agro processing firms do not work on the financial literacy levels of their management teams. The failure rate of the SME is high throughout the country. According to Auch (2021), 70% of the small businesses fail within the first 3 years with financial literacy being the second most cited reason for the failures. Knowledge on key success factors such as debt management helps in gaining insights on the best credit facilities for achieving sustainable growth. The managers become well-versed with various types of loans available for funding operations of the Agro processing firms such as purchase of manufacturing equipment. Budgeting and bookkeeping skills have also been found to be essential in sealing the loopholes such as wastage of resources and other operational inefficiencies (Benedict et al., 2021).

As earlier depicted, Agro processing industry control one of the largest share (38%) of the Kenya Manufacturing Sector (KNBS, 2013). The manufacturing sector has great influence on the development of a country's economy, both locally and internationally, and as such, it is regarded as one of the most significant sectors for the country's economic development. The contribution of the sector to economic development of a nation cannot be ignored by any state, as it is the most powerful driver of economic growth. The Agro processing sector is a catalyst to economic transformation of a country from a simple growth and slow growth to a vibrant and more productive economy (Kungu, 2015).

In Kenya, the manufacturing sector is perceived as a critical element for a vibrant and healthy economy. The sector significantly contributes to the economy as it accounts for 10% of the country's GDP, 13% of formal employment and 12.5% of exports (KAM, 2015). Manufacturing sector is critical for promoting enterprise culture and creating jobs within the economy (KAM, 2015). Manufacturing sector has been earmarked in the country's vision 2030 for government's intervention in terms of structural changes to ensure that the sectors' contribution to the GDP is increased. Manufacturing firms in Kenya are categorized in to twelve industrial subsectors (Chemicals and Allied, Energy, Building, Mining and Construction, Food and Beverages, Electrical and Electronics, Metal and Allied, Leather and Footwear, Motor Vehicle and Accessories, Textile and Apparel, Pharmaceutical and Medical Equipment, Paper, and Board, and lastly the Plastic and Rubber industry) collectively represented by the Kenya Association of Manufacturers (KAM, 2015). The Agro processing industry falls under the category of food and beverage. Agro processing is noted as a key pillar of any country's economic growth, with the sector having direct and indirect impact on the development of other sectors of the economy.

In the period 2008-2012, the Agro processing industries in Kenya experienced low firm performance especially the food and beverage, which is the largest component in the Agro processing manufacturing sector. In 2012, the food and beverage industries registered a 0.3% decline after experiencing a 1.6% decline in 2011. Other Agro processing industries involved in the preparation and preservation of fish, processed liquid milk, production of bakery products, processed and preserved fruits and vegetables registered a drop by 10.4, 13.7, 14.9 and 2.5 %, respectively during the said period (ROK, 2013)

Despite the immense contributions of the Agro processing sector to the country's economy, the productivity of the Agro processing sector and the manufacturing industry at large remains lower than expected. Referring to the Kenya Vision 2030, the blueprint sets the growth rate of the manufacturing sector at 10% with a contribution of 30% to the country's GDP. However, the contribution of Agro processing industry and manufacturing sector to GDP has stagnated at 3% and 10% respectively over the years with the industry's annual growth rate of 3.16% (KIPPRA, 2013). It is against this background that the study seeks to establish whether the decline in performance is because of financial literacy of the financial managers of the Agro processing companies in Nairobi County. The study specifically focused on the effects of financial budgeting literacy, financial risk management literacy and debt management literacy on the performance of Agro processing companies in Nairobi County.

1.2 Statement of the Problem

The Agro processing industry has a high number of registered enterprises and is dominated by small and medium enterprises. These SMEs are critical in accelerating economic growth through employment generation, farm and off-farm income, Value addition among others (Wambugu, 2016). Agro processing firms are facing challenges from cross border competition, pest side restrictions, green movement, customers that are more discerning and increasing global competition (Jouanjean, 2019). To survive, agricultural organizations must continuously align operations to the said environment they operate in (Hofmann & Jaeger-Erben, 2020). Improving financial literacy of the actors in the industry is one of the ways that Agro processing companies can use to improve their processes and ultimately improve their performance. The Kenyan government recognizes the significance of the Agro processing sector to creation of employment and mitigation of poverty in the nation (GoK, 2013). However, the Agro processing industry and manufacturing sector only contributes 3% and 10% to the GDP respectively over the years, which is way below the target of 30% (KAM, 2018). This is because the Agro processing SMES are characterized by limited technological capacity, low product diversification, inadequate financial knowledge, and entrepreneurial know-how.

Financial literacy programs are critical to transform smallholder agriculture from subsistence to innovative, commercially oriented, and modern agricultural sector to boost Agro processing. Evidence indicates that Agro processing industry has struggled to achieve the desired performance targets but to no success due in part to low financial literacy level (Khowa & Mukasi, 2021). As Mthombeni,et al. (2022) observed, most of the employees of the small-scale Agro processing firms

do not have formal training. Instead, they often acquire the knowledge and skills from friends and parents. Agricultural Mechanization Research Institute (2023) also points out that the firms are at greater risk of accomplishing the strategic growth targets because of the limited know-how and complexities involved in managing the scarce resources. For example, some processing firms obtain their supplies from dispersed and unorganized small-scale farmers. The cost of bulking, consolidating, and meeting the commercial volumes, as well as diverse consumers' needs are high. Moreover, the disruptions in the supply chains require the financial managers at the companies to have competent teams with exceptional knowledge and experience on budgeting, risks, and debt management. The prolonged shocks arising from Covid-19 raised the price of the raw materials to all time high. For example, the month-on-month food index or inflation rose from 0.35 in March 2021 to 1.73% in April 2021 (Global Alliance for Improved Nutrition/GAIN, 2021). As a result, an increasing number of SMEs in the Agro processing industry have been relying on financial aid from the government in order to remain in business. In fact, the World Health Organization advised Kenyan government to launch an economic cushion package to minimize the effects of the rising inflation (GAIN, 2022). However, the demand for such economic stimulus packages from thousands of other SMES means that it is impossible for the government to respond to all the financial needs of the Agro processing firms. In other words, the success of each player depends largely on access to competent financial managers. The more innovative the financial officers and accountant in launching resource utilizing programs, debt, and risk management incentives, the higher the chances of success.

The Government of Kenya has provided substantial amount of resources for development of key infrastructures and improvement of general logistics systems and regional market penetration protocols. However, despite the huge commitment of public resources, the Kenya National Bureau of Statistics (KNBS) reports a notable decline in performance of food processing firms. The intermediate and capital goods industries are also relatively underdeveloped, implying that Kenya's food manufacturing sector is highly import dependent. Locally manufactured food comprises 10% of Kenya's exports. Poor performance of food and beverage companies as a result of increase in costs can be indicated by the closure of a fast consumer goods manufacturer such as Cadbury Kenya, Kuguru Foods Complex Limited in July 2015, Pecha Food Limited in July 2016, Stawi Food and Fruits Limited in August 2016 and Maz International Limited in March 2017 (KAM, 2017). The Agro processing sector has also experienced declining customer satisfaction due to supply chain disruptions

characterized by food safety scares, shortages, and ever-increasing prices (Awino, 2019). Various studies have been done by different researchers on the subject of financial literacy influence to the performance of various business organizations. In their study, Lusimbo & Muturi, (2016) did a study on the significance of financial literacy to the growth of medium enterprises in Kakamega Central sub-county and established that even though managers possessed a fair understanding of debt management literacy most of them lack knowledge on the impacts of interest and inflation rates on borrowed loans based on matching assets and liabilities. Similarly, research by Chepngetich (2016) raised concern that limited knowledge on borrowing and budgeting posed threat to the growth of the SMEs in Uasin Gishu. The same recommendations were made by Kodongo (2018) that Kenya should boost the financial literacy efforts so as to achieve sustainable growth of the upcoming firms. Agro processing industry boasts of some of the entrepreneurial ventures expected to steer the country towards achievement of Vision 2030. Kimunduu and Erick (2021) also studied the influence of financial literacy on the performance of SMEs in Ruiru Town. However, the studied firms were better off than their peers in the Agro processing industries because they had undertaken financial literacy training that was offered by Equity Bank. Overall, significant knowledge gap exists on the impacts of financial literacy on the performance of upcoming firms in the Agro processing industry. A quick search on the Internet reveals that less than five studies exist on the correlation of financial proficiency and growth of Agro processing companies in Kenya. At the same time, there is limited knowledge as to whether the firms have embraced the financial literacy programs recommended by the existing studies and whether they recommendations are effective in addressing the emerging challenges caused by Covid-19, rising inflations, and related fluctuations in the socio-economic factors. Consequently, the choice in Agro processing industry brings a major shift on the effects of financial literacy, bringing out a clear gap necessitating for further research on the area. This study hence sought to fill the knowledge gap by examining the effects of financial literacy to the performance of Agro processing Companies.

1.3 Research Objectives

1.3.1 Main Objective

The main objective of the study was to assess the effects of financial literacy on the performance of Agro processing Companies in Nairobi County

1.3.2 Specific Objectives

- i. To determine the effects of financial budgeting literacy on the performance of Agro processing Companies in Nairobi County
- ii. To establish the effects of financial risk management literacy on the performance of Agro processing Companies in Nairobi County
- iii. To determine the effects of debt management literacy on the performance of Agro processing Companies in Nairobi County

1.4 Research Questions

- i. What are the effects of financial budgeting literacy on the performance of Agro processing Companies in Nairobi County?
- ii. What are the effects of financial risk management literacy on the performance of Agro processing Companies in Nairobi County?
- iii. What are the effects of debt management literacy on the performance of Agro processing Companies in Nairobi County?

1.5 Scope of the Study

The study was conducted in Nairobi County. The target population for the study comprised 112 Agro processing companies operating in the county. The choice of this industry was made mainly based on considerations that, the Agro processing industry constitutes the largest portion of Kenya manufacturing sector. Target respondents comprised the finance heads and major decision makers in the accounting and finance departments of each of the listed Agro processing companies. The study was conducted between 1st September 2022 and 15th January 2023.

1.6 Significance of the Study

1.6.1 Business Managers/Owners

This study contributes to the body of knowledge desired to provide understanding on the benefits of financial literacy on organizational performance to business managers/owners. It serves as a reference for both current and upcoming entrepreneurs on the role that financial knowledge plays in the performance of their business.

1.6.2 Policy Makers

The findings of the study are of great importance to the policy makers of various business enterprises by providing information that assist in developing policies on financial literacy acquisition.

1.6.3 Researchers and Academicians

Both researchers and academicians are expected to benefit from this study by gaining additional knowledge to the subject of financial literacy in respect to performance. The study is also of great beneficial to researchers in the field of finance as the findings of this research will form a good basis for further research.



CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents both theoretical and Empirical review of literature based on the specific objectives of the study. The study is anchored on dual process theory and the study also reviewed empirical evidence of previous studies on the variables of the study namely financial budgeting Theory, Financial risk management literacy and Debt management literacy.

2.2 Theoretical Framework

The study adopts dual process financial literacy theory. It argues that the behavior of people with a high level of financial literacy depend on the prevalence of the two thinking styles namely intuition and cognition (Esiebugi et al., 2018). Lusardi and Michell developed the theory in 2011. The theory posits that two individuals with high level of financial literacy are unlikely to pursue the same course of action when faced with a complex decision to make based on the differences in their intuitions and cognitions (Glaser and Walther, 2014). In this case, intuition refer to ability to acquire new knowledge without the use of reason. The concept can guide a financial manger to develop understanding, beliefs or make judgments that may not be rationally justified. For Instance, a chief financial officer (CFO) at an Agro processing company may influence subordinates to undertake an action based on mental shortcuts led by their intuition. Their emotions may push them to implement a decision that may put the entire firm at risk. As Aboluwodi (2022) argues, the decisions are fast, non-conscious, associative and experience based. For example, a manager impressed by a new invention may approve a new loan when a firm is already spending large chunks of the profits in serving other existing loans. On the other hand, cognition involves holistic processing of an idea before implementation. The mental processing entails comprehending, calculating, reasoning, problem solving and decision making (Esiebugi et al., 2018).

A firm's competitive advantage and performance is largely dependent on both tangible and intangible resources and hence the need for a wide knowledge base for the firms in relation to financial literacy. Research has shown that financial literacy helps businesses to make guided decisions, for example make a case to bankers during a client interview, meet challenges of changes to the business and to financial markets and hence achieve sustainability and possibly

greater performance. Low financial literacy would cause poor financial management practices and in turn lead to frequent financial mistakes.

However, the theory has been under increased criticism. According to Grayot (2020), dual process theory (DPT) has been questioned by cognitive scientists and philosophers over their subjective nature in distinguishing between rational and irrational decision-making processes. The critics argue that overgeneralized economic behaviors may also arise from following the DPT recommendations (Aboluwodi, 2022). Nevertheless, the comprehensive explanations of the intuitive and cognitive processes are clearly evident in the theoretical framework. For example, it is evident that both intuition and cognition influence a decision makers' financial behavior. Those who have more knowledge and experience in managing cash, debt, savings, and other expenses are better positioned to pursue the course of action that yields the greatest returns. However, the decisions tend to be effective when one relies on cognition rather than intuition (Hasibuan et al, 2017).

Studies have shown that financial literacy is positively related to self-beneficial financial behavior. Hilgert, Hogarth, & Beverly (2003) added financial behavior and financial literacy questions to the nationwide survey of consumer finances. They formed a financial practices index based upon behavior in four variables, cash-flow management, credit management, savings, and investment practices. Comparing the results of this index with scores on the financial literacy quiz, they found that those who were more financially literate had higher financial practices index scores, indicating that financial knowledge is related to financial behavior. Further they found that those with low financial literacy are more likely than others to base their behavior on financial advice from friends and are less likely to invest in stocks.

Financial literacy has a significant positive influence on financial behavior Komara et al. (2017). low levels of financial literacy have been linked to suboptimal financial behavior likely to have long-term consequences. Hilgert et al. (2003) find that low literate individuals are generally less likely to engage in a wide range of recommended financial practices. This in turn has a negative impact on the Agro processing industries and hence this study seeks to determine the effects of financial literacy on the areas of budgeting, Risk, and debt management to the performance of the firms under study.

Dual-process theories have been studied and applied in a number of previous studies. For example, Glaser & Walther (2014) anchored their research on the impacts of financial literacy on investment

behavior on the dual-process theory. Kamakia et al. (2017) used the theory in examining the relationship between financial literacy and financial wellbeing of public sector employees in Kenya. Esiebugi et al. (2018) also employed the theory in studying the effects of financial literacy on the performance of SMES in Benue Estate, Nigeria. Therefore, the theoretical framework is backed with multiple earlier studies.

The intuition and cognition processes are instrumental in various areas in finance (Glaser & Walther, 2014). For example, it facilitates the decision-making processes such as payment of bills on time, proper debt management which improves the credit worthiness of potential borrowers to support livelihoods, economic growth, sound financial systems, and poverty reduction. It also provides greater control of one's financial future, more effective use of financial products and services, and reduced vulnerability to overzealous retailers or fraudulent schemes. Facing an educated lot, financial regulators are forced to improve the efficiency and quality of financial services. This is because financially literate investors create competitive pressures on financial institutions to offer more appropriately priced and transparent services, by comparing options, asking the right questions, and negotiating more effectively. Investors on their part can evaluate and compare financial products, such as bank accounts, saving products, credit and loan options, payment instruments, investments, insurance coverage, to make optimal decisions (Miller et al., 2009)

In this study, dual process financial literacy was relevant in exploring the correlation between the financial proficiency and the business performance of the Agro processing companies. It assumes that the financial decision makers relying not only on their intuition but also their cognition are better placed to guide their firms towards achieving performance goals. On the other hand, even the professionally trained accountants and financial officers that implements rush or under-researched decisions are likely to expose their firms to budgeting, financial risks and debt management dysfunctions.

2.3 Empirical Review of Literature

2.3.1 Financial Budgeting Literacy and Organizational Performance

Budgeting Literacy refers to the skills and knowledge in expenditure planning and cashflow analysis which is critical to the success of business operation and Processes. Budgeting process may not fully guarantee effective financial resource distribution and utilization. However, it plays a significant role in the financial management of business enterprises (Li & Qian, 2019). Proper budgeting enhances profitability by minimizing of financial losses. Gorbunova (2021) examined the need for improvement of budget subsystem in agriculture and concluded that the system for organizing production, accounting, control, and budgeting is relevant to all firms. For example, automation of the data collection used for budgeting purposes often translate into effective strategic plans. In this case, the agro-industrial organizations can employ the skills to ensure production efficiency and labor efficiency, as well as launch of competitive products.

Siekei (2016) examined role of budgeting skills the SMEs' performance. Their findings showed that SMEs that presented better sales and profitability were proficient in budgeting skills. The study also established that budget development skills of such SMEs were acquired through financial education that helped the individuals to accurately predict sales and set goals that were achievable. This implies that the studied Agro processing companies would achieve new performance goals by acquiring advanced budgeting skills. The firms particularly needed proficiency in budget controls. As Fatoki (2017) noted, the operation of small enterprises remains informal based on the predicted income and there is no financial planning and controls on their expenditures. Similarly, Sharma (2019) found that most of business managers particularly the SMEs struggled to establish seamless financial planning and budgeting control processes. The budgets exist but are hardly complied throughout the fiscal periods.

Ali and Isak (2019) in their study, investigated the association between budgeting and performance of Somalia's remittance companies. The study established that there existed a positive and strong correlation between budgeting and performance of the firms, meaning that a level increase in budgeting leads a considerable increase in performance of the firms. In addition, the research established that the relationship between budgeting firm's performance was statistically significant and moderate positive. Therefore, it is important that managers equip themselves with budget making skills to nature performance of the firms.

Jiang et al (2020) did research on the impact of financial literacy on the performance of Chinese SMEs. The study sought to answer the question whether budgeting process has a positive and significant impact on performance of SMEs in China. It was revealed that there existed a positive impact of formal budgeting on the performance of the firms. Two key findings were established. First, a highly formalized budgeting planning resulted into increased revenue from sales. Secondly, the characteristics of the budget goals considerably affect the Chinese SMEs' budgetary performance. In other words, clear budget goals translate to higher achievement of goals while having challenging budgetary goals motivates employees to work harder leading to financial growth. Lastly, the study revealed that the more formalized budgetary controls are, the higher the profitability. This research also sought to determine whether the observation applied to the Agro processing firms in Nairobi County.

Isaboke & Kwasira (2016) also studied the effects of budgeting process on performance of the County Government of Nakuru. The study used financial capacity as the independent variable and firm performance as dependable variable. In addition, the researchers employed descriptive survey as their research design. Isaboke & Kwasira (2016) collected primary data using the structured questionnaires. It was found financial capacity had a strong influence on the performance of the county government. The study, therefore, recommended that there was need for Nakuru County Government to enhance its financial capacity during budgeting to improve its performance. This is in line with findings by Warue and Wanjira (2013) which attribute SMEs failure to poor budgeting skills.

However, budgeting skills gaps are high across the industry. Fin Access survey (FSD, 2009) revealed that although a large number of Kenyans are familiar with the concept of budgeting, over 51.2% felt they are not in control of their finances. These empirical studies reveal a positive relationship between financial literacy and human behaviors. For example, increased saving, wealth accumulation, investment portfolio choice and debt management are all essential requirements for business survival. However, Agro processing firms like other sectors of the economy needs more financial literacy programs.

Rabiu et al. (2015) studied the roles played by budgetary control on the performance of Nigeria's real estate industry. The study used questionnaire to collect primary data while secondary data was

acquired through financial statements for the businesses from 2007 to 2012. The findings established that factors such as target budget setting, budget administration and budget process play a significant role in influencing the performance of the firm. The study therefore recommended that top level management in organizations need to maintain appropriate standards when preparing and administering budgets and budget process. The findings are important to the stakeholders of the Agro processing companies. Acquisition of diverse budgeting skills would hasten the expansion of the Agro processing industry (Okello & Were, 2014)

Overall, several studies conducted in Kenya have showed that budgeting is positively correlated with financial performance (Okello & Were, 2014; Faith, 2016). However, the studies were conducted under different contexts and time periods hence the specific budgeting knowledge needed by the managers of the SMEs may differ significantly from those required by the Agro processing firms. More surveys are needed to uncover the specific skillset that would enable the Agro processing SMEs to maximize returns on investment and generate the highest values for their stakeholders. This study seeks to address this by delving into the effects of financial budgeting literacy on the performance of the Agro processing companies under study.

2.3.2 Financial Risk Management Literacy and Organizational Performance

financial risk management literacy refers to the process of identifying, assessing and controlling threats to organizations earnings and making investment decisions based on either accepting or mitigating them. Several studies have examined the relationship between financial risk management and organizational performance. As a result, the concept has several definitions. For example, Yang et al. (2019) defines the term as the financial practices employed by business enterprises to manage exposure to adverse events in their business environment such as unexpected fluctuation in inflation rates, assets value, capital assets, foreign exchange rates and others. On the other hand, Kimari (2016) view risk management as systematic thinking of all possible risks before their occurrence and establishing frameworks to avoid their adverse impacts to the stakeholders. Agro processing firms with competent risk managers, therefore, have upper hand in surviving in any type of market.

Existing study show that literacy in financial risk management applies to many areas of operation. For example, study by Kimunduu and Otieno (2016) on the relevance of financial literacy on the business performance of SMEs in Ruiru Town revealed that different approaches are needed to

address the market, liquidity, and credit risks. Market risks are those arising from external environmental factors such as changes in consumers' tastes and preferences. The market risks can also occur due to changes in prices of production inputs. This may trigger inflation, as well as the foreign exchange rates (Kimari, 2016). In contrast, credit risk are the unexpected events that may occur due to the failure of business partner to perform their obligations. For example, default by a counter party can lead to bad debts and low profits ((Liu et al. 2017). Similarly, a client who acquires goods on credit and fails to pay also poses a credit risk to the business. While liquidity risks are uncertainties related to the firm's ability to meet its operating costs. Ideally, liquidity position refers to access to resources that can easily be converted to cash (Alim et al., 2021).

The managers of the Agro processing businesses experiences in dealing with various types of risk determines their long-term performance (Lechner & Gatzert, 2018). According to Callahan & Soileau (2017), financial risk management literacy differentiates exceptional performers from the average industry players. Several other studies have documented the positive effects of having proficiency in managing various types of risks. For example, Kinyua, Mburu & Ogollah (2015) investigated how risk management affected performance of SMEs in the information and communication technology sector in Nairobi. The researchers used a sample population of forty-eight ICT small and medium enterprises. The study established that there exists a positive relationship between project performance and risk management in ICT small and medium enterprises in Kenya. Therefore, Kinyua, Mburu & Ogollah (2015) concluded that majority of the SMEs have knowledge on the importance of risk management practices. The Agro processing firms would that are currently struggling to prosper would turn around if the managers acquired all the relevant financial risk management skills. Such benefits include financial savings, increased success rates, high productivity, and enhanced decision-making.

On the other hand, Genrikh (2016) study yielded inconclusive results. The researcher obtained data from Financial Analysis Made Easy (FAME) database which stores financial information on Northern Ireland and UK. However, the study did not find sufficient evidence that financial risk management improved the surveyed firms' performance. The results could be because Genrikh (2016) did not take into account additional measures such as qualification and experience of the executive officers. Nevertheless, the study findings call for more research to determine the real-life experiences of the Agro processing companies' stakeholders, as far as, the relationship between financial risks management and performance is concerned.

Locally, Anyieni (2018) studied the effects of financial risk management practices on the resiliency of SMEs in matatu SACCOs in Nairobi. The study revealed that sixty two percent of the respondents agreed that it takes relatively longer duration to restore the state of normalcy after disruptions resulting from the financial risks. Only few managers with advanced skills on risk management had launched incentives such as diversification of risks to secure their firms from the losses associated with credit, liquidity, and market risks. However, there was no statistically significant correlation between diversification and business resilience (Anyieni, 2018). The Agro processing firms are facing similar challenges. The majority prefer to specialize on particular products (Mthombeni et al., 2022). However, the business often posts low returns on investment during low seasons particularly those dealing with seasonal farm supplies. Therefore, it is high time the managers tried out new approaches such as investing in multiple business lines to ensure steady flow of revenues.

2.3.3 Debt Management Literacy and Organizational Performance

Debt management literacy refers to all the knowledge, skills and attributes enabling a firm's employee to maintain healthy and beneficial relationships with the bankers, creditors, and debtors (Mwamba, 2020). Debt management is a broad area hence require the concerned parties to upgrade their skills. It entails having competency or insights into available sources of loans, advantages of borrowing from one firm over the other, interests charged. Knowledge in accounting ratios such as current ratios, debt-to-asset ratios also enable the business owners to effectively manage the risks. The competent managers further implement adequate lending and credit sales policies thereby protecting their businesses from avoidable losses.

Literature indicates that debt management skills are key success factors in all sectors of the economy. Cecchetti et al. (2011) found that firms have gone bankrupt due to over-borrowing. That is, accumulating a high debt level constrains a business' capabilities to run successful projects. Such firms are not able to secure new loans for emerging projects while the rivals with stronger financial bases can run multiple projects simultaneously. Due to the same reason, Esiebugie et al.

(2018) in a study conducted in Nigeria concluded that there is great need for training programs on debt management in schools and other institutions that seek to promote financial literacy and practice.

Another study by Eniola and Entebang (2017) showed that business managers possessing little financial literacy are susceptible to exploitations while negotiating for deals with their bankers or clients. Lack of comprehension on industry trends, as far as, interest rates, asset values and time value of money is concern undermines the managers' ability to secure good credit facilities for their firms. Consequently, the managers of the Agro processing firms should create multiple opportunities for expanding their Staff members' knowledge base on financial debt management. Locally, Chepngetich (2016) examined the effect of financial literacy and performance of SMEs in Kenya. The findings established that majority of business managers are exposed to pressure resulting from monetary problems. Similarly, behavior like extravagance, over-indebtedness, meager cash, and credit mismanagement among others affected the financial growth of the studied firms. As a result, Chepngetich (2016) recommended that problems emanating from deficiency of financial literacy should be mitigated by introducing financial education at workplaces to empower managers with self-administration skills on debt management.

Habib et al (2016) also carried out a study to examine the impact of debt on profitability of firms by assessing the non-financial sector in Pakistan. The findings showed that fixed investment was negatively affected by total debt ratio. Therefore, high levels of debt in a firm's financial structure can negatively affect investments relying on internal funds. This happens because companies suffering from high debt ratio tend to direct majority of their profits towards serving of debts hence leaving very little for investments using internal funds. Consequently, small-scale enterprises fall into more risks by introducing more debts to capital structure thus becoming impossible to obtain

further debts for investments as the high business risk will attract higher interest rates by creditors. The researchers also argued that a highly indebted company will suffer from underinvestment, as creditors will not be ready to provide more loans to such a firm. The operations of a firm therefore end up being highly affected if it does not undertake sufficient investments. In this study we look at the literacy levels of the decision makers in the firms under study and review the effects of this on the performance.

2.4. Summary of Literature Review

Most of the existing study show positive correlation between financial literacy skills and performance. The surveys indicate that the investments in gaining knowledge, skills, expertise in risk management, debt management and budgeting often translates into long term success. Out of the reviewed studies only research by Genrikh (2016) found that the financial risk management styles do not necessarily results into increased performance. The empirical evidence, therefore, suggested that access to employees with the relevant financial literacy skills improved the Agro processing firms' success rates.

From the reviewed studies, it is apparent that most of the studies focus on SMEs and there is minimal research, which is industry specific and, in this case, specifically on Agro processing. In addition, most studies have concentrated on financial performance leaving out social performance. Furthermore, times have changed with the ongoing disruptions in the business environment hence a knowledge gap exists on the consequences of the global inflation and recession since the onset of Covid-19 In the context of rapid changes and constant developments in the financial sector, and the broader economy. it is important to understand whether people are equipped to effectively navigate the maze of financial decisions that they face every day.

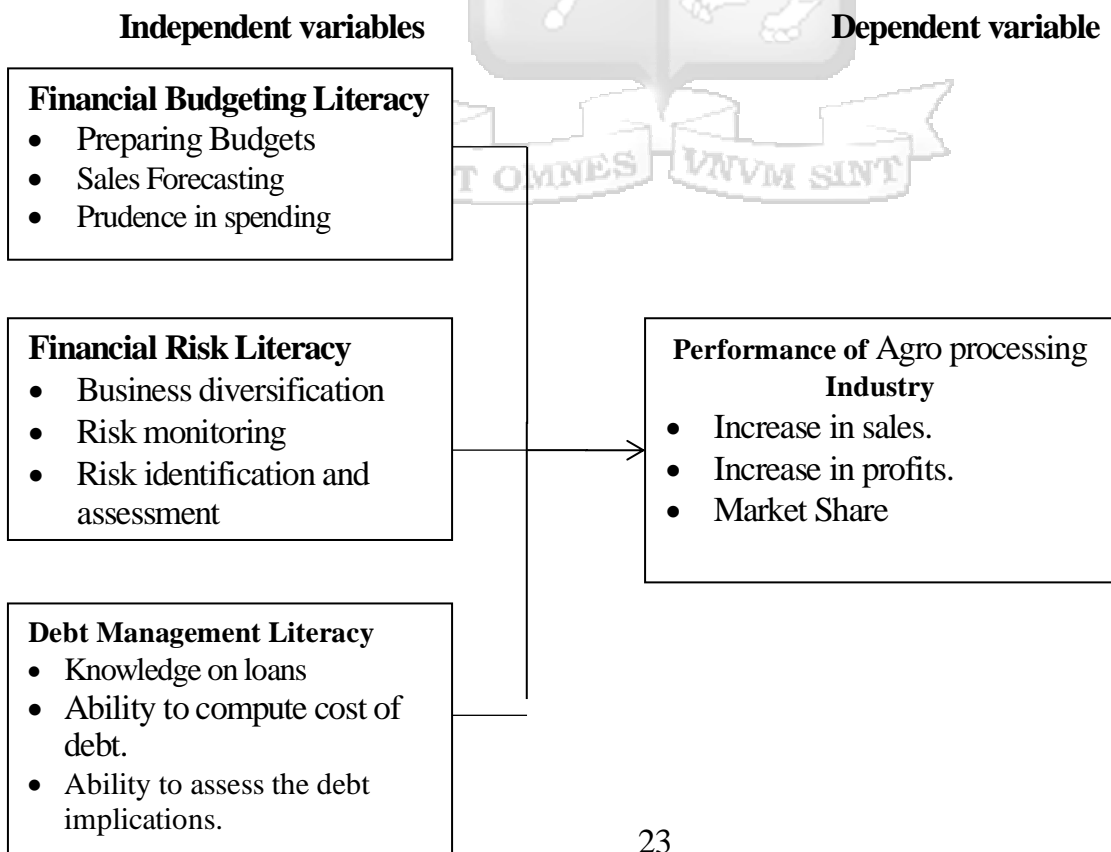
Although Education is positively correlated with financial literacy, the researcher set out to add

to the existing knowledge on financial literature and assess whether education as a basis of financial literacy is sufficient. The study looks at the effects that literacy levels in the areas of financial budgeting, financial risk assessment and debt management literacy has to the performance of the Agro processing Companies.

2.5 Conceptual Framework

A conceptual framework is a schematic framework showing the link between variables under examination. Following the proceeding literature review, several studies have documented that budgeting, risk management and debt management are evidently crucial contributors to the growth and performance of a company. Thus this study focused on Financial literacy which was operationalized as financial budgeting literacy, Financial risk literacy and debt management literacy. while the dependent variable was the performance of the Agro processing industry. The performance of the companies under study was conceptualized by reviewing the progress of the companies from the view of the employees in terms of the changes in sales, profits, and the market share.

Figure 1: Conceptual Framework



2.5.1 Operationalization of Study Variables

This subsection presents information on the operationalization of the study variables. It presents information on the study variables, indicators, measurement scales, analysis approach and statistics to be obtained.

This study focused on financial budgeting, debt management and financial risk management literacy as the key financial literacy variables. In regard to the independent variable, existing research advances the argument that all 3 variables are relevant for the performance of an organization. The performance was conceptualized in terms of the view of the respondents based on their experience at the firm in regard to the increase in sales, the increase in profits and the satisfaction from their customers. This study assumed that the respondents had both formal and informal communication channels with the customers to be able to get feedback.

Table 1: Operationalization of Study Variables

	Variable	Indicators	Scale	Analysis	Statistics
Dependent variable	Organizational Performance	<ul style="list-style-type: none"> • Increase in sales. • Increase on profits. • Customer satisfaction 	<ul style="list-style-type: none"> • Ordinal scale • Nominal 	<p>Quantitative</p> <ul style="list-style-type: none"> • Descriptive <p>Qualitative</p> <ul style="list-style-type: none"> • Thematic Analysis 	<ul style="list-style-type: none"> • Frequencies • Percentages • Means • Standard Deviations
Independent variable	Financial Budgeting Literacy	<ul style="list-style-type: none"> • Preparing Budgets • Sales Forecasting • Prudence in spending 	<ul style="list-style-type: none"> • Ordinal scale • Nominal 	<p>Quantitative</p> <ul style="list-style-type: none"> • Descriptive • Inferential <p>Qualitative</p> <ul style="list-style-type: none"> • Thematic Analysis 	<ul style="list-style-type: none"> • Frequencies • Percentages • Means • Standard Deviations • Regression Analysis
Independent variable	Financial Risk Literacy	<ul style="list-style-type: none"> • Business diversification • Risk monitoring • Risk identification and assessment 	<ul style="list-style-type: none"> • Ordinal scale • Nominal 	<p>Quantitative</p> <ul style="list-style-type: none"> • Descriptive • Inferential <p>Qualitative</p> <ul style="list-style-type: none"> • Thematic Analysis 	<ul style="list-style-type: none"> • Frequencies • Percentages • Means • Standard Deviations • Regression Analysis
Independent variable	Debt Management Literacy	<ul style="list-style-type: none"> • Knowledge on loans • Ability to compute cost of debt. • Ability to assess the debt implications 	<ul style="list-style-type: none"> • Ordinal scale • Nominal 	<p>Quantitative</p> <ul style="list-style-type: none"> • Descriptive • Inferential <p>Qualitative</p> <ul style="list-style-type: none"> • Thematic Analysis 	<ul style="list-style-type: none"> • Frequencies • Percentages • Means • Standard Deviations • Regression Analysis

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology that was adopted for the study. The methodology focused on the research approaches that helped to achieve the objectives of the project. This included research philosophy, design, the study population, sampling techniques, tools for data collection and analysis, strategies for improving research quality, and maintaining high ethical standards.

3.2 The Research Philosophy

The study employed positivism research paradigm because it was ideal for exploring the relationship between financial literacy and performance of the Agro processing firms. According to Žukauskas (2018), positivism views reality from objectivists' perspective in that an individual's understanding of a phenomena grow with exposure to new insights. According to positivism philosophy, science presents the best approach for learning about the truth. The researcher acquired new knowledge about financial literacy through observation, and statistical analysis of the collected data. Positivism further emphasize that the factual knowledge gained in the course of the study is more trustworthy than the mere beliefs in an idea (Ladyman, 2012). Moreover, the research philosophy allows for collection of quantifiable observations thereby enabling statistical analysis. In this case, the financial managers' opinions were converted into quantitative information through Likert Scale thereby allowing for correlational analysis. Generalization occurred through the outcomes of the statistical analysis and hypothesis tests.

3.3. The Research Design

A research design refers to the master plan that shows the procedures and methods for obtaining data and analyzing the data to derive relevant information that would help in answering the research objectives (Kothari, 2017). It is basically a plan of investigation that involves planning, collection, and analysis of data to provide information and solutions to the research problem. The research design is used to mold the research to show how major parts, variables, samples, and programs work hand in hand to address the research objectives. The study employed a descriptive correlational research design for this research. According to Creswell (2016), descriptive

correlational research design is a kind of research design that describes the variables of the study and the relationships that occur naturally between and among them. The choice of descriptive correlational research design for this research is guided by the specific objectives of the study which are focused on establishing the effects of financial literacy on the performance of Agro processing industries In Nairobi County. The descriptive correlational research design is also considered suitable for this study since it enabled the researcher to establish the relationship between study variables without manipulating them.

3.4. Target Population and Sampling Technique

Population can be described as the total collection of individuals or objects that have a common observable characteristic from which an inference can be made, (Dahabreh & Hernan, 2019). The target population of a research refers to the entire set of elements from which a researcher intends to make inferences (Sekeran & Bougie, 2016). It simply refers to the entire group of individuals or items that the researcher seeks to investigate. The target population for the study comprised 112 Agro processing companies in Nairobi County as registered with the Kenya Association of Manufacturers (KAM, 2019). The researcher also Chose Nairobi County because the county has the highest number of Agro processors as many of them migrate to the city to scramble for the ready market that is Assumed in Nairobi. The target respondents included the financial managers and key financial decision makers at each of the listed Agro processing companies.

Since the number of Agro processing firms were manageable, the study used census method. This involved gathering data from all the Agro processing companies based in Nairobi as per appendix 1. By surveying all the 112 firms, census method eliminated the risk of sample biasness that might have occurred in focusing on particular proportion of the firms (Martínez-Mesa et al., 2016). A survey of all the Agro-processors in Nairobi provided opportunity for obtaining data that would have been left out by sampling a small percentage of the firms. Purposive sampling technique was then administered to recruit three respondents from each of the 112 firms. This is a non-probability sampling where participants are selected based on the characteristic that a researcher needs in a sample (Etikan et al., 2016). Therefore, the executives involved in financial decision making were selected from the micro firms while the accountants and finance officers were chosen from those that had fully functional finance and accounting departments.

3.5. Data Collection Methods

Data collection also refers to the process through which information is obtained from the subjects being investigated (Creswell, 2016). The study focused on primary data. Questionnaires were used to collect primary data for this research. The study employed a well-structured online self-administered questionnaire that will be administered using Google Docs due to Covid-19 precaution measures and cost efficiency benefits. The questionnaire was divided into sections based on the specific objectives of the study. The first section of the questionnaire focused on gathering general information of the Agro processing companies. The second section gathered information on the effects of financial budgeting literacy on the performance of Agro processing industries. The third section focused on acquiring information on the effects of financial risk management literacy on the performance of Agro processing industries. The fourth section obtained information on the effects of debt management literacy on the performance of Agro processing industries. While the last section assessed the performance of the Agro processing industries. Each section, except the first section relied on a five-point Likert scale to quantify the impact of the independent variables on business performance of the studied firms.

3.6 Data Analysis

According to Zikmund et al. (2010), data analysis refers to the process of systematically applying statistical and logical techniques to describe, illustrate, condense, and evaluate data in line with the objectives of the study. It is simply a sequential process of drawing meaningful conclusions from data gathered. In this case, gathered data was first cleaned and then analyzed qualitatively and quantitatively. As Mugenda and Mugenda (2012) stated, data gathered from the field in raw form is difficult to interpret unless it is cleaned, coded, and analyzed. Qualitative data was then analyzed thematically through establishing of themes and patterns of responses systematically and then developing a report. Quantitative data was analyzed by Statistical Package for Social Science (SPSS) version 24. The tool allowed for detailed descriptive and inferential statistical analyses.

3.6.1 Descriptive Statistics

Descriptive statistics are statistics that describe, show, and summarize the basic features of a dataset found in each study (Mishra et al., 2019). They are normally presented in a summary that describes the dataset and its measurements. Descriptive statistics was used to give the general characteristics or features of a dataset hence gave useful insights into the trends into financial

literacy and performance of the surveyed Agro processing firms. Descriptive analysis for this study entailed frequency counts, percentages, arithmetic means, and standard deviations.

3.6.2 Inferential Statistics

Inferential statistical analysis is a statistical analysis method that deduces from a small but representative sample the characteristics of a bigger population (Ali & Bhaskar, 2015). It allows the researcher to make assumptions about an entire population using a smaller portion of a particular population. The main purpose of inferential statistics in this study was to provide measurements that can describe overall population. The results of the Agro processing firms in Nairobi could be used to predict the effects of financial literacy on the performance of other Agro processing firms from across the country. Correlation and regression analysis were performed in order to establish the relationships between financial literacy components and performance of the performance of Agro processing firms (Mishra et al., 2019).

Karl Pearson's correlation coefficient was employed in establishing the strength and the nature of association between financial literacy variables and Agro processing companies' performance (Witte & Witte, 2017). While multivariate regression model shown below was adopted. It sought to establish the extent to which a combination of the three explanatory variables (financial budgeting literacy, financial risk management literacy and debt management literacy) predict the response variable performance of Agro processing companies.

$$P = \beta_0 + \beta_1 FBL + \beta_2 FRL + \beta_3 DML + \epsilon$$

Where:

P= Performance of Agro processing Companies

β_0 = Constant (the intercept of the model)

β_1 = Coefficient of independent variable Financial Budgeting Literacy

β_2 = Coefficient of independent variable Financial Risk Management Literacy

β_3 = Coefficient of independent variable Debt Management Literacy

FBL= Financial Budgeting Literacy

FRL= Financial Risk Management Literacy

DML= Debt Management Literacy

ϵ = error term

Regression assumptions for linearity, normality and multicollinearity were tested to establish suitability for the inferential statistical analysis (Jeong & Jung, 2016). This assumption of linearity tests whether there exists a linear relationship between independent variables (financial literacy components) and the dependent variable (Performance of Agro processing Companies). This assumption is very significant for multiple regression analysis since it requires data that relates the independent variables and the dependent variable in a linear form. This assumption was tested using scatter plots in which the line of best fit will be drawn on the scatter plot to establish whether the nature of relationship between the variables is linear.

The assumption of normality tests whether the research data gathered exhibits the characteristics of a normal population. According to Verma & Abdel-Salam (2019), presence of normal population characteristics permits the researcher to apply parametric tests which are considered more reliable than non-parametric tests when findings are to be inferred to a larger population. Normality tests was conducted using Kolmogorov-Smirnov test and Shapiro-Wilk test (Hanusz, & Tarasińska, 2015). The data was considered normal if the p-values for both tests are greater than 0.05. Multicollinearity refers to when two or more independent variables (also known as predictor variables under regression analysis) are highly correlated with each other (Verma & Abdel-Salam, 2019). When multicollinearity levels exceed the minimum accepted levels between the predictor variables in a regression model, it makes it difficult to separate the effects of individual predictor variable. To test for multicollinearity, Variance inflation Factor (VIF) and Tolerance (T) was used (Thompson et al., 2017). The effects of multicollinearity were within acceptable limits when the VIF is less than 5 and Tolerance is greater than 0.2.

3.7 Research Quality

The validity and reliability of the collected data was achieved by test-retest method. A pilot test was conducted in the first week of September 2022. According to Mugenda & Mugenda (2008), 10% of the population is adequate for the pilot study. Therefore, 12 respondents were selected to participate on the pretest. The participants answered the questionnaire attached in appendix 2 and their responses were used to improve the data collection tools. For example, the review helped to replace the vocabulary and ambiguous statements used in the initial questionnaires with clearer terms.

3.7.1 Validity

According to Mills and Gay (2019), validity of data collection tool can be defined as the ability of an instrument to measure what it was intended to. In this case, content analysis enabled the researcher to ensure that all the research themes were not only captured but were also adequate to achieve the study objectives. At the same time, peer debriefing was conducted immediately after the pilot study hence fellow researcher's input helped to improve the data collection instrument and all the sections of the project.

3.7.2 Reliability

Reliability of a research instrument refers to the ability of the data collection tool to give consistent findings in repeated trials (Kothari, 2017). In this case, the researcher established whether a particular research instrument yielded the same findings when it is administered to same set of respondents at least more than once. The researcher tested for reliability by administering the questionnaire through test-retest approach. Test-retest approach is whereby the same set of respondents are subjected to the same questionnaire at least twice within a given time interval then comparisons made between two datasets. Cronbach Alpha test was further administered to assess the reliability of the data. The results indicated a Cronbach's Alpha test was 0.891 indicating that the data is reliable. According to Ravinder, and Saraswathi (2020) A Cronbach Alpha test above 0.70 is a sign of reliability.

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.891	4

(Researcher, 2022)

The average measure has an intra-class correlation of 0.891 as shown in table 3 below signifying that the data was reliable.

Table 3: Intra-class Correlation Coefficient

	Intra-class Correlation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.671 ^a	.624	.715	9.207	301	903	.000
Average Measures	.891 ^c	.869	.909	9.207	301	903	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intra-class correlation coefficients using an absolute agreement definition.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

(Researcher, 2022)

3.8 Ethical Issues in Research

Ethical issues in research are one of the most important dimensions of any research. In this study, the researcher sought for consent from the respondents before obtaining information from them. The researcher identified herself using the letter of introduction from the university. The researcher also obtained permission letter from National Commission for Science, Technology, and Innovation (NACOSTI). According to Kothari (2017), two key ethical standards that each researcher should adhere to are anonymity and confidentiality. Anonymity means that the researcher cannot be able to trace a particular response to the respondent who gave it whereas confidentiality means that it is only the researcher who has access to the collected information. The researcher assured the respondents of confidentiality of the information. The questionnaires did not bear the respondents' names or any other private information that could be traced back to them.

CHAPTER FOUR: PRESENTATION OF REASERCH FINDINGS

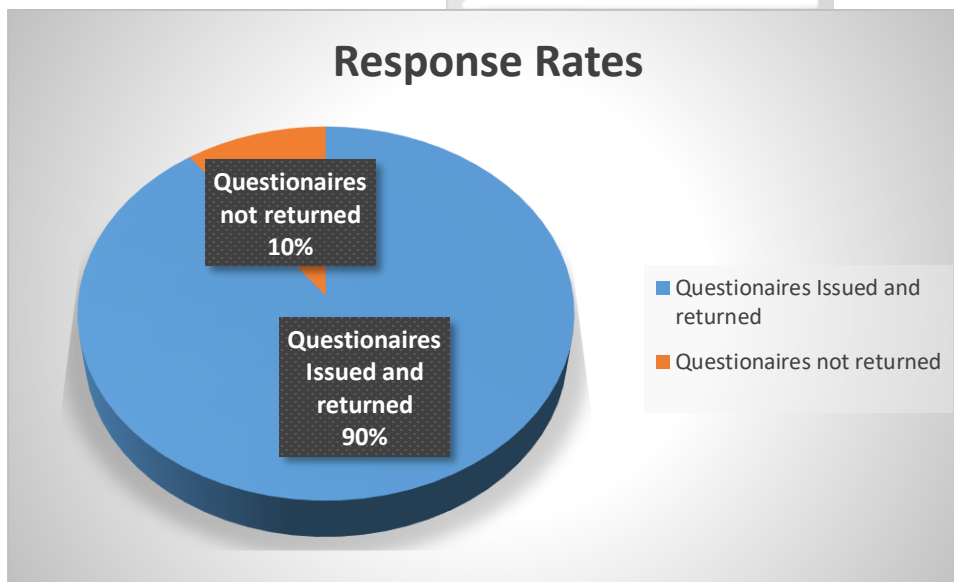
4.1. Introduction

This chapter presents the study results. It comprises descriptive statistics summarizing the respondents' views in regard to the effects of financial literacy on the performance of Agro processing industries in Nairobi Kenya. Correlational analysis is also conducted to determine the relationship of the variables.

4.2. Response Rate

The researcher sent 336 questionnaires (3 per the 112 Agro processing companies). The targeted respondents were the executives and professional's privy to the financial management processes at the firms. The choice of the respondents was determined by Purposive sampling technique. However, 34 respondents did not submit back their questionnaires giving a response rate of 90.17% as indicated in figure 2 below.

Figure 2: Response Rate



(Researcher, 2023)

The response rate was adequate to obtain information relating to the relationship of financial literacy and performance of the studied firms (Hendra and Hill, 2019). The respondents who did not submit their responses were from different firms as indicated in appendix 6.

4.3. Descriptive Statistics

The results as presented in Table 4 below shows that 6.9% of the companies were foreign while 94.1% of the firms were owned by Kenyan citizens.

Table 4: Ownership

		Frequency	Percent
Valid	Foreign	25	6.9
	Local	277	94.1
	Total	302	100.0

(Researcher, 2023)

The respondents were professionals with experience in different fields. Accountants, chief financial officers, chief executive officer, and marketing managers participated in the study as shown in Table 5 below.

Table 5: Respondents' Positions at their Companies

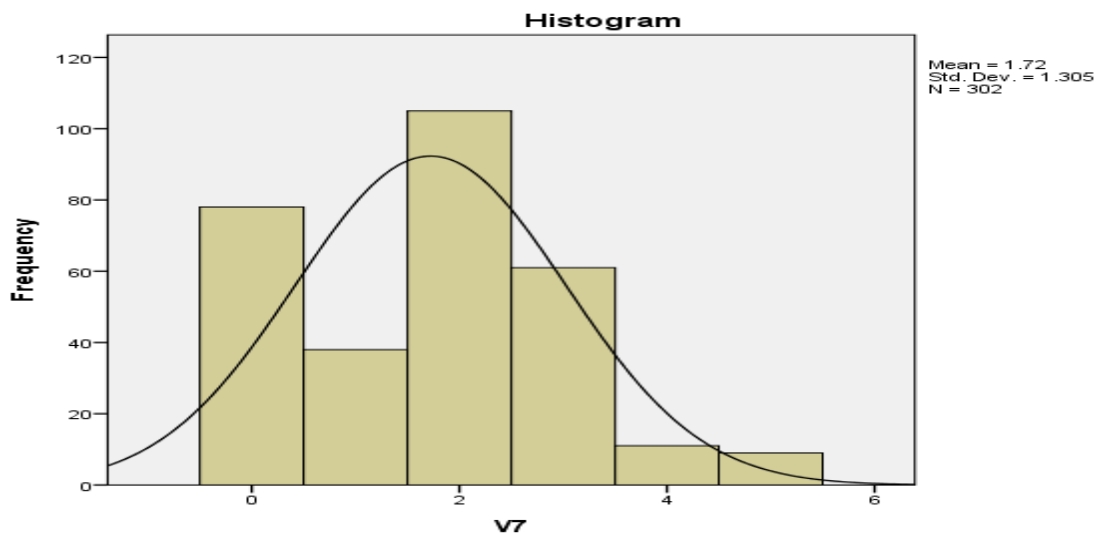
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Operations Manager	51	14.0	16.9	16.9
	Accountant	65	17.9	21.5	38.4
	Marketing Manager	13	3.6	4.3	42.7
	Chief manager	47	12.9	15.6	58.3
	Financial Officer	51	14.0	16.9	75.2
	Managing Director	24	6.6	7.9	83.1
	Account Assistant	6	1.6	2.0	85.1
	CEO	24	6.6	7.9	93.0
	Director	11	3.0	3.6	96.7
	Financial Manager	3	.8	1.0	97.7
	Chief Accountant	7	1.9	2.3	100.0
	Total	302	83.0	100.0	
	Missing	System	62	17.0	
Total		364	100.0		

(Researcher, 2023)

The participants were therefore privy to the information required to establish the correlation between the financial literacy and the overall performance of the firms. The fact that the respondents held influential positions such as operations managers, directors, CEOs, chief accountants, means that they were major decision makers in the studied areas such as financial budgeting, risk, and debt management.

All the respondents have worked at their respective firms long enough to have knowledge on how their own literacy levels, as well as those of their colleagues affects their firms' performance. The results are as presented by the histogram shown in Figure 3. respondents had worked for a duration of 11 to 14 years, 78 respondents had worked for a duration of 5 to 10 years, 61 respondents had worked for a period of 15 to 20 years, 38 respondents had worked for less than 5 years, 11 respondents had worked for 25 years and above and 9 respondents had worked for 21 to 24 years. Total number of respondents was 302 and on average most of the respondents had worked for 11 to 14 years. Ideally, the longer an employee serves at a firm, the better the knowledge on the correlation between financial literacy and the performance trends over the years. Therefore, the respondents' views added valuable input on the study's outcomes.

Figure 3: Histogram



(Researcher, 2023)

The study also sought to determine the general performance of the companies in terms of growth in firms' size and accomplishment of strategic objectives such as socioeconomic values added to the local community and other stakeholders. The results are as presented in Table 6 below.

Table 6: Respondents View on their Firms' General Performance

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	171	47.0	56.6
	Moderate	115	31.6	94.7
	Very Good	16	4.4	100.0
	Total	302	83.0	100.0

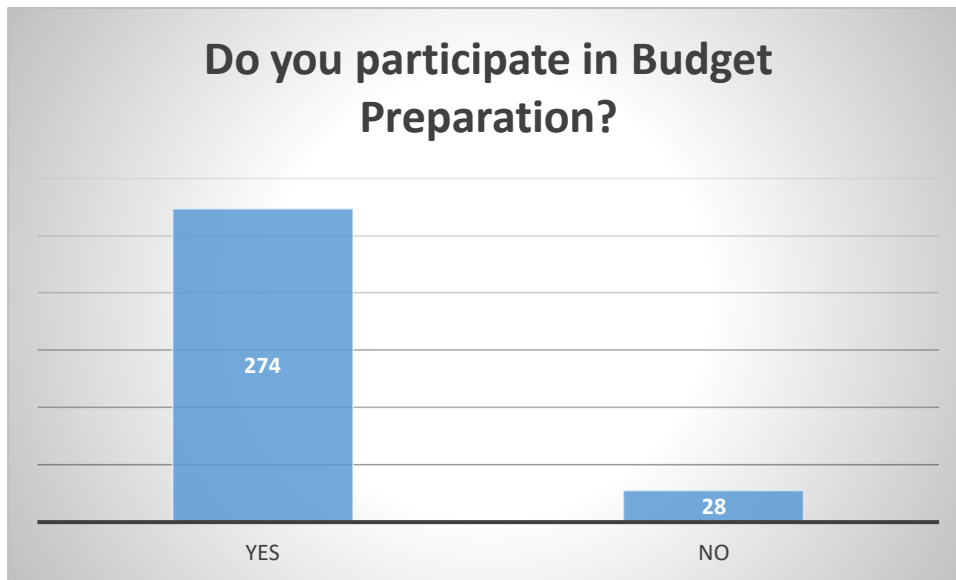
(Researcher, 2023)

According to the respondents, 171 of the respondents recorded good performance, 115 had moderate performance and 16 posted very good performance where good performance indicated that the firms recorded significant growth in size and contributing to corporate social responsibility issues such as creation of employment and donations to charity events.

4.3.1. The Effects of Financial Budgeting Literacy on Performance

90% of the respondents agreed that they were directly involved in budget preparation at their respective firms. Their inputs, therefore, affects the performance of their companies. Figure 4 shows the responses to the question as to whether the individuals participated in budget preparation.

Figure 4: Number of Respondents participating in Budget Preparation



(Researcher, 2023)

However, budgeting is always an organization-wide process where employees at all levels are often invited to provide their input. According to Egbunike and Unamma (2017), most exceptional performers often seek for the opinion of all their internal members including the low-level employees. Therefore, the opinions of all the respondents including those that were not involved in budgeting were valuable. All the respondents have adequate experience with only a few having engaged in such vital processes for less than two years.

The study further determined whether the respondents had professional training in their areas of specialty at the studied firms. The results in table 7 indicated that 280 (76.9%) respondents had knowledge in various disciplines such as Bachelor of Commerce, CPA, diploma in accounting and finance, and certified financial analysts (CFA). While 22 (6.0%) did not hold any professional qualification. These professional qualifications are basic requirements for gaining proficiency in financial literacy. A degree holder in B. Com finance or accounting who has also a certified public accountant (CPA K) is well equipped to handle most of the financial and bookkeeping needs of the Agro processing businesses. Similarly, a certified financial analyst has adequate knowledge to improve the performances of their companies. Therefore, the fact that 76.9% of the respondents have such professional qualifications means that they can sufficiently improve the performances

of their firms. The surveyed firms continue to grow while about 40% of their peers (SMEs in both Agro processing and other industries) often fail before their fourth anniversary (Omondi, 2016)

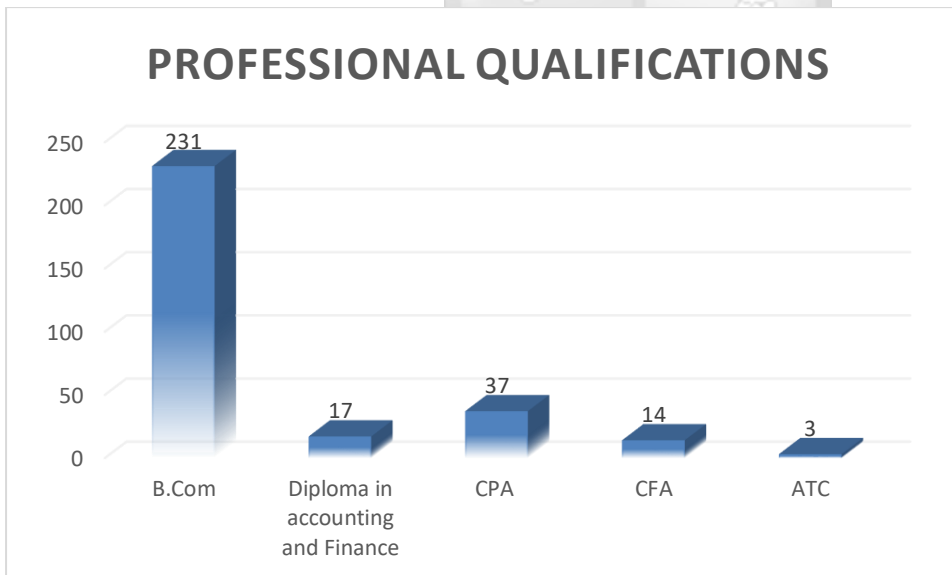
Table 7: Respondents' Professional Qualification

	Frequency	Percent	Valid Percent	Cumulative Percent
No	22	6.0	7.3	7.3
Valid Yes	280	76.9	92.7	100.0
Total	302	83.0	100.0	
Missing System	62	17.0		
Total	364	100.0		

(Source: Researcher, 2023)

Majority of the respondents had pursued diploma and degree in accounting finance while others were CPA and CFA holders as summarized in figure 5 below. These levels of professionalism imply that the respondents have adequate financial literacy needed to improve the performance of the studied companies.

Figure 5: Professional Qualification



(Source: Researcher, 2023)

The respondents, therefore, were knowledgeable on the budgeting processes hence impacted significantly on the performances of their firms. According to Siekei (2016), businesses with qualified budgeting teams are often better off in achieving steady and consistent growth than their rivals. Therefore, the professional qualifications by the studied Agro processing companies are added advantage towards performance.

The responses to the financial budgeting literacy questions were as summarized in table 8 below.

Table 8: Responses to the Financial Budgeting Literacy Questions

Statement	SA	A	NS	D	SD	MEAN	SD
There is a high level of comprehensiveness of budgets developed in your firm	12(3.3%)	266(73.1%)	1(3%)	18(4.9%)	5(1.4%)	2.13	0.644
You have good knowledge and understanding of budget development	26(7.1%)	266(73.1%)	–	9(2.5%)	1(0.3%)	1.98	0.485
Staffs in the finance department have acquired sufficient knowledge in budget preparation	5(1.4%)	284(78.0%)	9(2.5%)	4(1.1%)	–	2.04	0.313
Staffs in the finance department have acquired sufficient knowledge in sales forecasting	6(1.6%)	288(79.1%)	2(0.5%)	5(1.4%)	1(0.3%)	2.03	0.349
Staffs in the finance department have acquired sufficient knowledge in budget implementation	6(1.6%)	287(78.8%)	2(0.5%)	6(1.6%)	1(0.3%)	2.04	0.367
Staffs in the finance department have acquired sufficient knowledge in budget monitoring	11(3.0%)	284(78.0%)	4(1.1%)	3(0.8%)	–	2.00	0.299
Staffs in the finance department have acquired sufficient knowledge in budget evaluation	6(1.6%)	284(78.0%)	6(1.6%)	6(1.6%)	–	2.04	0.344
Staffs in the finance department have acquired sufficient knowledge in prudent spending	5(1.4%)	286(78.6%)	3(0.8%)	8(2.2%)	–	2.05	0.362
Staffs in the finance department have acquired sufficient knowledge in financial resource distribution during budget development	5(1.4%)	289(79.4%)	3(0.8%)	4(1.1%)	1(0.3%)	2.03	0.330
Staffs in the finance department have acquired sufficient knowledge in information gathering for budget development	5(1.4%)	285(78.3%)	5(1.4%)	7(1.9%)	–	2.05	0.352
Financial budgeting Literacy of the Staff has affected the Performance of your firm positively	23(6.3%)	267(73.4%)	6(1.6%)	5(1.4%)	1(0.3%)	1.99	0.439

(Researcher, 2023)

From the table it can be concluded that there is adequate budgeting literacy in almost all the studied firms. This is evident from the fact that the mean score for the respondent's satisfaction with the qualification of the finance department's staff members was below 2.5 while standard deviation ranged between 0.352 and 0.644. The vast majority of the respondents agreed that the employees' skills were enough to formulate and implement comprehensive budgets in their firms. As indicated in the literature review, efficiency in budgeting is positively correlated with profitability (Li & Qian, 2019; Gorbunova, 2021). The greater the access to budgeting literacy, the higher the chances of financial growth of the studied Agro processing companies. The results, therefore, implies that

the firms have an upper hand in utilizing such human resources to achieve growth in customers, market size and returns on investments.

4.3.2. The effects of Financial Risk Management Literacy on the Business Performance of the Agro processing Firms

All the respondents agreed that their firms have various financial risk management strategies except 22 (7%) who felt that their companies should improve on such an area as shown in figure 6 below. However, lack of risk management exposes such firms to high chances of failure (Van den Boom, 2020). All the sectors of the economy are facing challenging economic times that has so far driven many firms out of business. The disruptions in supply chains, cost of energy, as well as the persistent rise in inflation require the firms to move with speed in developing comprehensive risk management policies (Mthombeni et al., 2022).

Figure 6: Financial Risk Management Strategies



(Researcher, 2023)

The respondents provided different types of financial management strategies as summarized in the Table 9 below.

Table 9: Risk Management Strategies Employed by the Studied Firms

Risk Management Strategies	Number of times mentioned
Diversification	56
Hedging	20
Proactive approaches to systematic risks	32
Taking insurance covers	41
Training, seminars, and conferences on popular risks characterizing the industry	94
Outsourcing of unfamiliar activities to third parties	56
Conducting regular audits and risk assessments	85
Establishment of strong internal controls	89
Risks monitoring via Omni-channel platforms	165
Formulation and regular review of risk management policies	140
Offering online training programs to the financial risk management staff	46
Continuous research and development on various risks facing my company	80
Use of Big Data Analytics to predict and prevent possible risks	135
Deployment of enterprise resource planning systems to match the risks against the rewards	123
Use of contingency plans during challenging economic periods such as peak periods for Covid-19	55
Benchmarking financial management against the industry leaders	36
We have comprehensive credit sales procedures and policies	41
Investing in new cost saving procedures	48
cutting off customers that abuse our credit terms	12
Proper budgeting to prevent cash-flow volatility	46

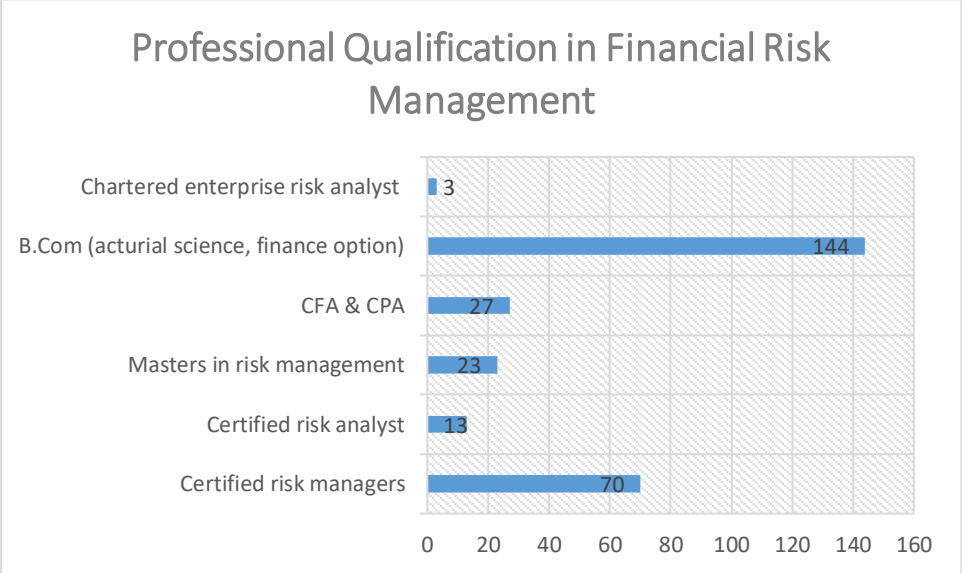
(Researcher, 2023)

The risk management strategies can be categorized into the four popular management approaches which include risk identification, quantification, acceptance, mitigation, transferring and avoidance. Some of the firms are deploying multiple tools and technologies such as ERP system, Big Data Analytics and Omni-channel platforms such as the information gathered through word of mouth, social media pages, websites, and online shopping pages to predict the financial risks characterizing their businesses. For example, the technologies came in handy in devising new operational strategies for coping with the adverse effects of Covid-19. Four responded argued that the ERP system allowed their firms to assess the severity of the risks, monitor their impacts on

performance over the year and inspire new approaches for ensuring value maximization. Others also argued that regular audits enabled their firms to determine the effectiveness of their policies in minimizing cases of bad debts, wastage of resources and appropriateness of the cost control procedures. Some firms also have diversified sources of income such as supplying recycled packaging materials to other industry players beside their main line of business (agro processing products). Some also have insurance covers while others have benchmarked their risk management incentives against those of the industry leaders.

20 respondents admitted that they lacked professional training on financial risk management while the majority argued that their career growth had exposed them to multiple financial risk mitigation strategies. The CPA, CFA and B.COM holders pointed out that financial risk identification and proactive risk avoidance measures were part and parcel of their training. The well-established firms such as Coca-Cola have professionals such as certified financial controllers and financial management analysts thus are better off in handling the risks that may negatively affecting their overall financial health. Out of the 280 who reported to have professional training risk management, 25% were certified risk managers, 6% had master in risk management while the rest studied risk management in their CPA, B.COM and diploma in accounting and finance courses as indicated in the bar graph in Figure 7 below.

Figure 7: Professional Qualification in Financial Risk Management



(Researcher, 2023)

Table 10 shows the extent to which the respondents agreed that their staff members are equipped with the relevant financial risk literacy. The respondents agreed that they had sufficient knowledge, experience, and abilities to manage the financial risks characterizing the Agro processing industry. For example, 10 individuals strongly agreed, and 269 others agreed that there was high level effectiveness of financial risk management strategies in their firms. Similarly, more than 70% of the respondents argued that their colleagues in the finance department had the capabilities to identify, monitor, prevent, evaluate, and mitigate such risks thus the items scored mean of between 2.06 and 2.01. The results further indicates that the financial risk literacy levels have been part and parcel of the firm’s financial growth with 28 individuals strongly agreeing and 259 agreeing that the skills have significantly improved their overall financial health.

Table 10: Responses to Questions on Financial Risk Literacy

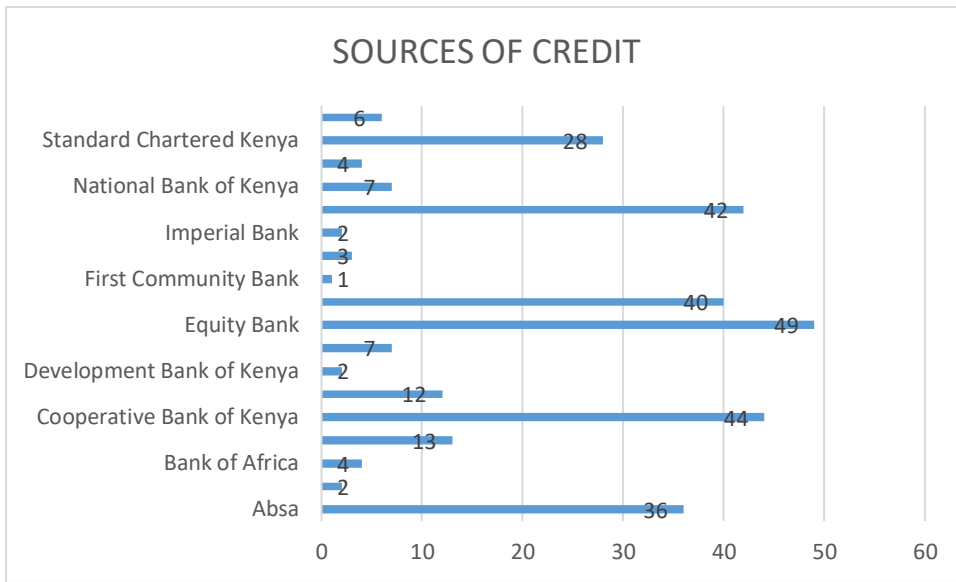
Statement	SA	A	NS	D	SD	MEAN	SD
There is a high level of effectiveness of financial risk Management strategies in your firm	10(2.7%)	269(73.9%)	–	18(4.9%)	5(1.4%)	2.14	0.635
You have good knowledge and understanding of Financial Risk management	21(5.8%)	270(74.2%)	–	10(2.7%)	1(0.3%)	2.01	0.482
Staffs in the finance department have sufficient knowledge in financial risk identification	7(1.9%)	279(76.6%)	9(2.5%)	7(1.9%)	–	2.05	0.379
Staffs in the finance department have sufficient knowledge in financial risk monitoring	7(1.9%)	282(77.5%)	1(0.3%)	11(3.0%)	1(0.3%)	2.06	0.446
Staffs in the finance department have sufficient knowledge in financial risk evaluation	6(1.6%)	284(78.0%)	2(0.5%)	9(2.5%)	1(0.3%)	2.06	0.416
Staffs in the finance department have sufficient knowledge in financial risk mitigation	17(4.7%)	275(75.5%)	3(0.8%)	7(1.9%)	–	2.00	0.399
Staffs in the finance department have sufficient knowledge in business diversification as a risk mitigation measure	7(1.9%)	280(76.9%)	7(1.9%)	8(2.2%)	–	2.05	0.387
Staffs in the finance department have practically demonstrated financial risk identification capabilities in their tasks	7(1.9%)	284(78.0%)	1(0.3%)	10(2.7%)	–	2.05	0.397
Staffs in the finance department have practically demonstrated financial risk monitoring capabilities in their tasks	8(2.2%)	283(77.7%)	5(1.4%)	6(1.6%)	-	2.03	0.349
Staffs in the finance department have practically demonstrated financial risk evaluation capabilities in their tasks	7(1.9%)	280(76.9%)	5(1.4%)	10(2.7%)	–	2.06	0.411
Staffs in the finance department have practically demonstrated financial risk mitigation capabilities in their tasks	6(1.6%)	285(78.3%)	2(0.5%)	9(2.5%)	–	2.05	0.380
Financial risk management Literacy of the Staff has affected the Performance of your firm positively	28(7.7%)	259(71.2%)	3(0.8%)	9(2.5%)	3(0.8%)	2.01	0.559

(Researcher, 2023)

4.3.3. Effects of Debt Management Literacy on the Business Performance of the Agro-Processing Firms

All the respondents admitted that their firms always access credit from other financial institutions with the majority of the firms accessing the loan facilities from their bankers. The Agro processing companies obtain credit from almost all leading commercial banks in the country as summarized in Figure 8 below.

Figure 8: Sources of Credit for the Agro-processing Companies



(Researcher, 2023)

Most of the respondents reported that they had professional qualifications. That is, only 35 or 12% did not have professional certifications while 267 argued that they had knowledge, experience and abilities needed to utilize the credit facilities in maximizing values for their companies as shown in the pie chart in figure 9.

Figure 9: Professional Qualification in Debt Management



(Researcher, 2023)

However, like in the cases of financial risk management and budgeting only a few had additional training on debt management besides their degree or diploma certificates. Table 11 indicates that a significant number of the respondents pursued various professional debt management courses.

Table 11: Debt Management Qualifications

Professional Qualification in Debt Management	No.
Certified Credit Analysts	12
Credit management executive program	15
Corporate credit analysts	23
Advanced Credit Risk Management	22
Diploma in credit management	7
B.COM, CPA, ATC and dip in accounting and Finance	188

(Researcher, 2023)

In the respondents' views, the qualifications were adequate to steer the firms towards the desired performance standards. The majority of the respondents (274 or 75.3%) agreed that there was high

level effectiveness in debt Management in their firms. 280 of the individuals further agreed that the finance department had qualified people knowledgeable on the loans offered by various financial institutions operating in the country. Similarly, 22 respondents strongly agreed that their counterparts in the finance department were aware of the implications of the multiple borrowing on the firm as compared to 268 who agreed while only five disagreed that the staff members at the finance department did not have such qualifications. Overall, the questions in regard to the skills and experience levels of the employees in utilizing the loans to create returns for their companies scored a mean between 1.99 and 2.07 as shown in table 12 below. Borrowing has direct impacts on performance. For example, the costs of the acquired loans are operational expenses that reduce profitability. Therefore, engaging in multiple borrowing can undermine a firm's performance if the processing costs reduces the amount of profits that can be reinvested in other profitable avenues.

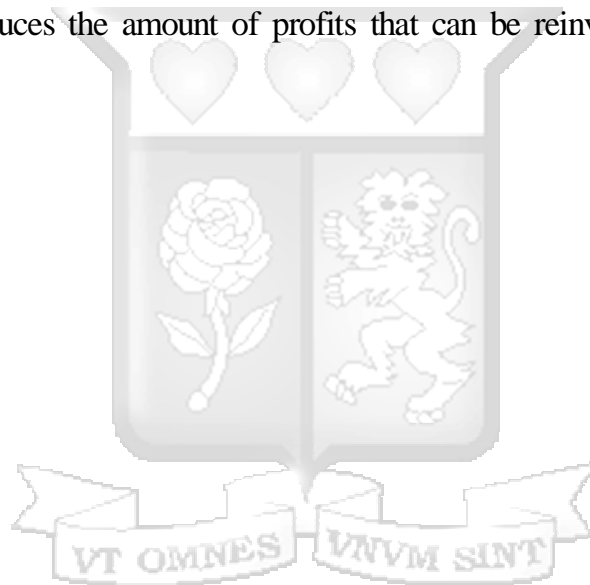


Table 12: Views on Suitability of the Employees' skills on Debt Management

Statement	S. AGREE	AGREE	NOT SURES	DISAGREE	S. DSIAGREE	MEAN	SD
There is a high level of effectiveness of Debt Management in your firm	11(3.0%)	274(75.3%)	3(0.8%)	12(3.3%)	2(0.5%)	2.07	0.510
You have good knowledge and understanding of debt management	25(6.9%)	261(71.7%)	–	14(3.8%)	2(0.5%)	2.03	0.573
Staffs in the finance department have necessary knowledge on loans offered by various banks	12(3.3%)	280(76.9%)	5(1.4%)	5(1.4%)	–	2.01	0.350
Staffs in the finance department have the ability to calculate loan interests on a monthly basis	7(1.9%)	281(77.2%)	4(1.1%)	9(2.5%)	1(0.3%)	2.06	0.427
Staffs in the finance department have sufficient knowledge on the implications of accumulating debts in the firm	9(2.5%)	286(78.6%)	2(0.5%)	4(0.1%)	1(0.3%)	2.01	0.346
Staffs in the finance department have the knowledge on how to adhere to the purpose of a loan once its disbursed	22(6.0%)	268(73.6%)	4(1.1%)	8(2.2%)	–	1.99	0.439
Staffs in the finance department have necessary knowledge on the implications of multiple borrowing on the firm's debt management process	8(2.2%)	282(77.5%)	6(1.6%)	6(1.6%)	–	2.03	0.354
Staffs in the finance department have sufficient knowledge on the implications of not paying firm debts in time	10(2.7%)	281(77.2%)	1(0.3%)	10(2.7%)	–	2.04	0.410
Staffs in the finance department are well aware on the importance of borrowing only what is necessary for a particular purpose for the purpose of debt management.	9(2.5%)	283(77.7%)	4(1.1%)	6(1.6%)	–	2.02	0.350
Staffs in the finance department have sufficient knowledge on how to access finance at minimum costs	10(2.7%)	281(77.2%)	6(1.6%)	5(1.4%)	–	2.02	0.345
Staffs in the finance department have sufficient knowledge on determining the total debt position of the firm	9(2.5%)	284(78.0%)	1(0.3%)	8(2.2%)	–	2.03	0.373
Staffs in the finance department have necessary knowledge on the effects of inflation and interest rates on the loans borrowed for the firm	11(3.0%)	282(77.5%)	3(0.8%)	6(1.6%)	–	2.01	0.355
Debt Management Literacy of the Staff has affected the Performance of your firm positively	31(8.5%)	255(70.1%)	2(0.5%)	10(2.75%)	4(1.1%)	2.01	0.602

(Researcher, 2023)

The standard deviations of the scores were also between 0.350 and 0.510 implying that there was minimal difference in the respondents' opinions across the 13 questions on the relevance of debt management literacy and their firms' performance. Nevertheless, the firms should invest further in upgrading their employees' professional qualifications, as well as experience in debt management.

4.3.4. Performance of the Agro-Processing Firms

Agro processing industry is a fast-growing sector based on the aggressiveness of the players in pursuing the profitable opportunities. This was reflected on the respondents' opinions on the overall performance of their companies. As Table 13 indicates 12 respondents strongly agreed that their firms' profits have increased over the past five years as compared to 26 individuals who have observed persistent rise in overall sales in the last half a decade. The responses indicate that about 70% of the respondents agreed that the financial health of their companies have improved significantly since 2017. The mean score for the results were below 2.5 in all the cases while standard deviation was below 0.670. This means that there was minimal difference in the responses' views on the financial growth patterns and prospects of the firms.

Table 13: Opinions on the Studied Firms' Performance

Statement	S. AGREE	AGREE	NOT SURE	DISAGREE	S. DISAGREE	MEAN	SD
There has been a significant increase in profits for the past five years	12(3.3%)	263(72.3%)	1(0.3%)	21(5.8%)	5(1.4%)	2.15	0.670
There has been a significant increase in sales for the past five years	26(7.1%)	260(71.4%)		15(4.1%)	1(0.3%)	2.02	0.561
There has been a significant diversification of products for the past five years in which most of them are performing relatively well	7(1.9%)	275(75.5%)	9(2.5%)	11(3.0%)	-	2.08	0.439
There has been a significant decrease in losses for the past five years	11(3.0%)	277(76.1%)	2(0.5%)	11(3.0%)	1(0.3%)	2.05	0.465
The financial risks associated with the firm have been well mitigated for the past five years	7(1.9%)	281(77.2%)	2(0.5%)	11(3.0%)	1(0.3%)	2.07	0.449
There are minimal incidences of unfavorable outcomes due to effective financial risk management practices for the past five years	12(3.3%)	278(76.4%)	4(1.1%)	7(1.9%)	1(0.3%)	2.03	0.419
There are minimal incidences of financial resource allocations complains due to effective and satisfactory budgetary development process for the past five years	9(2.5%)	276(75.8%)	8(2.2%)	9(2.5%)	-	2.06	0.416
There is smooth running of firm activities due to comprehensive budget development	5(1.4%)	278(76.4%)	3(0.8%)	16(4.4%)		2.10	0.479
The sustainability of the firm is well guaranteed due to effective debt management strategies	7(1.9%)	281(77.2%)	4(1.1%)	9(2.5%)	1(0.3%)	2.06	0.427
There is high level of customer satisfaction for the past five years	5(1.4%)	280(76.9%)	4(1.1%)	13(3.6%)	-	2.08	0.442
The level of client retention has been so high for the past five years	25(6.9%)	257(70.6%)	6(1.6%)	12(3.3%)	2(0.5%)	2.04	0.567

(Researcher, 2023)

4.4. Diagnostic Test

Normality, multicollinearity, and linearity tests were conducted, and the results are as discussed below.

4.4.1. Normality Test

Kolmogorov-Smirnov and Shapiro-Wilk Tests were administered as displayed in the table 14 below.

Table 14: Test for Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
FBL	.404	302	.000	.533	302	.000
FRL	.396	302	.000	.561	302	.000
DML	.376	302	.000	.596	302	.000
P	.407	302	.000	.500	302	.000

a. Lilliefors Significance Correction

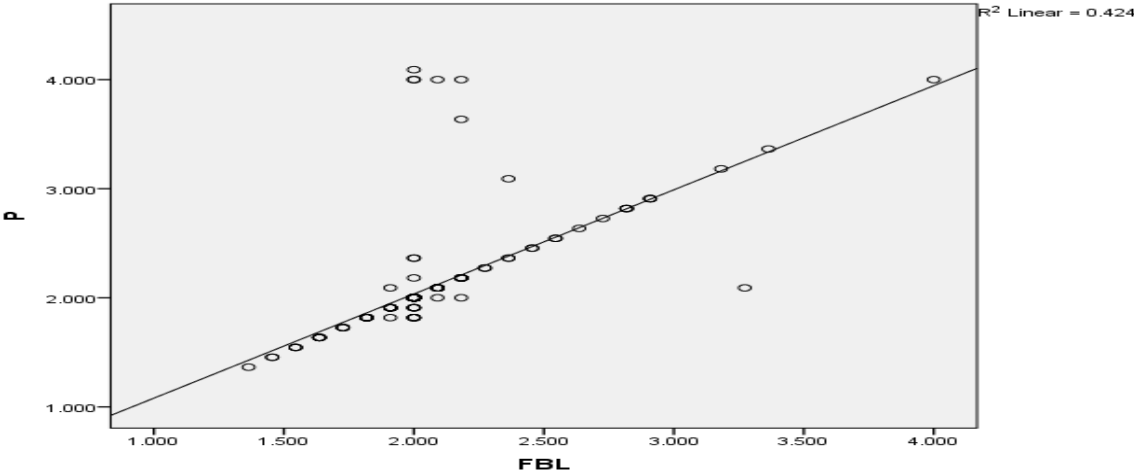
(Researcher, 2023)

Based on the output, the significance values for the financial variables both in Shapiro Wilk test and Kolmogorov smirnov test are 0. 000. The significance values are <0.05 meaning that the research data is not normally distributed. As a result, non-parametric tests were used to determine the correlation between the independent and dependent variables.

4.4.2. Test for Linearity

Scatter plots were used in linearity tests to show whether there exists a linear relationship between independent variables (financial literacy components) and the dependent variable (Performance of Agro processing Companies). The scatter plots shown in figures 10, 11 and 12 illustrate a linear relationship because the points on the scatterplot closely resemble a straight line that is one variable increases by approximately the same rate as the other variables changes by one.

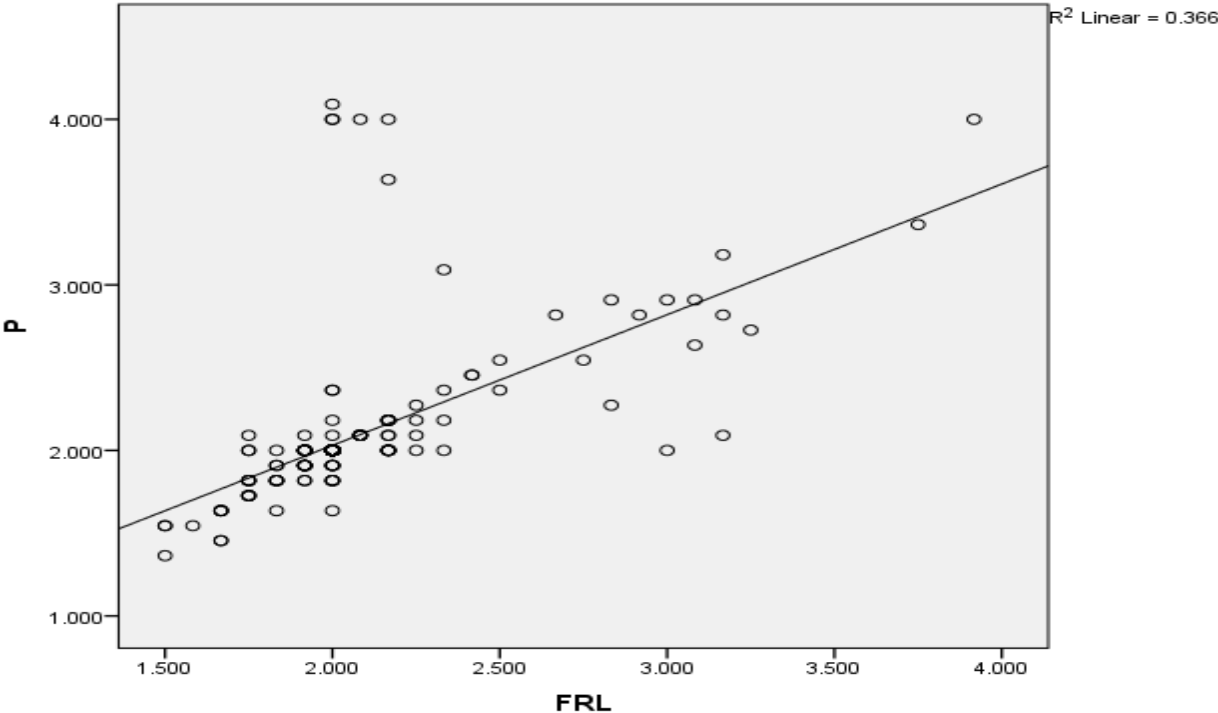
Figure 10: Scatter Plot for Financial Budgeting Literacy



(Source: Researcher, 2023)



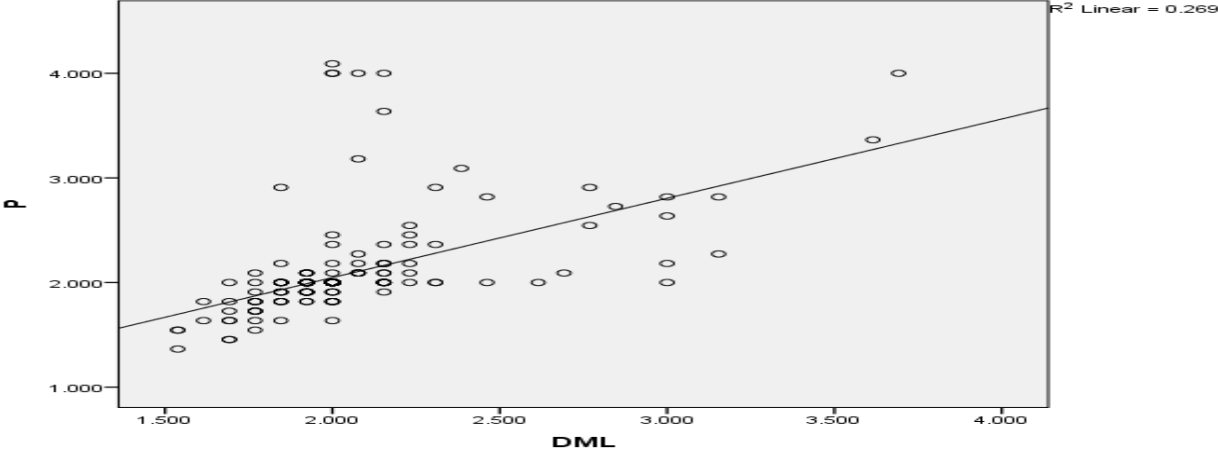
Figure 11: Scatter Plot for Financial Risk Literacy



(Source: Researcher, 2023)



Figure 12: Scatter Plot for Debt Management Literacy



(Source: Researcher, 2023)

4.4.3. Test for Multicollinearity

Table 15 below shows the results for multicollinearity test.

Table 15: Multicollinearity Test

Model	Coefficients ^a							
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	.076	.145		.522	.602		
	FBL	.982	.178	.670	5.508	.000	.230	2.671
	FRL	-.094	.180	-.072	-.520	.603	.202	1.836
	DML	.092	.114	.063	.809	.419	.319	2.138

a. Dependent Variable: P

(Source: Researcher, 2023)

Multicollinearity means that there are at least two independent variables in the model that are correlated and provide redundant information about the response. The existence of this problem causes larger variances and covariance therefore affect the significance of t statistics. It reduces the reliability of the data information and leads to confusing and biased results (Hickey et al., 2019). The variance inflation factors (VIF) was used for multicollinearity testing. The value of VIF =1 indicates that the independent variables are not correlated to each other. If the value of VIF is $1 < VIF < 5$, it specifies that the variables are moderately correlated to each other. The challenging value of VIF is between 5 to 10 as it specifies the highly correlated variables. Based on the coefficients output in table 15 above, the obtained VIF values are 2.671, 1.836 and 2.138 hence were less than the recommended cut off value of 10. Similarly, the tolerance was greater than 0.2 in all the cases. Therefore, it can be inferred that correlations between the independent variables (financial budgeting literacy, financial risk literacy and debt management literacy) are minimal hence would not affect the accuracy of the regression model, as well as the analysis of the regression results.

4.5 Correlation Analysis

Table 16: Pearson Correlation

		Correlations			
		FBL	FRL	DML	P
FBL	Pearson Correlation	1	.933**	.769**	.651**
	Sig. (2-tailed)		.000	.000	.000
	N	302	302	302	302
FRL	Pearson Correlation	.933**	1	.825**	.605**
	Sig. (2-tailed)	.000		.000	.000
	N	302	302	302	302
DML	Pearson Correlation	.769**	.825**	1	.519**
	Sig. (2-tailed)	.000	.000		.000
	N	302	302	302	302
P	Pearson Correlation	.651**	.605**	.519**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	302	302	302	302

(Researcher, 2022)

To quantify the strength of the relationship between the variables, the study used Karl Pearson's coefficient of correlation. The correlation coefficient (or Pearson correlation coefficient for short) is a measure of the strength of a linear association between two variables and is denoted by r . The Pearson correlation coefficient, r , can take a range of values from +1 to -1. A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association, that is, as the value of one variable increase so does the other variable. A value less than 0 indicates a negative association, that is, as the value of one variable increases the other variable decreases (Schober et al., 2018).

A Pearson correlation coefficient was performed to evaluate the strength and the nature of association between financial literacy variables and Agro processing companies' performance.

The correlation results shows that all the dependent variables had a positive correlation with the independent variable. correlation between financial budgeting literacy and performance of Agro processing companies was moderate, positive, and significant ($r=0.651$; $P\text{-value}= 0.000<0.05$). This means that financial budgeting literacy has moderate correlation with the firm's performance (Witte & Witte, 2017). The respondents' budget literacy levels significantly affect the profitability, revenues, and market growth of the companies. whereas the correlation between financial risk literacy and performance of Agro processing companies was moderate, positive, and significant ($r=0.605$; $P\text{-value} =0.000<0.05$) signifying that financial risks literacy moderately affect the performance and increase in FRL would lead to an increase in overall performance. in Debt management literacy there was a moderate, positive, and significant correlation. ($r=0.519$; $P\text{-value} =0.000<0.05$) The correlation is the lowest as compared to FBL and FRL meaning that the relationship between the firms' debt management literacy is lowest in relation to performance.

Pearson correlation of financial budgeting literacy, financial risk literacy, debt management literacy and performance of the firm was found to be moderately positive and statistically significant hence showing that an increase in either of the variables would lead to greater performance of the firm.

4.6. Multiple Regression Analysis

The dependent variable (performance) was regressed against financial budgeting literacy (FBL), financial risk literacy (FRL) and debt management literacy (DML). The results are summarized in the table 16 below.

Table 167: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.652 ^a	.426	.420	.280900

a. Predictors: (Constant), DML, FBL, FRL

b.

(Source: Researcher, 2023)

The R value represents the multiple correlation coefficient and can be considered as a measure of the quality of the prediction of the dependent variable. Therefore, R value of .652 shows positive correlation and means that the changes in debt management literacy, financial budgeting literacy and financial risk management literacy have significant impacts on the firms' performance (Witte & Witte, 2017). While R square shows that 42.6% of the variance in the dependent variable can be explained by the independent variables i.e., DML, FBL and FRL (Ali & Bhaskar, 2016). A R² of between 0% and 40% indicates a low causation, 41% to 70 means moderate causation while over 70% indicates strong causation (Azubuikke , 2019). Other researchers have also showed that low R-squared value is not a cause for alarm as perceived by many individuals as it means that the data sets have inherently greater amount of unexplained variation (Akossou & Palm, 2013; Wang et al., 2017; Duke University, 2023). In such cases, the researchers still make useful conclusions about the data. For example, employees of an Agro processing company may have proficiency in all areas of financial literacy, yet their firms will still post low profits if the competitors have better products or market share. Therefore, the results indicate that the goodness of fit is adequate to explain the variance between financial literacy and performance of the studied firms. ANOVA Table 18 below further confirms the critical roles played by financial literacy on the overall health of the Agro processing companies. The study tested for goodness of fit of the model using ANOVA with table 18 holding the results.

Table 18: ANOVA

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	17.419	3	5.806	73.586	.000 ^b
Residual	23.514	298	.079		
Total	40.933	301			

(Researcher, 2023)

The F statistic tests whether the overall regression model is a good fit for the data. i.e., F (3,298) =73.586, p value < 0.05. This means that the predictor/independent variables (DML, FRL and FBL) can play a significant role in shaping the performance sufficiently explain the variation in

performance of the studied Agro processing Firms. In other words, the model was a good fit for exploring the association between the variables.

Table 19 shows the beta coefficients for the independent variables.

Table 19: Beta Coefficients

Model		Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.076	.145		.522	.602	-.210	.361
	FBL	.982	.178	.670	5.508	.000	.631	1.333
	FRL	-.094	.180	-.072	-.520	.603	-.447	.260
	DML	.092	.114	.063	.809	.419	-.132	.316

a. Dependent Variable: P

(Researcher, 2023)

The table indicates that the constant for the model was 0.076 while the (β) coefficients for FBL, FRL and DML were 0.982, -0.94 and 0.092 respectively. The unstandardized coefficient indicates how much the dependent variable varies with an independent variable when all other independent variables are held constant. This means that financial budgeting had the greatest impacts on the performance of the Agro processing companies followed by debt management literacy. While financial risk management remains a challenge at the firms. From the regression findings, the substitution of the equation $P = \beta_0 + \beta_1FBL + \beta_2FRL + \beta_3DML + \epsilon$ will be

$$P = .076 + 0.982FBL - 0.094FRL + 0.092DML + \epsilon$$

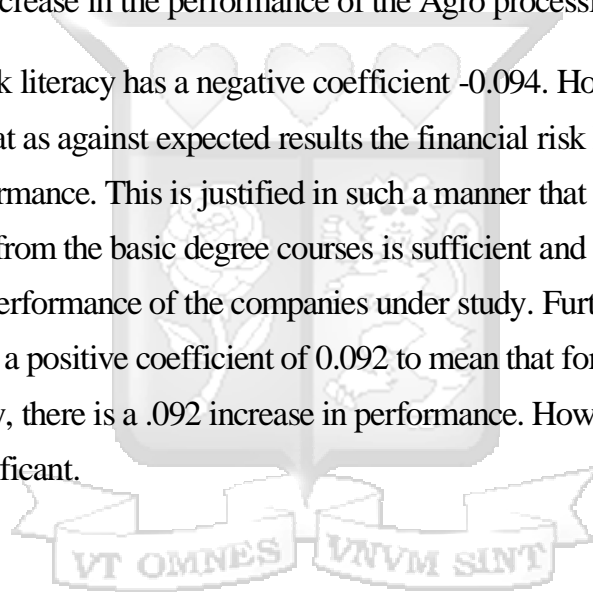
Where P is the dependent variable (Performance of Agro processing companies), B1 is the effects of financial budgeting variable, B2 is the financial risk management literacy variable, and B3 is debt management literacy variable.

Based on the study findings, the model revealed a statistically significant positive relationship between financial budgeting literacy and performance, insignificant positive relationship

between debt management literacy and performance and insignificant negative relationship between financial risk literacy and performance.

The model of the study also provided a positive regression coefficient for both financial budgeting literacy and debt management literacy except for financial risk literacy that had a negative coefficient. Thus, the performance increases by 0.076 units regardless of whether the variables under study are active or not. The estimated model further exposes the effect of the variables under study. As expected and corroborating the results of the number of previous studies, the variable financial budgeting literacy had a positive coefficient 0.982. and is statistically significant. It shows that as expected a unit change in financial budgeting literacy leads to a 0.982 rate of increase in the performance of the Agro processing companies.

The variable financial risk literacy has a negative coefficient -0.094. However, it is statistically insignificant, showing that as against expected results the financial risk literacy does not have a huge impact on the performance. This is justified in such a manner that the financial knowledge on risk literacy acquired from the basic degree courses is sufficient and additional skill sets does not statistically explain performance of the companies under study. Further on, Debt management literacy had a positive coefficient of 0.092 to mean that for each unit increase in debt management literacy, there is a .092 increase in performance. However, the variable was also not statistically significant.



CHAPTER FIVE: DISSCUSSION, CONCLUSION AND RECCOMENDATION

5.1. Introduction

This chapter first summarizes the major findings of the study then suggests the strategies required to reap optimum returns on investments from financial literacy programs by the Agro processing companies. The section also presents areas for future research, as well as the limitations of the study and how they were overcome.

5.2. Summary of the findings

The findings from our descriptive analysis can be best understood from the Dual processing literacy theories, The intuitive and cognitive abilities in the dual process model emphasize that investment in human capital is a prerequisite for growth in performance. In the view of Gallery et al. (2011), acquisition of new knowledge on financial issues lead to better decision making and eventually accomplishment of targeted growth goals. This means that the more resources that the staff at the studied firms' finance department spent in gaining professional skills the higher the returns on investment in terms of rise in profitability, sales, market share and overall financial health. Similarly, behavioral theorists argue that learning often enabled positive changes in individuals' attitudes, beliefs, and approaches for solving problems in their companies (Hilgerth et al., 2003). Members of a firm experiencing decrease in sales revenues gain abilities to launch sustainable solutions such as pursuit of diversified sources of income or launching innovative cost saving techniques.

However, the model of the study revealed an insignificant relationship between financial risk literacy and debt management literacy to the performance of Agro processing companies. This can be justified by the fact that there are cases where people have learnt new skills without necessarily changing their behaviors (Komara et al., 2017). Some employees in the finance department need motivations to achieve higher productivity and therefore, it should not be interpreted that the number of workers with professional certificates is directly proportional to their firms' performance. Some financial officers make decisions based on their intuition that may contradict with the appropriate strategies for solving the financial challenges facing the companies. This justifies why a number of respondents disagreed that the firms did not have minimal incidences of uncalculated financial decisions. For example, 16 respondents believe that smooth running of the

firms is yet to be achieved due to budgeting dysfunctions. On the other hand, the firms' financial officers have vast knowledge of budgeting.

5.2.1. Effect of Financial Budgeting Literacy and Business Performance

The correlation between financial budgeting literacy and performance was moderate, positive, and significant as shown by the correlation analysis ($r=0.651$; $P\text{-value}= 0.000<0.05$). The regression model further revealed a significant positive relationship. The variable had the strongest impacts on financial growth as evident in a beta coefficient of 0.982. The findings indicate that the employees' literacy levels are contributing to the performance of the companies. And that a unit increase in financial budgeting literacy increases performance by .982. The preparation of budgets coupled with budget expertise provides a spending plan for finances making it possible for the availability of funds to enhance future growth and overall performance of SMEs. This, however, requires the participation of employees in the budget process in order to realize improved performance.

The findings are in line with the outcomes of a number of existing surveys. For example, a study by Kimundu and Otieno (2016) demonstrated a strong positive relationship between financial literacy and profitability of small and medium enterprises in Ruiru, Kiambu County. The businesses survival depends on how the management utilizes the financial resources to create value for stakeholders and pursue emerging profitable opportunities. Similar observations were made in this study. The Agro processing firms withstood the test of time such as coronavirus pandemic and ongoing recession because the management team have aggressively invested risk management strategies. Knowledge of important concepts such as changes in interest rates, risks, and returns of investment and capital budgeting techniques enable the firms to reach new heights in improving their overall financial health. Some have diversified their sources of income, others have established strategic alliances with leading retailers, wholesalers, and supermarkets so as to reach a large number of customers. Kimundu and Otieno (2016) further found that the financial literacy skills positively influenced the sales volume. This study also reveals similar trends. Over 70% of the respondents expressed confidence in the abilities of the staff in the finance and accounting departments. The professionals have qualifications, experience and knowledge that have seen companies increase their sales and profits over the past few years. Such employees also make

informed judgments and decisions thereby satisfying the customers' needs and increasing the firms' market share.

Empirical data also show that financial budgeting literacy can be a game changer in Agro processing company's performance. As Gorbunova (2021) explained, automation of the budgeting processes always leads to production efficiency, rise in productivity, minimal wastage, and superior products. Managing such automated systems require soft skills on ERP systems. Siekei (2021) also showed that SMEs that had employees with proficient budgeting skills posted high profits and sales growth. In this case, the respondents have undertaken various degree and diploma programs and online certification courses hence have the holistic skills needed to achieve targeted performance standards. Most of the studied firms, therefore, ensured that they had adequate resources to achieve the strategic goals. The financial directors or chief accountants also developed key performance indicators that enabled them to monitor the periodic progress and implement the necessary changes needed to stay on top of the industry.

5.2.2. Financial Risk Literacy and Business Performance

The correlation coefficient of financial risk literacy was moderate, positive and significant ($r=0.605$; $P\text{-value}=0.000<0.05$) this was to mean that there is a moderately strong relationship between the variable and performance, the regression model of the study however revealed a statistically insignificant negative relationship, to mean that the variable does not significantly explain the performance of the Agro processing companies and hence the study adopts that the Financial risk literacy insignificantly affect performance. Our descriptive findings on the other hand concluded that there was adequate financial risk literacy in the firms, the respondents were qualified professionals and they believed that the variable had an effect on the performance of the firms. It was, however, interesting to note that the more complex the trainings for the staff in the different organizations the more complex the risk strategies used, and this could have been a factor that affected the significance of the variable in our model.

Various studies have documented various results on the link between financial risk literacy and performance for instance (Kinyua et al., 2015; Kimari, 2016; Leachner & Gatzert, 2018; Yang et al., 2019). Having profound insights into the risks affecting a firm's operations helps to develop proactive measures for attaining exemplary performance. According to Anyieni (2018), financial risk literacy has been part and parcel of resiliency of the Kenyan SMEs operating in the transport

industry. Various approaches ranging from diversification to taking insurance policies allow the firms to maintain steady growth despite the changes in business cycle. This provides areas for further research on the role of risk management in companies.

5.2.3. Debt Management Literacy and Business Performance

The debt management literacy also exhibited an insignificant positive relationship in our study regression model. To note however is that from our Pearson correlation, Debt management literacy has a strong, positive, and significant correlation. (($r=0.519$; $P\text{-value}=0.000<0.05$), and this shows that there is a moderately strong relationship between the variable and performance. Descriptive statistics further agreed to this as respondents were certain that the DML affected the firm's performance as here again we had 70% of the respondents in agreement but what was evident was that most of the professionals were degree and diploma holders. And therefore, this can be used to interpret the likelihood that the professional qualifications required to gain proficiency are not engrained in the basic academic requirements and there is need for the organizations to encourage further debt management related qualification for instance credit management certification. Existing studies have found that credit management skills often translate to achievement of desirable business performance (Cecchetti et al., 2011; Eniola and Entebang, 2017; Esiebugie et al., 2018; Mwamba, 2020). The studies observed that the firms with employees lacking DML always struggle with huge and productive loans. Eniola and Entebang (2017) particularly noted that the business managers possessing limited knowledge on the area are susceptible to exploitation by unscrupulous financial institutions.

The major findings of the study were that financial budgeting Literacy affects the performance of Agro processing companies. The regression model resulted in R^2 of 42% which means that the variables are effective in predicting 42% of the firms' performance and other factors such as communication technologies, inflation, changes in the targeted consumers' purchasing power and rivalry among the industry players. The model further revealed that both financial risk management literacy and debt management literacy were insignificant and this brings out the need to review additional professional qualifications needed to improve the literacy of the employees as it was evident that majority of the respondents were only holders of the basic degree requirements like the B.com and diploma. The correlation coefficient was positive for all variables under study and the descriptive analysis also pointed to a positive relationship between the

variables and performance hence the researcher was still able to deduce conclusions from the model. While some earlier studies have demonstrated that financial literacy are prerequisites for financial success, others suggest that as much as the financial knowledge play critical roles in achieving steady growth a number of firms have recorded remarkable profitability despite lacking some essential skills. For example, Chepngetich (2016) showed that the shortages of financial skills exposed the firms to monetary problems such as extravagance, over-indebtedness, and other credit management dysfunctions. Such firms hardly make significant progress, as far as performance is concerned. Lechner & Gatzert (2018) showed that businesses that have successfully utilized the skills of their financial analysts in stabling comprehensive financial risk management always enjoy high operational efficiency that in turn translates into high profits. In contrast, Anyieni (2018) found a negative correlation between some aspects of financial risk management such as diversification and business resilience of SMEs. Okello and Were (2014) also found that although a number of firms in Nairobi are run by professionals in finance and accounting fields, inventory management inefficiencies exposed the businesses to significant losses. For example, 70.9% of the respondents claimed that there were incidences of inventory miscalculations that led to inability to meet customer's demands and high shipping costs. Therefore, the firms must not only prioritize the financial literacy aspects but also the other success factors. The financial knowledge base should serve as a starting point in that the financial officers and accountants should work hand in hand with the marketers, production engineers, and operational managers in producing superior products and services as compared to other industry players.

5.3. Conclusion

The study sought to assess the effects of financial literacy in the growth of Agro processing industry. Budgeting financial literacy has a positive and significant effect on Agro processing companies' performance. The preparation of budgets coupled with budget expertise provides a spending plan for finances making it possible for the availability of funds to enhance future growth and overall performance of the companies This, however, requires the participation of employees in the budget process in order to realize improved performance. findings also revealed the insignificant relationship between financial risk management literacy and debt management literacy. As the study indicates, the firms with incentives for increasing their employees' knowledge of financial budgeting have a better chance at enhancing their growth. Policies

therefore need to take advantage of the opportunities presented by financial budgeting literacy towards company performance. The industry is undergoing paradigm shifts characterized by strong competition from exports, emergence of new risks and high cost of living. and having financial and accounting professionals with qualifications ranging from degrees in finance and accounting to CPAs, CFAs, and corporate credit analysts will enable the firms to ensure increased profitability. the study concludes that financial budgeting literacy is a key requirement for the success of all the companies operating in the industry.

5.4. Recommendation

5.4.1. Impacts of the Study on Practice

The study makes a number of recommendations. financial budgeting literacy exhibited a significant positive impact to business performance and Companies should encourage their workforce to enroll in more subject specific qualifications that sharpens their budgeting literacy levels. It is, therefore, necessary for employees to have budget expertise. Most importantly, the finance managers need to have budget expertise since they dictate whether the budget would be implemented as prepared or not. Moreover, budgets should be prepared regularly with full participation of employees in the budget process.

5.4.2. Impacts of the Study on Policy

Like in other fast rising industries like information technology, the policymakers in the Agro processing industry should organize regular forums to enhance their employees' literacy levels. The sector has unique knowledge and skills set needed to realize vision 2030 goals. The financial literacy requirements must be customized to subject specific areas of finance to be able to yield maximum result and in order to meet the specific needs of the firms. Therefore, incentives such as regular conferences, debates or online discussions would present opportunities for developing sustainable solutions to the challenges facing the industries. For example, the policymakers would be able to publish new documents on emerging issues on budgeting, risk and debt management thereby equipping the accountants, financial officers, and bookkeepers at the Agro processing companies with new knowledge.

5.5. Suggestion for future Research

More research is needed in this subject area to fully establish the effect of financial risk literacy and debt management literacy since this study exhibited no significant effect. Further on, Agro processing

industry like other sectors of the economy is witnessing paradigm shifts in the knowledge, skills and abilities needed to prosper in the foreseeable future. Green accounting practices and Big Data financial management analytics are quickly changing the market dynamics. In fact, it is projected that firms' competitive advantages is rapidly shifting to ability to utilize resources in ways that preserve the virgin raw materials, minimize carbon footprints, and optimize cost savings. To capitalize on such emerging opportunities, Agro processing companies need to acquire highly skilled personnel with knowledge on the disruptive technologies such as artificial intelligence powered ERP systems. This is because the ventures are characterized by multiple risks hence powerful tools are needed to upgrade the accounting systems appropriately. Therefore, future studies should concentrate on the effects of recruiting and retaining industry's best talents, as far as, emerging innovations in accounting and finance is concerned, on the growth prospects of the Agro processing companies. The study also indicates that as much as financial literacy plays critical roles in the firms' profitability, more research is needed on other key success factors. That is, it is evident that the performance of the firms depends on a number of interrelated events with financial literacy playing a significant role while other incentives such as utilization of the knowledge base and related human resources to establish valuable, rare, difficult to imitate and innovative product portfolios are also essential components of long-term success. Therefore, future researchers should do a comparative study on the specific roles played by the financial knowledge base in the profitability of the leading and lowest performing firms in the Agro processing sector.

5.6. Limitations of the Study

This study was limited to Nairobi County only. The county was considered since it holds majority of the Agro processing companies. Further on, the study obtained data from the financial managers and executives of the Agro processing companies thus there was high risk of self-reporting bias. The respondents including those lacking training on financial issues might have not been willing to talk openly about the weaknesses of their firms due to fear of leaking their business secrets to the rivals. However, they were assured of confidentiality to encourage them to provide accurate details on the state of financial literacy at their firms. The questionnaire did not contain identity information that could be used by the audience to identify the respondents.

Additionally, another limitation of the study was that it only adopted three variables which were budgeting literacy management literacy and debt management literacy and therefore did not involve other possible variables that have an effect on the performance of a firm.



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APPENDICES

Appendix 1: Letter of Introduction

Dear Sir/Madam,

RE: ACADEMIC RESEARCH

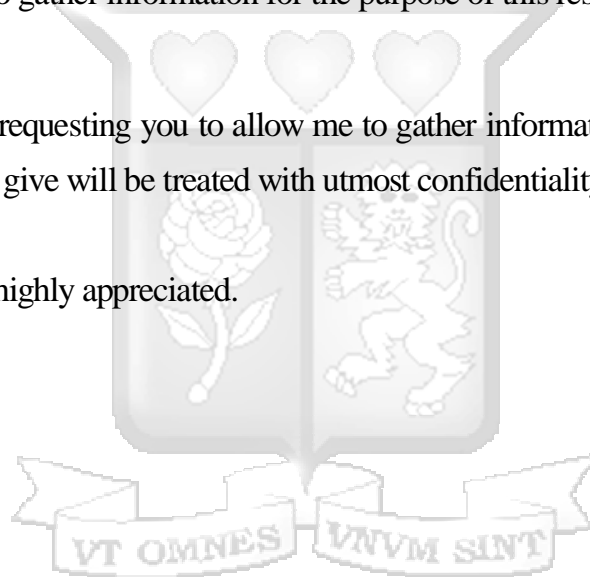
I am a Postgraduate student at Strathmore University conducting research on “**The effects of Financial Literacy on the Performance of Agro processing Industries in Nairobi County**”. I will use a questionnaire to gather information for the purpose of this research.

I am kindly and politely requesting you to allow me to gather information for this research. The information that you will give will be treated with utmost confidentiality.

Your acceptance will be highly appreciated.

Yours Sincerely

Diana Mwirichia



Appendix 2: Research Questionnaire for the Respondents

Dear respondent,

I am a Postgraduate student at Strathmore University conducting research on “**The effects of Financial Literacy on the Performance of Agro processing Industries in Nairobi County**”.

The information provided therein will be confidential as the status of response will be anonymous.

Yours Sincerely

Diana Mwirichia

Instructions: Tick where applicable



SECTION A: GENERAL INFORMATION

1. Ownership of the company
 - 1) Local
 - 2) Foreign
 - 3) Local and Foreign
2. What is the form of business organization?
 - 1) Sole proprietorship
 - 2) Partnership
 - 3) Private limited company
 - 4) Other (Specify.....)
3. What is your position in the firm?
 - 1) Owner
 - 2) Chief Manager
 - 3) Chief Accountant
 - 4) Financial Manager
 - 5) Other (Specify.....)
4. Years of the company in operation
 - 1) Less than 5 years
 - 2) 5-10 years

- 3) 11-14years
 - 4) 15-20 years
 - 5) 21-24 years
 - 6) 25 years and above
5. How would you rate the general performance of your firm?
- 1) Very good
 - 2) Good
 - 3) Moderate
 - 4) Poor
 - 5) Very poor

SECTION B: FINANCIAL BUDGETING LITERACY

6. Do you prepare budget for your firm?
- 1) Yes
 - 2) No
7. If yes, for how long have you been preparing budgets for your firm.
- 1) Less than 2 years
 - 2) 2-5 years
 - 3) 6-10 years
 - 4) Above 10 years
8. Do you have any professional qualification on budget preparation?
- 1) Yes
 - 2) No

If yes, please mention them.

- i.
- ii.
- iii.

9. The following statements refer to financial budgeting literacy of your firm. Please state the extent to which you agree with them. (SA-Strongly Agree, A-Agree, NS-Not Sure, D-Disagree, SD-Strongly Disagree)

	Statement	SA	A	NS	D	SD
1.	There is a high level of comprehensiveness of budgets developed in your firm					
2.	You have good knowledge and understanding of budget development					
3.	Staffs in the finance department have acquired sufficient knowledge in budget preparation					
4.	Staffs in the finance department have acquired sufficient knowledge in sales forecasting					
5.	Staffs in the finance department have acquired sufficient knowledge in budget implementation					
6.	Staffs in the finance department have acquired sufficient knowledge in budget monitoring					
7.	Staffs in the finance department have acquired sufficient knowledge in budget evaluation					
8.	Staffs in the finance department have acquired sufficient knowledge in prudent spending					
9.	Staffs in the finance department have acquired sufficient knowledge in financial resource distribution during budget development					
10.	Staffs in the finance department have acquired sufficient knowledge in information gathering for budget development					

11.	Financial budgeting Literacy of the Staff has affected the Performance of your firm positively					
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SECTION C: FINANCIAL RISK MANAGEMENT LITERACY

10. Does your firm have any special financial risk management strategies?

- 1) Yes
- 2) No

If so, please mention five major ones.

- i.
- ii.
- iii.
- iv.
- v.

11. Do you have any professional qualification on financial risk management?

- 1) Yes
- 2) No

If yes, please mention them.

- i.
- ii.
- iii.

12. The following statements refer to financial risk management literacy in your firm. Please state the extent to which you agree with them. (**SA**-Strongly Agree, **A**-Agree, **NS**-Not Sure, **D**-Disagree, **SD**-Strongly Disagree)

	Statement	SA	A	NS	D	SD
1.	There is a high level of effectiveness of financial risk Management strategies in your firm					
2.	You have good knowledge and understanding of Financial Risk management					

3.	Staffs in the finance department have sufficient knowledge in financial risk identification					
4.	Staffs in the finance department have sufficient knowledge in financial risk monitoring					
5.	Staffs in the finance department have sufficient knowledge in financial risk evaluation					
6.	Staffs in the finance department have sufficient knowledge in financial risk mitigation					
7.	Staffs in the finance department have sufficient knowledge in business diversification as a risk mitigation measure					
8.	Staffs in the finance department have practically demonstrated financial risk identification capabilities in their tasks					
9.	Staffs in the finance department have practically demonstrated financial risk monitoring capabilities in their tasks					
10.	Staffs in the finance department have practically demonstrated financial risk evaluation capabilities in their tasks					
11.	Staffs in the finance department have practically demonstrated financial risk mitigation capabilities in their tasks					
12.	Financial risk management Literacy of the Staff has affected the Performance of your firm positively					

SECTION D: DEBT MANAGEMENT LITERACY

13. Has your firm ever accessed credit from any financial institution?

- 1) Yes
- 2) No

If so, from which financial institutions have you accessed credit from

- i.
- ii.
- iii.
- iv.

14. Do you have any professional qualification on debt management?

- 1) Yes
- 2) No

If yes, please mention them.

- i.
- ii.
- iii.

15. The following statements refer to debt management literacy in your firm. Please state the extent to which you agree with them. (SA-Strongly Agree, A-Agree, NS-Not Sure, D-Disagree, SD-Strongly Disagree)

	Statement	SA	A	NS	D	SD
1.	There is a high level of effectiveness of Debt Management in your firm					
2.	You have good knowledge and understanding of debt management					
3.	Staffs in the finance department have necessary knowledge on loans offered by various banks					

4.	Staffs in the finance department have the ability to calculate loan interests on a monthly basis					
5.	Staffs in the finance department have sufficient knowledge on the implications of accumulating debts in the firm					
6.	Staffs in the finance department have the knowledge on how to adhere to the purpose of a loan once its disbursed					
7.	Staffs in the finance department have necessary knowledge on the implications of multiple borrowing on the firm's debt management process					
8.	Staffs in the finance department have sufficient knowledge on the implications of not paying firm debts in time					
9.	Staffs in the finance department are well aware on the importance of borrowing only what is necessary for a particular purpose for the purpose of debt management.					
10.	Staffs in the finance department have sufficient knowledge on how to access finance at minimum costs					
11.	Staffs in the finance department have sufficient knowledge on determining the total debt position of the firm					
12.	Staffs in the finance department have necessary knowledge on the effects of inflation and interest rates on the loans borrowed for the firm					

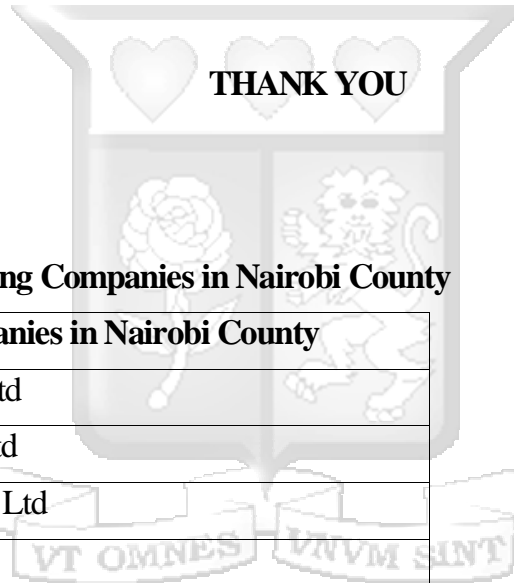
13.	Debt Management Literacy of the Staff has affected the Performance of your firm positively					
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SECTION E: ORGANIZATIONAL PERFORMANCE

16. The following statements refer to the organization performance of your firm. Please state the extent to which you agree with them. (**SA**-Strongly Agree, **A**-Agree, **NS**-Not Sure, **D**-Disagree, **SD**-Strongly Disagree)

	Statement	SA	A	NS	D	SD
1.	There has been a significant increase in profits for the past five years					
2.	There has been a significant increase in sales for the past five years					
3.	There has been a significant diversification of products for the past five years in which most of them are performing relatively well					
4.	There has been a significant decrease in losses for the past five years					
5.	The financial risks associated with the firm have been well mitigated for the past five years					
6.	There are minimal incidences of unfavorable outcomes due to effective financial risk management practices for the past five years					
7.	There are minimal incidences of financial resource allocations complains due to effective and satisfactory budgetary development process for the past five years					

8.	There is smooth running of firm activities due to comprehensive budget development					
9.	The sustainability of the firm is well guaranteed due to effective debt management strategies					
10.	There is high level of customer satisfaction for the past five years					
11.	The level of client retention has been so high for the past five years					



Appendix 3: Agro processing Companies in Nairobi County

No.	Food Companies in Nairobi County
1.	Almasi Beverages Ltd
2.	Alpha Fine Foods Ltd
3.	Alpha Grain Millers Ltd
4.	Alpine Coolers Ltd
5.	Aviano East Africa
6.	Bakers Corner Ltd
7.	Afripon (K) Ltd
8.	Agri Pro-Pak Ltd
9.	Aquamist Ltd
10.	Bdelo Ltd
11.	Belat Enterprises
12.	Belfast Millers Ltd
13.	Beverage Service (K) Ltd
14.	Bio Food Products Ltd

15.	Blueplastics and Water Co. Ltd
16.	Bounty Ltd
17.	Breakfast Cereal Company (K) Ltd (Formerly Weetabix)
18.	Bulto Foods Ltd
19.	C. Dormans Ltd
20.	C.CzarnikowSugar (EA) ltd
21.	Cadbury Kenya Ltd
22.	Candy Kenya Ltd
23.	Capel Food Ingredients
24.	Chirag Kenya Ltd
25.	Coca-Cola East Central and West Africa Ltd
26.	Coca-Cola Juices (K) Ltd
27.	Danone Baby Nutrition Africa and Overseas
28.	DPL Festive Ltd
29.	East African Breweries Ltd
30.	East African Malt Ltd
31.	East African Sea Food Ltd
32.	East African Seed Co. Ltd
33.	Eastern Produce Kenya Ltd (Kakuzi)
34.	Edible Oil Products
35.	Elekea Ltd
36.	Elle Kenya Ltd
37.	Ennsvally Bakery Ltd
38.	Erdemann Co. (K) Ltd
39.	Europack Industries Ltd
40.	Europack Industries Ltd
41.	Farmers Choice Ltd
42.	Frigoken Ltd
43.	Frutarom Kenya (Ltd)

44.	Giloil Company Ltd
45.	Glacier Products Ltd
46.	Global Fresh Ltd
47.	Gonas Best Ltd
48.	Grain Industries Ltd
49.	Green Forest Foods Ltd
50.	Highlands Caners Ltd.
51.	Jambo Biscuits (K) Ltd
52.	Kamili Packers Ltd
53.	Kedsta Investment Ltd
54.	Kenafic Industries Ltd
55.	Kenchic Ltd
56.	Kenya Co-Operative Coffee Dealers Ltd (KCCD)
57.	Kenya Sweets Ltd
58.	Kenya Wine Agencies Ltd
59.	Kirinyaga Flour Mills
60.	Koba Waters Ltd/ Broomhill Springs Water
61.	Kuguru Food Complex Ltd
62.	Kwale International Company Ltd
63.	Kwality Candies & Sweets Ltd
64.	Landeco Ltd
65.	london distillers (K) LTD
66.	Manji Food Industries Ltd
67.	Melvin Marsh International
68.	Mini Bakeries (Nbi) Ltd
69.	Mjengo Ltd
70.	Monwalk Investment Ltd
71.	MulsonImplex Ltd
72.	Nairobi Bottlers Ltd
73.	Nairobi Flour Mills Ltd

74.	NAS Airport Services Ltd
75.	Nestle Kenya Ltd
76.	New Kenya Co-Operative Creameries Ltd
77.	Norda Industries Ltd
78.	Nutro Manufacturers EPZ Ltd
79.	Patco Industries Ltd
80.	Pearl Industries Ltd
81.	Pembe Flour Mills Ltd
82.	Pernod Ricard Kenya Ltd
83.	Premier Flour Mills Ltd
84.	Premier Food Industries Ltd
85.	Pristine International Ltd
86.	Proctor & Allan (E.A.) Ltd
87.	Propack Kenya Ltd
88.	Rafiki Millers Ltd
89.	RAZCO Ltd
90.	Re-Suns Spices Ltd
91.	Sahara Venture Capital Company Ltd
92.	Salim Wazarani Kenya Company
93.	Sameer Agriculture & Livestock (Kenya) LTD
94.	Savannah Brands Company
95.	SBC Kenya Ltd
96.	Shree Sai Industries
97.	Simply Foods Ltd
98.	Sky Foods Ltd
99.	Spice World Ltd
100.	Stawi Foods and Fruits Ltd
101.	Tropical Heat Ltd
102.	Trufoods Ltd
103.	Unga Group Ltd

104.	United Distillers and Vintners
105.	Usafi Services Ltd
106.	Vava Coffee Ltd
107.	Vert Ltd
108.	W.E Tilley (Muthaiga) Ltd
109.	Wanji Food Industries
110.	Winnie's Pure Health
111.	Wrigley Company (E.A)
112.	Zheng Hong (K)Ltd



Appendix 4: Clearance from Ethical Approval



16th December 2022

Ms Mwirichia Diana,
Diana.mwirichia@strathmore.edu

Dear Ms Mwirichia,

RE: The Impact of Financial Literacy on the Performance of Agro-Processing Industries in Nairobi County

This is to inform you that SU-ISERC has reviewed and **approved** your above SU-master's research proposal. Your application reference number is SU-ISERC1508/22. The approval period is from 16th December 2022 to 15th December 2023.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 48 hours of notification
- iv. Any changes, anticipated or otherwise, that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 48 hours
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Dr Ben Ngoye".


for: **Dr Ben Ngoye,**
Secretary; SU-ISERC

Cc: Prof Fred Were,
Chairperson; SU-ISERC

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Appendix 5: NACOSTI



REPUBLIC OF KENYA



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

Ref No: **393075** Date of Issue: **21/February/2023**

RESEARCH LICENSE



This is to Certify that Miss. Diana Mwirichis of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev 2014) in Nairobi on the topic: THE IMPACT OF FINANCIAL LITERACY ON THE PERFORMANCE OF AGRO-PROCESSING INDUSTRIES IN NAIROBI COUNTY for the period ending : 21/February/2024.

License No: **NACOSTI/P/23/23500**

393075

Applicant Identification Number



**Director General
NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION**

Verification QR Code



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Scan the QR Code using QR scanner application.**

See overleaf for conditions



Appendix 6: Respondents who did not submit back their Responses.

No.	Company	No. of Respondents
1	Almasi Beverages Ltd	1
2.	Bakers Corner Ltd	1
3.	Afripon (K) Ltd	1
4.	Belat Enterprises	2
5.	Bulto Foods Ltd	1
6.	C. Dormans Ltd	1
7.	C.CzarnikowSugar (EA) ltd	1
8.	Cadbury Kenya Ltd	1
9.	Candy Kenya Ltd	1
10.	Capel Food Ingredients	1
11.	Chirag Kenya Ltd	2
12.	Coca-Cola East Central and West Africa Ltd	1
13.	Coca-Cola Juices (K) Ltd	1
14.	Danone Baby Nutrition Africa and Overseas	1
15.	DPL Festive Ltd	1
16.	East African Breweries Ltd	1
17.	East African Malt Ltd	1
18.	SBC Kenya Ltd	2
19.	Shree Sai Industries	1
20.	Simply Foods Ltd	1
21.	Sky Foods Ltd	1
22.	Spice World Ltd	1
23.	Stawi Foods and Fruits Ltd	1
24.	Unga Group Ltd	1
25.	United Distillers and Vintners	2
26.	Usafi Services Ltd	1
27.	Vava Coffee Ltd	1
28.	Vert Ltd	1

29.	W.E Tilley (Muthaiga) Ltd	1
30.	Wrigley Company (E.A)	1
31.	Zheng Hong (K)Ltd	1

