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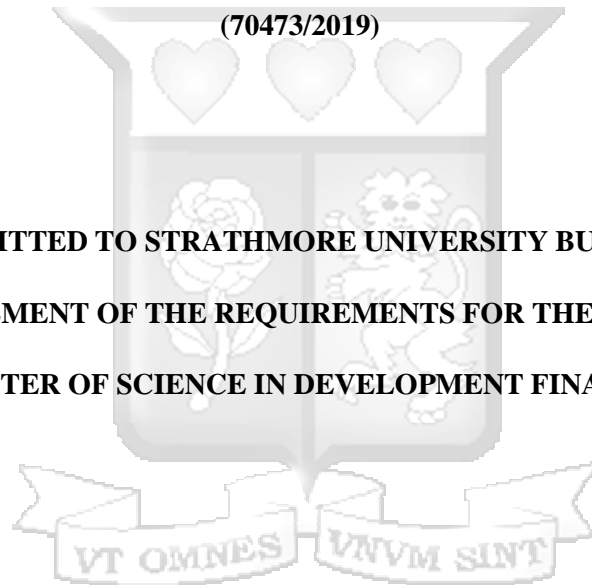
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**EFFECT OF FIRM-SPECIFIC FACTORS ON THE FINANCIAL PERFORMANCE OF FOOD
AND BEVERAGES MANUFACTURING FIRMS IN KENYA.**

DUNCAN ONWONG'A MOKAYA

(70473/2019)

**A THESIS SUBMITTED TO STRATHMORE UNIVERSITY BUSINESS SCHOOL
IN FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE IN DEVELOPMENT FINANCE**



19th February 2023

DECLARATION

I hereby declare that all the information in this research proposal report is my original work and has not been presented in any other institution other than Strathmore University Business School for academic credit.

Signed:



Date: 06-06-2023

Mokaya Duncan

Student

This proposal has been presented for examination with my approval as the appointed supervisor.

Signed:



Date: 06-06-2023

Dr. Muli Maingi.



DEDICATION

I dedicate this work to my loving parents and my three wonderful siblings; Daisy Moraa, Joseph Angwenyi, and Benedict Akivatsi who have supported me and encouraged me throughout my school time and it the time of writing this research work. And, to God for granting me the wisdom through it all.



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LIST OF ABBREVIATIONS AND ACRONYMS

IOs - International Organizations

GDP - Gross Domestic Product

LTDTA - Long Term Debt to Total Assets

NSE - Nairobi Stock Exchange

ROA - Return on Assets

ROE - Return on Equity

STDTA - Short Term Debt to Total Assets

TDE - Total Debt Equity

STDTA - Short Term Debt to Total Assets

WCM - Working Capital Management



DEFINITION OF TERMS

Return on Assets (ROA): A measure of how efficiently a company is using its assets to generate profits. It is calculated by dividing the company's net income by its total assets.

Earnings Before Interest and Taxes (EBIT): A measure of a company's operating profitability. It is calculated by subtracting a company's operating expenses from its revenue.

Leverage: The use of borrowed funds to increase the potential return of an investment. It can refer to both financial leverage (using debt to finance investments) and operating leverage (using fixed costs to increase profits).

Liquidity: The ability of an asset to be converted into cash quickly without incurring a significant loss in value. It is often measured by the asset's ability to meet short-term financial obligations.

Return on Equity (ROE): A measure of how effectively a company is using shareholder equity to generate profits. It is calculated by dividing the company's net income by its shareholder equity.

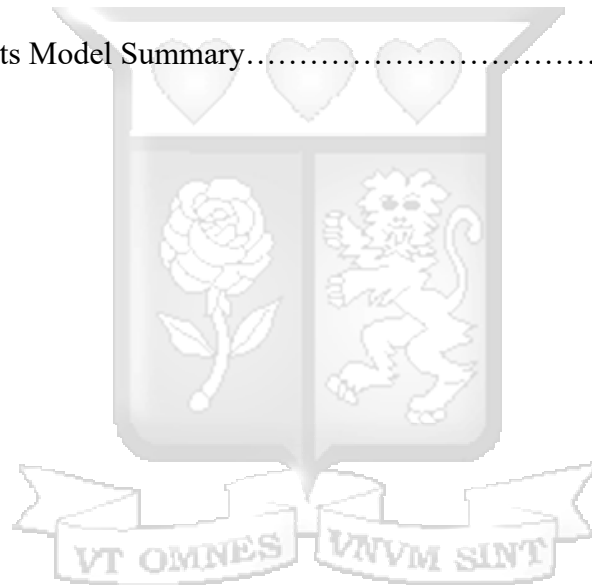
Debt-to-Equity Ratio: A measure of a company's financial leverage. It compares the amount of debt a company has to the amount of equity, with higher ratios indicating a higher level of financial risk.

Dividend Yield: A measure of the return on investment in a stock. It is calculated by dividing the annual dividend per share by the stock's current market price.

Price-to-Earnings Ratio (P/E Ratio): A measure of a company's stock price relative to its earnings. It is calculated by dividing the current stock price by the company's earnings per share.

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ABSTRACT

Assessments and projections of the growth of the Kenyan economy are founded on the increases on the contribution of the manufacturing sector to the economy. The performance of this sector has been overtaken by the novel telecommunications and real estate sectors on the contribution to GDP. The Food & Beverages Manufacturing sector accounts for a majority 22% share of the Kenyan manufacturing sector, thus, the most sources of livelihood to workers in the manufacturing industry. It is for this reason that this research embarked on a quest to determine the factors within the control of these firms that affect their financial performance. The success of this sector has a larger effect on the overall performance the Kenyan Manufacturing sector owing to its sheer contribution to the industry. This study assessed the effect of the: size, age, leverage, and liquidity of a firm on its financial performance. This study employed descriptive correlational research design on data from 2009 -2018 of 75 Food and Beverages firms in Kenya. The data collected from this study was analysed through a panel regression model to test the influence of the variables in this study on the financial performance of Food and Beverages manufacturing firms. The study found positive influence on financial performance by leverage being statistically significant. The study recommends strategies to increase cash reserves through retaining earnings, issuing equity, or selling non-core assets, reducing debt by paying off loans or refinancing them at a lower interest rate.



CHAPTER ONE: INTRODUCTION

1.1 Introduction to the study

This first chapter provides a background for the research into firm-specific factors that affect the financial performance of companies in the food and beverage manufacturing industry. In this chapter, the background of the research is discussed considering the application of related concepts across the world. It also discusses the problem that the research addresses, and then introduces the research objectives and questions. Finally, it provides the areas of significance of the study.

1.2 Background of the Study

The definition of a firm in Economics is a commercial enterprise that seeks to make a profit by manufacturing or selling products or services – or both – to consumers. For example, one of the most common uses of this term is for ‘*law firms*,’ which usually sell services in relation to the law. However, other organizations can be firms too, including those that provide accounting services, design services, education, and consultancy services. In commerce, the term is usually synonymous with ‘company’, or ‘business.’ According to Francoise, Gerald & Mansi (2005) the term first emerged in the English language with the meaning of ‘business house’. It is believed to have come from the German word *Firma* meaning ‘a business or a name of a business,’ which came from the Italian word *Firma*, meaning ‘signature’ and *Firmare* ‘to sign.’

On the other hand, Francoise, Gerald & Mansi (2005) observed that “Performance” is a word that originated from the old French word ‘Parfournir’; whose meaning is, ‘to bring through, to carry out, to do or to bring forth.’ Performance is an act of performing, implementing, achieving, and fulfilling of the given tasks that needs to be measured against defined sets of precision, money, fullness, and timing. In finance, it refers to the measurements of the company’s policies, activities, and operational results in financial terms. It is used to check a company’s success, compliance, and financial position. These results are reflected in the firm’s return on investment, assets, equity, capital employed and profitability.

In the 1950s, the performance of a firm was deemed to be the equivalence of its organizational efficiency. Organizational efficiency is the degree to which an organization, as a social system

with scarce resources and means, can achieve its objectives without the use of an excessive amount of effort from its members. In this school of thought, the criteria used for assessing a firm's performance are productivity, flexibility, and interorganizational tensions (Georgopoulos, 1957). Later, in the 1960s and the 1970s, organizations began to prospect newer ways to gauge their performance. In this period, performance was defined as an organization's ability to exploit its environment for the access and use of its scarce resources (Yuchtman & Seashore, 1967). In the early 2000's, Verboncu and Zalman (2005) appreciated that performance is a particular result obtained in management, economics, and marketing that gives characteristics of competitiveness, efficiency, and effectiveness to the organization and its structural and procedural components. Much more recently, Bartoli and Blatrix (2015) recommended that performance should be achieved through, piloting, evaluation, efficiency, effectiveness, and quality. Due to the absence of a single operational definition of firm performance upon which most scholars' consent, naturally there arises diverse interpretations suggested by various people according to their personal perceptions.

Financial performance is the measure of the financial well-being of the organization and is indicative of the performance of the executive leadership of a company. A greater financial performance of a company is indicative of its efficient use of available resources towards the economic growth (Almajali et al., 2012). Unsurprisingly, the fundamental objective of most firms is profit maximization, creation of wealth and other secondary objectives that are considered important to that firm (Chandrapala & Knápková, 2013). Similarly, Kolawole (2013) found out that, organizations seek to improve performance, create wealth for their shareholders and increase stakeholder's satisfaction. This finding was further confirmed by Tariq Bhutta & Hasan (2013) in their findings that maximizing the profit of the firm was one of the major objectives of managers.

According to Taouab & Issor, (2019), a well performing firm yields higher and long-term profits, which will generate employment opportunities and improve the income of individuals. Furthermore, financial profitability of a firm will enhance the returns of its employees, have better production units, and bring products of higher quality for its customers.

Historically, the performance of firms has been measured differently by different researchers but in no more than three major groupings: profitability ratios, growth rates and margins. Based on

these researches it was concluded that performance can be measured and defined in several ways depending of the context of research (Kemp et al., 2003).

However, the use of modern financial ratios as measures of performance have been deemed to be the most fit and much more relevant owing to the fact that they take into account some degree of market risk as opposed to classical financial ratios that give information of performance based on historical occurrences (Huselid et al., 1997). Still, the recent developments and the use of proxies like; quality of intellectual capital, quality of management, environmental factors, and others are considered and have been seen to be much more indicative of the performance of a firm (Stavrou-Costea, 2005).

1.2.1 Manufacturing Sector

The manufacturing sector is one of the biggest contributors to the economy as it plays a significant role on the economic development of any country at both the local and the international level. Kaldor, (1967) examined the relationship between industrial development and economic growth, and based on empirical results, characterized the manufacturing sector as “the main engine of fast growth.” This not only held true for the 12 early industrializers Kaldor examined, from the UK to Japan, but is also characteristic of catching-up countries that have experienced rapid, sustained growth (The Growth Report, 2008; Felipe et al., 2014). Szirmai & Verspagen, (2015) tested the relationship between the value added share of manufacturing and growth of GDP per capita using fixed effects, random effects, Hausman-Taylor estimations and between effects models for an unbalanced panel of 92 countries, the study established that manufacturing acts as an engine of growth for low and for some middle income countries, provided they have a sufficient level of human capital. Avkiran, (1999) tested whether Kaldor’s conclusions were still valid beyond the heydays of rapid industrialization and catch-up of the 1970s, applying an instrumental variable econometric technique for 45 mostly developing countries for the period 1960-1994. The results confirmed Kaldor’s argument that “manufacturing is an engine of growth” for most of the developing countries included in the study. By contrast, the results of Fagerber et al., (2009) show that manufacturing only acted as an engine of growth for developing, but not for developed countries for the period 1970s to 1980s.

The profitability of food and beverages manufacturing firms is influenced by both internal and external factors. Internal factors, also known as firm-specific factors are variables that exist

within the control of the management of these companies; they include decision making for sources of capital, the level of expenditure and management of working capital (Onuonga, 2014) whereas external factors, also known as macroeconomic factors are variables that exist beyond the control of the management of the organization which affect the profitability of the business. They include; prevailing interest rates, the growth rate of Gross Domestic Product (GDP), recession, boom, government regulations, market structure and the legal environment in which they operate in (Staikouras & Wood, 2004).

Analysis of empirical studies that have studied financial performance of firms in Kenya and the rest of the world show that they have mainly focused on commercial banks, oil and gas, other non-food & beverages manufacturing firms, and macroeconomic factors like inflation, interest rates, and GDP. In view of the basic challenges such as modernization, intensive digital innovation and disruptions, facing firms it is critical to examine the factors within the control of a firm that impact its financial performance.

The financial performance of food and beverage firms in Europe has also been impacted by several trends related to leverage, firm size, and age. Larger firms with established brand recognition and distribution networks have generally been better able to weather economic downturns and market fluctuations, while smaller firms have had to rely on innovation and agility to remain competitive. In terms of leverage, Lukić, Nikolić, & Mitić (2019) argue that firms with higher debt levels may be more vulnerable to economic shocks, while those with lower debt levels may be better able to weather economic downturns. Finally, the age of a firm can also impact its financial performance, as newer firms may be more agile and innovative, while older firms may have established market positions and well-established customer bases. Overall, a variety of factors impact the financial performance of food and beverage firms in Europe, and firms must navigate these trends effectively in order to remain successful.

The financial performance of food and beverage firms in America has also been shaped by trends related to leverage, firm size, and age. Like Europe, larger firms have tended to have a more stable financial performance, due to their established market positions and distribution networks (Lopes & Basso, 2018). However, in recent years, there has been a trend towards smaller and more specialized firms, particularly in the natural and organic food sector. In terms of leverage, firms with high debt levels may be more vulnerable to economic shocks, while those with lower debt levels may be more resilient. Regarding age, Sulaiman, Uddin & Rahman (2019) suggest

that younger and more innovative firms may have more agility in responding to changing market conditions, while older firms may have established brand recognition and loyal customer bases. Overall, the food and beverage industry in America is highly competitive.

The financial performance of food and beverage firms in Asia has also been impacted by trends related to leverage, firm size, and age. According to Chen & Wang (2020), the rise of the middle class and increasing urbanization in many Asian countries has contributed to significant growth in demand for convenience foods and beverages, particularly among younger consumers. This has created opportunities for smaller and more innovative firms to enter the market, although larger firms with established brand recognition and distribution networks still hold significant market share. In terms of leverage, many firms in Asia have high debt levels, which can leave them vulnerable to economic shocks. Regarding age, younger firms may be more innovative and responsive to changing market conditions, while older firms may have established market positions and brand recognition. Overall, the food and beverage industry in Asia is highly diverse, with significant variation between countries and regions. Firms that can navigate these trends effectively, while also responding to changing consumer preferences and market conditions, will be best positioned for success in the years ahead (Yigit & El-Kafrawy, 2018).

Finally, the financial performance of food and beverage firms in Sub-Saharan Africa has also been impacted by trends related to leverage, firm size, and age. In many countries in the region, as explained by Tamang et al. (2020), there has been significant growth in demand for processed foods and beverages, particularly among urban consumers. This has created opportunities for both larger and smaller firms, although many smaller firms struggle with limited access to financing and distribution networks. In terms of leverage, many firms in the region have limited access to capital and rely on debt financing, which can leave them vulnerable to economic shocks (Ülker, Oğan and Özkaya, 2017). Regarding age, many firms in the region are relatively young and may lack the experience and resources of more established firms in other regions. Overall, the food and beverage industry in Sub-Saharan Africa is highly diverse and dynamic, with significant variation between countries and regions. Firms that can navigate the unique challenges of operating in the region, while also responding to changing consumer preferences and market conditions, will be best positioned for success in the years ahead.

1.2.1 Financial Performance

Alzharani et al., (2012) defines the financial performance of a firm as a firm's performance results denoted in monetary terms of either loss or profit for a period, usually, one year. However, the common measure of performance and that which is common stimulus to investors of time, finances and knowledge in the firm is profits generated during that period. According to Stierwald (2012), profit is the net amount after total expenses incurred by a firm along the course of doing business is deducted from the total income during that time frame.

Furthermore, businesses in the same category can be juxtaposed to compare how financially successful they are using financial ratios. Some of the ratios in this case include Return on Equity (ROE) and Return on Assets (ROA).

ROE is the most popular measurement of corporate financial performance; it is the unit measure of return for a unit investment of a shareholder's funds in a company. It is received as dividend, usually, on annual basis and reflects the equity earning power of a firm (De Wet & Du Toit, 2007). Shareholders value is created in the event the return on equity supersedes the cost of that equity.

On the other hand, ROA is the ratio of a firm's profits to its assets. It is the ability of a firm's management personnel to utilize company assets for generation of profit (Abor, 2005). This study will employ ROA as a measure of Financial Performance.

1.2.2 Determinants of Financial Performance of Firms

Two broad factors affect the financial performance firms in Kenya: internal and external factors. Internal factors, also known as firm-specific factors, are variables that influence the level of profitability of a firm and are intrinsic to the organization. Managers of these firms control these variables through decision making on corporate governance, sources of capital, level of expenditure and liquidity (Onuonga, 2014). External factors are variables felt throughout an economy outside of the control of the company. They include; money supply, regulation, market share, exchange rates, inflation, GDP and scarcity of capital (Majumdar, 1997). This study focuses on the factors that are firm-specific and seeks to find the relationships that exists or do not exist between firm age, liquidity levels of a firm, leverage, and the size of a food and beverages manufacturing firm on its financial performance.

Firm age, liquidity, leverage, and size are all important factors in determining the financial performance of a food and beverage manufacturing firm. However, as found out by Agbejule & Uwuigbe (2017), their impact may vary depending on the specific circumstances of the firm and the industry in which it operates. For example, firm age can be an important factor in determining financial performance as younger firms may have less experience and fewer resources to weather economic downturns. However, younger firms may also be more agile and innovative, and therefore better able to respond to changing market conditions. Similarly, liquidity and leverage are important factors in determining the financial performance of a firm. High levels of liquidity can help firms weather economic shocks and take advantage of growth opportunities, while high levels of leverage can leave firms vulnerable to economic downturns and financial instability. Finally, firm size can be an important factor in determining financial performance. Larger firms may have established brand recognition and distribution networks, which can provide a competitive advantage. However, smaller firms may be more agile and better able to respond to changing market conditions. Overall, while age, liquidity, leverage, and size are all important factors in determining financial performance, their impact may vary depending on the specific circumstances of the firm and the industry in which it operates. Successful firms must effectively navigate these factors and respond to changing market conditions in order to remain competitive and achieve long-term financial success (Abdul-Rahim & Ku Ismail, 2018).

1.2.3 Food and Beverages Manufacturing Firms in Kenya

The manufacturing industry in Kenya is an important one as it makes a substantial contribution to the economy. The industry contributes approximately 20% of the GDP of Kenya and is one of the key economic pillars in Kenya's Vision 2030, a developmental blueprint geared to transform Kenya into a middle-income country by the year 2030. According to Were, Willem and Wainaina (2017) Kenya ought to double its manufacturing output if it were to achieve the government target of the industry to increase its annual contribution to GDP by 10% as envisaged in the Vision 2030 development blueprint.

The manufacturing industry is the 4th largest sector in Kenya behind Agriculture, Transport and Communication, and Wholesale. In so far as industries are concerned, Kenya is the frontrunner

among East African countries. A report by Economic Recovery Strategy for Employment and Wealth Creation (2015) indicated that the manufacturing sector in Kenya is a major contributor to growth and yet, still has a high potential for growth and investment.

According to KAM (2018), there are 289 registered food and beverages manufacturing firms, this translates to a majority 22% of total registered firms at the Association followed by Service and Consultancy and Chemicals and Allied sector at 12% and 9% respectively.

1.3 Statement of the problem

The food and beverage manufacturing sector is one of the most significant in the country. According to Munguti (2015), it is credited for the employment of about 33.5% of new employs in 2010 in the manufacturing sector, and 33% of the 10% of GDP contribution by the manufacturing sector in the same year. Exports from the food and beverage sector at the turn of the decade stood at 197 billion shillings, out of the total exports of 483 billion shillings, or 41%. The Kenya Association of Manufacturers (KAM)(2022), also notes that the food and beverage manufacturers make up the largest of their membership, at 22%, Despite the attention given by the government to the manufacturing sector in Kenya, through blueprints such as Kenya Vision 2030 and the Big Four Agenda, the food and beverage industry has been stagnant for a long time. According to Were et al., (2017), the share of manufacturing in gross domestic product (GDP) was the same in 2015 as it was in 1965, and it has declined over the last five years to a low of 9.2% in 2016. German Energy Solutions (2022) add that the contribution of the food and beverage manufacturing sector to the GDP further declined to 4.1% in 2021.

The performance and contribution of the manufacturing firms to the economy has been worrying especially as other sectors of the economy such as real estate and telecommunications have surpassed it on the contribution to the GDP (GOK, 2014). Job loss in the industry has been ongoing in the past five years preventing the sector from moving out of the infancy stage. Muthui(2014) mentions that even though the sectors faces several macro factor challenges including poor infrastructure, market access and local markets being flooded by cheap imports, improvement in micro factors can counter the effect leading to improvement in performance. The analysis of firm performance has a special significance for management in their attempt to maintain the company's stability and to increase its market share (Ongori & Migiro, 2010).

While there are a good number of research on the determinants of firms' performance in developed economies, most notably the United States, Russia, and France a few in Kenya have primarily focused on other aspects on performance like supply chain management practices (Mutwiri & Muthuri, 2016) and strategic leadership (Njeru, 2019). Moreover, findings from these studies in other parts of the world mentioned cannot be applied to Kenya's economy given the disparities in nature of economies and the market structures of developed and developing countries. Additionally, scholars who have studied the internal factors affecting the financial performance of firms, have done so for other industries such as banking, oil and gas, and pharmaceuticals (Okurut et al., 2016; Ochieng & Otieno, 2018; Olugbenga & Oluwole, 2016).

Considering the sheer contribution of the food and beverage manufacturing sector to the manufacturing industry in Kenya, this study seeks to establish the firm-specific factors that affect the financial performance of food and beverages manufacturing firms in Kenya.

1.4 Research Objectives

1.4.1 General Objective

The study sought to investigate the firm-specific factors on the financial performance of food and beverages manufacturing firms in Kenya.

1.4.2 Specific Objectives

- i. To ascertain the effect of liquidity on the financial performance of food and beverages manufacturing firms in Kenya.
- ii. To examine the influence of firm size on the on the financial performance of food and beverages manufacturing firms in Kenya.
- iii. To investigate the effect of firm age on the on the financial performance of food and beverages manufacturing firms in Kenya.
- iv. To examine the influence of leverage on the on the financial performance of food and beverages manufacturing firms in Kenya.

1.5 Research Questions

Based on the above objectives, the following research questions were formulated.

- i. To what extent does liquidity affect the financial performance of food and beverages manufacturing firms in Kenya?
- ii. To what extent does firm size influence the financial performance of food and beverages manufacturing firms in Kenya?
- iii. To what extent does the age of the firm affect the financial performance of food and beverages manufacturing firms in Kenya?
- iv. To what extent does leverage influence the financial performance of food and beverages manufacturing firms in Kenya?

1.6 Scope of the study

This study covered food and beverages manufacturing firms in Kenya. The period of study was 10 years (2009-2018). This period has been chosen to reflect and capture recent years of operation for food and beverages companies in Kenya post the Global Financial crisis of 2008. The findings were compared to findings from similar research outside of Kenya. Data on firm size, leverage, firm age, and liquidity was collected. The effect of these variables on the financial performance of food and beverages companies in Kenya was studied. The decision to study this industry amongst a variety of industries in the manufacturing sector is informed by the absence of a study on these firm-specific factors in the food and beverages manufacturing in Kenya.

1.7 Significance of the study

1.7.1 Significance to the Industry

The food and beverages manufacturing sector is a crucial contributor to Kenya's economic development. Understanding the firm-specific factors that influence the financial performance of these firms can provide insights into the overall health and growth of the sector, thereby facilitating evidence-based policymaking and strategic decision-making.

The food and beverages manufacturing industry is labour-intensive, generating a significant number of employment opportunities. By studying the firm-specific factors that affect the financial performance of these firms, policymakers, investors, and industry stakeholders can identify the determinants of profitability and growth, thereby facilitating job creation and subsequently spur advances for economic growth and stability.

Kenya's food and beverages manufacturing sector faces competition from both domestic and international players. A study on firm-specific factors impacting financial performance can shed light on the industry's competitiveness. By identifying the factors that contribute to success or failure, firms can make informed decisions regarding pricing, production processes, supply chain management, and innovation, ultimately enhancing their competitiveness in the domestic and global markets.

1.7.2 Significance to Investors

Investors, both local and foreign, rely on accurate and up-to-date information to make informed investment decisions. Understanding the firm-specific factors that affect the financial performance of food and beverages manufacturing firms in Kenya can help investors assess the industry's potential for profitability, growth prospects, and risk levels. This knowledge can guide investment allocation and resource allocation decisions, contributing to economic growth and development.

1.7.3 Significance to Government

Governments and regulatory bodies play a crucial role in shaping the business environment and supporting industry growth. A comprehensive study on firm-specific factors can provide policymakers with valuable insights into the challenges and opportunities faced by the food and beverages manufacturing sector. This information can help formulate effective policies, regulations, and incentives that encourage investment, enhance competitiveness, and foster sustainable growth within the sector.

1.7.4 Significance to Policymakers

The findings of the study would have practical implications for managers, policymakers, and industry practitioners. By identifying the firm-specific factors that affect financial performance, the study would enable firms to make informed decisions and implement strategies that can enhance their profitability and sustainability. Policymakers can also utilize these findings to design effective policies that support the growth and competitiveness of the food and beverages manufacturing sector.

In summary, a study on firm-specific factors affecting the financial performance of food and beverages manufacturing firms in Kenya has significant implications for economic development, job creation, competitiveness, investment decisions, policy formulation, and practical implications for academicians and business leaders. It provides valuable insights to various stakeholders, enabling them to make informed decisions and foster the growth of the sector while ensuring its long-term sustainability.



CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section of the study will examine what other scholars and past studies have found out on the factors affecting the financial performance of non-financial institutions. It lays out the theoretical review as well as empirical literature studies that have been done relative to the objectives of this study. Finally, it points out gaps in research that this study aims to address and gives a justification for the relevance this study.

2.2 Theoretical Review

The following theories have provided the basis upon which this research was conducted, agency theory, market power theory and efficient structure theory. These theories have provided a theoretical basis upon which conceptualization of firm-specific factors that determine the financial performance of food and beverages companies.

2.2.1 Decision Theory

Decision theory is a branch of mathematics and economics that provides a framework for analyzing and making optimal decisions under conditions of uncertainty. It seeks to understand how individuals or organizations should make choices when faced with multiple options and uncertain outcomes. The origins of decision theory can be traced back to the works of early pioneers such as Daniel Bernoulli, John von Neumann, and Oskar Morgenstern. One influential publication in decision theory is Daniel Bernoulli's "Exposition of a New Theory on the Measurement of Risk" (1738). In this paper, Bernoulli introduced the concept of expected utility, which suggests that decision-makers evaluate options based on the expected value and utility they associate with each possible outcome. This paper laid the foundation for subsequent research in decision theory.

Another seminal work is John von Neumann and Oskar Morgenstern's book "Theory of Games and Economic Behavior" (1944). This book introduced the theory of rational behavior in games and laid the groundwork for decision theory's application in economics and social sciences. In the context of the research on food and beverage manufacturers, decision theory can provide

valuable insights into their decision-making processes. For example, food and beverage manufacturers often face uncertainties related to market demand, input costs, regulatory changes, and competitive dynamics. Decision theory can help these firms analyze and optimize their choices in various aspects, including production planning, pricing strategies, investment decisions, and supply chain management.

Research papers have applied decision theory to various aspects of the food and beverage manufacturing industry. For instance, a study by Smith and Palma (2015) used decision theory to analyze the optimal pricing strategy for a food manufacturer in a competitive market. By considering demand uncertainties and competitor behavior, the study provided recommendations for setting prices that maximize the manufacturer's profits. Another research paper by Johnson et al. (2018) applied decision theory to assess the investment decisions of food and beverage manufacturers in adopting sustainable practices. The study utilized decision analysis techniques to evaluate the risks and rewards associated with sustainability investments, aiding companies in making informed decisions that align with their long-term sustainability goals.

The application of decision theory in the food and beverage manufacturing industry is not limited to these examples. It can be employed in various decision-making contexts, including new product development, capacity expansion, supplier selection, and risk management. By utilizing decision theory frameworks, companies in this industry can make more rational and informed decisions that consider uncertainties, trade-offs, and their risk preferences. The decision theory, originating from the works of Bernoulli, von Neumann, and Morgenstern, provides a robust framework for decision-making under uncertainty. This theory has been applied in various research papers within the food and beverage manufacturing industry, enabling companies to make optimal choices in areas such as pricing, sustainability investments, and other critical decision-making contexts. By incorporating decision theory principles, firms can enhance their decision-making processes, improve their performance, and navigate uncertainties effectively.

2.2.2 General Equilibrium Theory

General Equilibrium Theory is a fundamental concept in economics that seeks to analyze the interactions and interdependencies of various economic agents and markets within an economy.

It aims to understand how supply and demand across multiple markets determine the equilibrium prices and quantities of goods and services. The origins of General Equilibrium Theory can be traced back to the pioneering work of Léon Walras, an economist of the late 19th century. Walras developed the theory as a framework to explain how markets reach a state of equilibrium, where supply equals demand in all markets simultaneously. His work laid the foundation for modern General Equilibrium Theory.

Numerous research papers have utilized General Equilibrium Theory to analyze various aspects of the food and beverage manufacturing industry. One such study is "General Equilibrium Analysis of the Food Processing Sector: An Application to Canada" by Hailu and Veeman (2001). The authors employed a computable general equilibrium (CGE) model to examine the economic impacts of changes in food processing industries on the Canadian economy. The study provided insights into how changes in food processing activities affect prices, production, employment, and trade patterns in the broader economy. Another relevant research paper is "A General Equilibrium Analysis of the Economic Impacts of Food Safety Regulations" by Blandford et al. (2010). The authors used a CGE model to evaluate the economic consequences of food safety regulations on the U.S. food industry. The study investigated the effects of stricter regulations on prices, production, trade, and welfare in the food sector. Furthermore, General Equilibrium Theory can be applied to research in the food and beverage manufacturing industry to analyze the effects of policy interventions, technological advancements, or changes in market conditions. By considering the interactions between different sectors, such as agriculture, manufacturing, and retail, researchers can gain a holistic understanding of the implications of various factors on the industry's equilibrium outcomes.

In conclusion, General Equilibrium Theory provides a powerful framework for analyzing the complex interactions between markets and economic agents. Its applications to the food and beverage manufacturing industry have helped researchers examine the effects of policy changes and external shocks on the industry's equilibrium outcomes. By incorporating the principles of General Equilibrium Theory, researchers can gain valuable insights into the functioning and dynamics of the food and beverage manufacturing sector.

2.2.3 Resource Based View

The origin of resource-based view can be traced back to earlier research of Seiznick (1957), Penrose (1959) among other researchers. The emphasis on this school of thought was on the importance of resources and its implication for the firm performance. This theory simply emphasizes the idea that an organization must be seen as a bundle of resources and capabilities to create value and therefore gain competitive advantage (Barney, 1991). The resource-based view further posits that firms can achieve overall competitiveness and performance if they possess tangible or intangible resources that are valuable, rare, inimitable and non-substitutable.

These four characteristics of resources describe what Barley (2007) considers strategic assets that, if properly mobilized build and sustain a firm's competitive advantage and improve its performance. According to Barney (1991) enterprises in the same sector can be heterogeneous in respect to their own resources and as resources are not perfectly transferable among enterprises, the heterogeneity and the consequent competitive advantage achieved could be durable over time. However, resources and capabilities are not valuable on their own and are essentially unproductive in isolation Newbert, (2008). As such, Newbert(2008) contends that the key to attaining a competitive advantage is by exploitation of a valuable resource-capability combination. This view is further supported by Bitar and Hafsi (2007) who opine that resources and capabilities are sources of competitive advantage, but they do not necessarily contribute to competitive advantage.

However, despite the increased literature devoted to use of RBV. The theory has its own critics. According to Hedman and Kalling (2003) this theory is criticized for neglecting the obstacles to dynamics and managements. Chan et al. (2004) similarly criticizes the theory for its implicit assumption of static equilibrium yet competitive advantages stem from developing current capabilities that are highly effective in responding to the organizational environment. For firms to attain competitive advantage in this competitive environment, they need to provide value to customers. This value can be derived from either cost advantage, service or differentiated products. Resource-based theory therefore, focuses on the relationship between a firm's internal resource stability and the ability to stay competitive through its strategy formulation. Resource-based view theory (RBV) has also been extended by Grant (1991) to encompass competitive strategy.

According to Grant (1991) the Resource-based View Theory links competitive strategies and capabilities to value creation. He posits that not only do capabilities need to be considered as the base to develop competitive strategy, but they also need to be renewed and maintained by strategist. Hence RBV is important to understand value may stem from strategic alignment of resources and competitive strategies. In developing their competitive strategies, the firms in the food and beverage industry in Kenya may pay attention to the resources existing within the firm so as to be able to create value for its customers. The theory highlights the fact that the bigger a firm is the higher the monitoring and agency costs will be due to the asymmetrical information. Companies should seek to minimize these situations through solid corporate policy. On the other hand, the theory suggests that a firm with variety and differentiated products and a large market share can outclass competition and realize unusual profits. Studies have shown that it is much easier for older (age) firms to achieve product differentiation owing to their greater financial strengths (liquidity) as compared to smaller and younger firms (Kim et al., 1998). And finally, the Efficient Structure Theory advocates for better management for the profitability of firms. As seen earlier, one of the goals of every financial manager is to increase the profitability of the firm (Tariq Bhutta & Hasan, 2013). In doing so, the manager endeavors to attract both equity and debt (leverage) instruments investments to the firm for the guarantee of maximizing the returns on them. An effective manager is then able lead the firm to higher profits and that better performance then leads to rising market share and concentration over time (Adjaoud & Hermassi, 2017).

2.3 Empirical Review

There are not many studies that have been carried out on the firm-specific factors affecting financial performance of non-financial institutions. On the other hand, several studies have been conducted on factors that influence the financial performance of other financial institutions, notably, banks.

2.3.1 Firm Liquidity and Financial Performance

In a study conducted by Saleem & Rehman (2011) using multiple regression analysis on the impact of liquidity on the profitability of oil and gas companies in Pakistan, the authors found

out that; current ratio had no substantial impact nor relationship on ROA. Mousavi & Jari (2012) using panel data, investigated 56 listed companies in the Tehran stock exchange of Iran on a correlation and regression model. The study was aimed at identifying the relationship between a firm's performance and its working capital management. The findings showed a strong positive correlation between a firm's working capital management and its performance. Similarly, a study conducted by (Azam, Muhammad, 2011) examined the effect of working capital management (WCM) of non-financial institutions of Karachi stock exchange on their financial performance. Panel data of 21 listed firms over a 10-year period (2001-2010) found out that there was a positive relationship between WCM and the financial performance of these firms. The study recommended that the management personnel of these firms can increase shareholder value and ROA by reducing their inventory.

Adjaoud & Hermassi (2017) undertook a study on the impact of CEO duality, board size and corporate liquidity on the profitability of service firms in Canada. Over a period of 3 years (2007-2010) they studied 75 firms listed on the Toronto stock exchange. The findings showed that the three variables positively impacted the profitability of these firms. In a study by Terra (2008) it was found a significant positive correlation between liquidity and profitability in the medium term, thus contradicting main literatures on the impact of liquidity on profitability.

A study by Chen and Liao (2018) examined the relationship between liquidity and firm performance in the context of Chinese small and medium-sized enterprises (SMEs). The study found that firms with higher levels of liquidity tended to have better financial performance, as measured by return on assets (ROA) and return on equity (ROE). Additionally, the study found that liquidity was particularly important for SMEs, as they may have more limited access to external financing and may be more vulnerable to financial shocks.

Another study by Kim and Suh (2016) looked at the impact of liquidity on the financial performance of Korean firms. The study found that higher levels of liquidity were associated with better financial performance, as measured by Tobin's Q and ROA. The study also found that liquidity had a greater impact on the performance of small firms, as they may have more limited access to external financing and may be more vulnerable to liquidity constraints.

A third study by Oke and Munene (2013) examined the impact of liquidity on the financial performance of firms in the Nigerian food and beverage industry. The study found that firms with higher levels of liquidity tended to have better financial performance, as measured by ROA

and ROE. Additionally, the study found that liquidity was particularly important for firms operating in a volatile economic environment, as it allowed them to weather economic shocks and take advantage of growth opportunities. The study also found that larger firms tended to have higher levels of liquidity, which provided them with a competitive advantage over smaller firms.

2.3.2 Firm Size and Financial Performance

Alzharani et al. (2012) investigated the relationship between the size of the firm and its financial performance in the kingdom of Saudi Arabia. Data of 392 listed companies on firm size and ROA for a 4-year period (2007-2010) was analyzed on a regression model. The findings showed there was an indirect relationship between the size of the firm and ROA. The conclusions from this study were that smaller firms were more innovative, creative and had tendency to change often. These findings were supported by Banz (1981) who established that as firms grew, it became increasingly difficult for them to sustain impressive performance. Almajali et al. (2012) investigated the financial performance of insurance companies listed on the Amman stock exchange in Jordan between 2002 and 2007. The conclusions from the study have shown that size, leverage, and liquidity have a significant impact on the financial performance of the insurance firms in Jordan.

A study by Demirgüç-Kunt and Maksimovic (1996) investigated the relationship between firm size and financial performance in the context of small and medium-sized enterprises (SMEs) in developing countries. The study found that firm size was positively correlated with financial performance, as measured by profitability and growth. Another study by Berger and Udell (1998) examined the relationship between firm size and financial performance in the context of U.S. small businesses. The study found that smaller firms tended to have higher levels of financial risk and more limited access to financing, which could negatively impact their financial performance. However, the study also found that smaller firms were more nimble and able to respond quickly to changes in the market, which could give them a competitive advantage. Finally, a study by Chen, Cheng, and Hsu (2018) investigated the impact of firm size on the financial performance of Taiwanese firms. The study found that larger firms tended to have better financial performance, as measured by return on assets (ROA) and return on equity (ROE).

However, the study also found that there was a nonlinear relationship between firm size and financial performance, with the positive effect of size on performance diminishing beyond a certain threshold.

2.3.3 Firm Age and Financial Performance

Majumdar (1997) examined the effect of the age of a firm on its performance among Indian firms. The study found an inverse correlation between profitability (ROA) and age among 1020 Indian firms between 1992 and 1997. The study concluded that older firms were much more productive but much less profitable whereas younger firms were less productive but much more profitable. Coad et al. (2013) studied whether a firm's performance increases with age among Spanish manufacturing firms. The study researched 62,259 firms over a 9-year period using multiple regression analysis. The findings of this report showed a negative relationship between age of a firm and its profitability (ROA). Noordin & Mohtar (2014) conducted a study among SMEs to determine whether their ages matter for them to perform. They measured the firm's value production, innovative capacity, and intellectual capital; the findings showed that age improved the performance of firms. Studies on age of firm in relation to profitability have been inconsistent in showing the same correlation results.

A study by Jiménez, Saurina, and Peydró (2006) investigated the relationship between firm age and financial performance in the context of Spanish firms. The study found that older firms tended to have better financial performance, as measured by profitability and solvency, due to their greater experience and reputation. Another study by Ho and Williams (2003) examined the relationship between firm age and financial performance in the context of Australian small businesses. The study found that younger firms tended to have higher levels of financial risk and more limited access to financing, which could negatively impact their financial performance. However, the study also found that younger firms tended to be more innovative and have a higher growth potential, which could give them a competitive advantage. Finally, a study by Nguyen and Nguyen (2019) investigated the impact of firm age on the financial performance of Vietnamese firms. The study found that younger firms tended to have lower financial performance, as measured by return on assets (ROA) and return on equity (ROE), due to their limited resources and experience. However, the study also found that there was a positive

nonlinear relationship between firm age and financial performance, with the positive effect of age on performance increasing beyond a certain threshold.

2.3.4 Firm Leverage and Financial Performance.

Numerous empirical studies have been conducted in attempts to explain the impact of leverage on financial performance. In a study conducted by Tan (2012) using multiple regression analysis to examine firm performances and level of financial distress on firms from the financial crisis of Asia. The findings from the study showed a negative relationship between ROA and leverage. Explaining that a firm with lower leverage ratios outclasses those with higher leverages in times of a financial crisis. Similarly Pouraghajan et al. (2012) examined the capital structure of 28 listed firms on the Tehran stock exchange between 2005-2009. The study showed a negative relation between ROA and financial performance of these firms.

Shah & Ilyas (2014) empirically studied the determinants of leverage on automobile companies listed on the Karachi stock exchange of Pakistan. The study employed panel data of 132 companies on an OLS regression between 2005 and 2010. The findings showed that leverage is negatively correlated with profitability but insignificantly. Therefore, the study recommended the use of internal sources of financing to meet long term financial obligations considering the size and growth factor of these companies.

In contrast, Luper & Isaac (2012) used three measures to check the impact of leverage on the profitability of firms; Total Debt Equity (TDE), Long Term Debt to Total Assets (LTDTA) and Short Term Debt to Total Assets (STDTA). The findings showed that STDTA and LTDTA have a negative relationship with ROA whereas TDE has a positive relationship to ROA. Overall, there is a negative-insignificant relationship between capital structure and profitability. Hence, capital structure is not a major determinant of the financial performance of a firm.

On the other hand, (Khatab et al., 2011) examined the effect of corporate governance of a firm on its profitability using leverage as the control variable. They found a positive correlation between ROA and leverage contrary to the previous studies. In line with these findings, Weill (2005) examined the relationship between corporate performance and leverage among European countries. Using data from 16,700 manufacturing firms across seven countries; leverage was established to have a positive and significant impact on profitability for five of seven countries. In the other two, there was a positive but low significance relationship. The study further

explains that profitability alone is not a sufficient variable for consideration of performance to explain leverage since profitability is the source of internal financing.

Consequently, there is a negative relationship between profitability and leverage as higher profitability reduces the need for leverage. The study concludes that institutional factors influence the relationship between performance and leverage and as such the outcomes vary from country to country.

2.4 Summary of Literature and Research Gaps

Literature review contributed to the familiarization of this area of study through analysis of findings of past studies. It also highlighted shortcomings of the studies conducted and what is to be studied. Even though significant progress had been made, there are research questions and gaps that need to be addressed. For example, there were conflicting outcomes and inconsistencies among the reviewed and analyzed empirical studies. For instance, in a study by Terra (2008), it was found a significant positive correlation between liquidity and profitability in the medium term, thus contradicting main literatures on the impact of liquidity on profitability.

Similarly, when Khatab et al. (2011) examined the effect of corporate governance of a firm on its profitability using leverage as the control variable, they found a positive correlation between ROA and leverage contrary to the previous studies that had found a negative correlation.

These contradictions could be attributed to a variety of factors including, different data sets, varying jurisdictions, time, and data analysis techniques. As most of the studies reviewed on the empirical analysis were conducted on developed countries, there is a need to examine what internal variables affect the financial performance of food and beverages manufacturing companies in Kenya.

Observably, majority of the studies herein have focused on financial institutions; consequently, there exists a contextual gap to study internal variables that affect the performance of non-financial institutions like food and beverages firms in Kenya. Of the existing research conducted on non-finance institutions, most of them exist outside of Kenya hence evoking the need to conduct research within Kenya to highlight the specific factors affecting firms in this industry but not limited to key staff turnover and corporate governance. One of the studies reviewed highlighted the inconsistencies among scholars on what firm-specific factors influenced the

financial performance of food and beverages firms. This advocacy signifies that this is an area that could benefit from further study and hence the drive of this study.

2.5 Conceptual Framework

According to Grunewald et al. (2015), a conceptual framework is a tool to organize and simplify the researcher's ideas in a simple yet meaningful way. The dependent variable for this study will be the level of financial performance of food and beverages firms as measured by ROA. This is because ROA is an aggregate measure of profitability of a firm and is determined by a variety of factors as highlighted in the studies such as Pathirawasam (2011), Dada & Ghazali (2016) and Loderer & Waelchli (2011). The ROA will be the test variable for the study since the aim of the study is to specifically establish the contribution of internal variables in different firms on their financial performance.

2.5.1: The Expected Interrelationship between the Dependent and Independent Variables from Studied Literature.

2.5.1.1: Firm Size and ROA

The size of a firm plays an important role in determining the kind of relationship the firm enjoys within and outside its operating environment. The larger a firm the greater the influence it has on its stakeholders. Again, the growing influence of conglomerates and multinational corporations in today's global economy and in local economies where they operate are indicative of the role firm size plays within the corporate environment (Abel, 2006).

2.5.1.2: Firm Age and ROA

The prior belief would seem to be that age enhances performance (Claudio and Urs., 2009), since firms learn about their abilities and how to do things better as they get older. Furthermore, for Muhammad and Shahimi (2013), firm age represents the experience and knowledge accumulated since its establishment. Thus, it is considered to have influence on firm performance. Hence, the age of a firm is considered a factor that improves firm's performance. But contrary to this view, Muhammad and Shahimi (2013), Claudio and Urs (2009) believe that older firms are not flexible enough to make rapid adjustment, reduce barriers to innovation and make profit because their organizational rigidities limit their growth by inhibiting change as they become harder to change over time. Consequently, the firms deteriorate as they grow older.

2.5.1.3: Firm Leverage and ROA

Leverage is that part of capital structure used to finance the activities of firm, most times referred to as debt. According to Champion (1999), the use of leverage is one way to improve the performance of the firm. Aliu (2010) defines leverage as the sensitivity of the value of equity ownership with respect to changes to the underlying firm value. That is, firm's mix of its financial liabilities. Sumit (1997) refers to leverage as debt equity and reports that the greater the amount of debt, the more stringent is the monitoring of managers and therefore firms' performance will be superior.

2.5.1.4: Firm Liquidity and ROA

Liquidity is one of the most important goals of working capital management and central task of cash management (Sanna & Sandra, 2009). Therefore, for a firm to survive and make profit, it must remain liquid as failure to meet its obligation in due time results in bad credit rating by the short-term creditors, reduction in the value of growth in the market and may lead to liquidation. A good firm financial management policy seeks to maintain adequate liquidity in order to meet its short-term maturing obligations without affecting profitability (Ben, Olubukunola & Uwuigbe, 2013). Figure 1.1 illustrates the interrelationships among the identified dependent and independent variables.



Figure 1.1: Conceptual Framework

A conceptual framework including macroeconomic factors, control variables, and independent and dependent variables was used to explore the relationships between these factors and the financial performance of food and beverage firms. The independent variables included firm liquidity, size, age, and leverage, while the dependent variable was return on assets.

In addition to these independent and dependent variables, control variables were included to ensure that the relationship between the independent variables and the dependent variable was not influenced by other factors. To develop the conceptual framework with these variables, the independent variables of liquidity, size, age, and leverage were measured using financial data, such as the firm's current ratio, market capitalization, years in business, and debt-to-equity ratio, respectively. The dependent variable of return on assets was calculated by dividing a firm's net income by its total assets.



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section illustrates the research methodology and design employed for this study. It adequately discusses the target population and size of samples of the study, methods of data collection, sources of data, techniques of data analysis and their justification. In addition to communicating the validity and reliability, this section outlines the ethical considerations that will be employed while carrying out the study.

3.2 Research Philosophy

Research philosophy is a system of beliefs and assumptions about the development of knowledge **Error! Reference source not found.** It has been noted by Rubin & Rubin (2005) that research philosophies carry different meanings which have a bearing on the research itself. This research took a positivism research philosophy. Bringing this definition regarding the social realm, ontology is defined as a concept concerned with the existence of, and relationship between different aspects of society, such as social actors, cultural norms and social structures **Error! Reference source not found.** Ontology is thereafter classified as either taking a subjective or objective tangent. Objectivism (otherwise known as positivism) states that social entities exist external to social actors concerned with their existence **Error! Reference source not found.** This is to say that the fact-finding exercise should exercise independence and should record reliable results observable in the real world. Positivism emphasizes the objective observation and measurement of phenomena, aiming to produce generalizable knowledge. In the context of food and beverage institutions, adopting a positivist approach allows researchers to collect empirical data, analyze it using standardized methods, and draw conclusions that can be applied to a wider population of similar institutions. This promotes the reliability and replicability of research findings. Positivism also aligns well with quantitative research methods, which involve the collection and analysis of numerical data. Food and beverage institutions often generate vast amounts of quantitative data in the form of financial statements, sales figures, production volumes, and customer surveys. By employing a positivist research philosophy, researchers can effectively analyze this data using statistical techniques to identify patterns, trends, and relationships, contributing to a deeper understanding of the sector.

3.3 Research Design

This study is a descriptive correlational research design, one that aims to study to what extent internal factors affect the financial performance of food and beverages firms in Kenya. It adopted the use of correlation to establish what firm-specific factors influence the financial performance of food and beverages firms in Kenya. This methodology focuses more on the “what” of the research subject rather than the “why” of the research subject without influencing it in any way. This type of design is useful to determine the cause and effect of observable phenomena, and when a sufficiently large sample is employed, the findings of the research can be generalized as representative of the population under study (Mwangi et al., 2013). This study therefore employed the use of historical data that is independent of the researcher and as such fitting into the objectivism stance of positivism.

3.4 Population and Sampling Design

3.4.1 Population

Cooper & Schindler, (2003) define population as the subject that is measured therefore it is a unit of observation. An element on the other hand is the subject upon which the measurement is being taken. A sample is the subset of individuals from a population that is used to infer the characteristics of the entire population. The population of interest in this study was the food and beverages firms that are formally registered and based in Kenya. The target population included the 289 (Kenya Association of Manufacturers, 2022) food and beverages manufacturing firms in

3.4.2 Sampling Design

Sampling Frame

A sampling frame is a set of source materials from which the sample is drawn. The definition also encompasses the use of sampling frames, which is, to provide a framework for selecting the members of the target population that are to be interrogated in each survey (Turner, 2008). For this study, the sampling frame in Appendix 2 of the total list of Food & Beverages manufacturing firms in Kenya was acquired from Kenya Association of Manufacturers Report of 2018.

Sampling Technique

Kombo and Tromp (2009) and Kothari (2004) define a sample as a collection of units chosen from the universe to represent it. Lavrakas (2008) describes a sample in a survey research context as a subset of elements drawn from a larger population. Polit and Beck (2003), strongly recommend that it is much more practical and less expensive to collect data from a sample than from an entire population. This study employed simple random sampling. Simple random sampling is the most basic and common type of sampling method used in quantitative social science research and in scientific research generally; the main benefit of the simple random sample is that each member of the population has an equal chance of being chosen for the study (DePersio, 2015). For this study, the sample frame was obtained from the list of the 187 Food and Beverages Manufacturing firms on the Kenya Association of Manufacturers Report of 2018. The firms were listed in alphabetical order and numbered 1-187 in ascending order. With the calculated sample size as 75 firms, using the random number function in Microsoft Excel (RAND), the researcher generated 75 random numbers for which all corresponding firms were taken to achieve the sample size requirement. To ensure validity of findings, and elimination of bias, the researcher ensured every individual selected participates in the study.

Sample Size

The smaller size of the larger population is referred to as a sample size (Cooper and Schindler, 2008). The importance of a sample size is that it is very economical for the researcher when they are doing their data collection. When the researcher limits study the population, it can be uneconomical because of producing results that are an inadequate presentation of the entire population size whereas an over-sized population size can be very expensive (Cooper and Schindler, 2008).

At a confidence level of 90%, the margin of error is 10%. To obtain a sample size that has an adequate size relative to the goals of the study, the researcher adopted Yamane's formula as follows:

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

Where **n** is the sample size, **N** is the population size, and **e** is the margin of error (Yamane, 1967).

$$n = 289 / (1 + 289(0.1)^2) = 75.$$

A sample size of 75 firms was used to analyze and meet the specific objectives of this study.

Table 3.1: Food and Beverages Manufacturing Firms

Category	Target Population	Sample Size
Food and Beverages Manufacturing Firms	289	75
Total	289	75

Source: Author (2023)

3.5 Data Collection Methods

To determine the factors that influence the financial performance of foods and beverages manufacturing firms in Kenya, this study employed the use of secondary data, using financial and statistical formulas as methods to arrive at figures for further statistical computation and analysis. Historical data of return on assets, firm size, firm age, firm leverage, and liquidity will be sourced from published annual audited reports of firms that were sampled for this study for a 10-year period from 2008 – 2018. Other secondary data and financial reports were extracted from fact books, websites, and the Nairobi Stock Exchange.

The justification for the use of secondary data to generate panel data is based on the reason that this study is quantitative research one, which attempts to establish an after-math effect, as such data that is historical in nature was analyzed (Bala et al., 2005).

3.6 Variable Definition and Measurement

3.6.1 Dependent Variable

Dependent variable used for this research is financial performance proxy by return on asset (ROA) measured as earnings before interest and tax scaled by total asset (Yana 2010; Bala et al 2005).

3.6.2 Independent Variables

The independent variables for this study are firm size, firm age and leverage and liquidity. Firm size measured as natural log of total assets, firm age is the difference between the current year and the year of incorporation. While firm leverage is the total debt to total assets, intangibles measured as the total sum incurred to acquire such assets and liquidity is measured as the total current assets divided by the sum of current liabilities.

Table 3.2: Operationalization of Variables.

	VARIABLE	MEASUREMENT	SOURCES
1	Return on assets	Earnings before interest and tax scaled by total assets	Published annual reports of firms
2	Firm size	Natural log of total assets	Published annual reports of firms
3	Firm age	Number of years since establishment	Published annual reports of firms
4	Leverage	Total debt/total assets	Published annual reports of firms
5	Liquidity	Current asset/ current liability	Published annual reports of firms

Source: Author (2023)

3.7 Data Analysis

The study employed panel data regression as the technique of analysis, the independent variables (firm size, firm age, leverage, liquidity) were regressed against one independent variable (ROA). Regression is widely used to determine the association between independent and dependent variables. In order to make a choice between fixed and random effects model, the study employs the Hausman specification test. This test is necessary given that there is a trade-off between fixed effect and random effect model. Hausman test is used to differentiate between the fixed and random effect models in a panel data of which fixed effect is preferred for the alternate

hypothesis while the random effect is preferred under the null hypothesis. The test evaluates the significance of an estimator versus an alternative estimator; and was used to test the linear regression model developed for the study. Additional robustness tests adopted in this research includes the test for multi-collinearity using the Variance Inflation Factor (VIF) and the collinearity, and normality tests for heteroskedasticity, to check for the fitness of model and reliability of findings.

This equation is hereby formulated to test the hypotheses in order to get the multiple regression results.

$$ROA_{it} = f(\beta_1 SIZE_{it}, \beta_2 LEV_{it}, \beta_3 AGE_{it}, \beta_4 LIQ_{it})$$

Where:

ROA_{it} (RETURN ON ASSET) = earnings before interest and tax by total assets of firm i at time t .

$SIZE_{it}$ (FIRM SIZE) = natural log of total assets of firm i at time t .

LEV_{it} (LEVERAGE) = total debt to total assets of firm i at time t .

AGE_{it} (AGE) = the difference between the current year and the year of incorporation of firm i at time t .

LIQ_{it} (LIQUIDITY) = current assets divided by current liabilities of firm i at time t .

e_{it} = The error term.

3.7.1 Justification of Methodology.

For the purpose of determining the factors that have an impact on the financial performance of foods and beverages firms in Kenya, the need for secondary data was necessitated by the fact that it was difficult to get first-hand information on the variables used. The model specification is justified the numbers of independent variables are regressed against the dependent variable. The study of Abdullah et al (2011) considered similar model specification, though firm age and liquidity were not considered at all when conducting their study on determinants of the financial performance of a firm.

3.7.2 Test of Significance

R-squared was used to determine the model explanatory power. The model further used Durbin Watson statistic to test for autocorrelation. P values were used to test significance of the coefficients at 5% significance level.

3.8 Research Quality

According to Mugenda (1999), validity is the meaningfulness and accuracy of data according to the research objectives whereas reliability is the degree to which the instruments of research yield consistent findings when repeatedly administered.

3.8.1 Validity

The study sourced was sourced from audited financial statements. This lends credence to the authenticity of the data. Audited financial statements adhere to standardized reporting formats, such as income statements, balance sheets, and cash flow statements. This consistency facilitates the validity of comparisons between different companies and enables the application of accepted financial analysis techniques. Finally, audited financial statements are subject to review by external parties, including auditors, regulators, and financial analysts. The external scrutiny and peer review process provide an additional layer of validation, ensuring that the financial statements are free from significant errors or intentional misrepresentation.

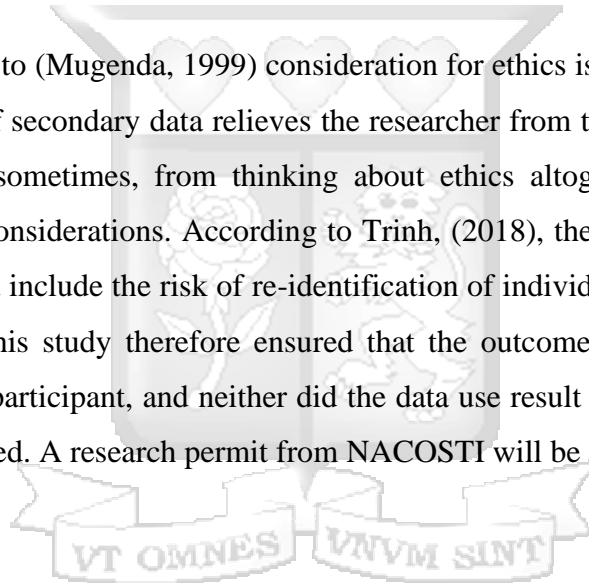
3.8.2 Reliability

As highlighted above, the select sample of companies were selected from the Kenya Association of Manufacturers 2018 members and the data to be used were drawn from their audited financial statements. According to Sekaran & Bougie (2003), the reliability of a measure is determined by testing for both stability and consistency. The reliability of the audited financial statements used in this research was crucial to ensure the trustworthiness and dependability of the data. The reliability of this data was centred on several factors including external auditing, regulatory compliance and corporate governance in these companies. The audited financial statements have undergone an external auditing process conducted by certified and independent auditors. This process involves a comprehensive examination of the company's financial records, ensuring accuracy, adherence to accounting standards, and detection of any potential misrepresentations

or errors. On regulatory compliance, the financial statements are prepared in accordance with recognized accounting standards and regulations, such as Generally Accepted Accounting Principles (GAAP) or International Financial Reporting Standards (IFRS). These standards provide guidelines for consistent and reliable financial reporting across companies. The reliability of the financial statements is further reinforced by the presence of effective corporate governance practices within the companies. Strong governance structures and internal controls help ensure the accuracy and reliability of financial reporting, reducing the likelihood of intentional or unintentional misstatements.

3.9 Ethical Considerations

For any study, according to (Mugenda, 1999) consideration for ethics is of great importance. It is often believed that use of secondary data relieves the researcher from the burden of applying for ethical approval – and sometimes, from thinking about ethics altogether. Research involves making a lot of ethical considerations. According to Trinh, (2018), the challenges envisioned in the use of secondary data include the risk of re-identification of individuals and the disclosure of sensitive information. This study therefore ensured that the outcomes of the analysis did not allow re-identifying the participant, and neither did the data use result in any damage or distress for the companies involved. A research permit from NACOSTI will be obtained.



CHAPTER FOUR: RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the results and findings of the study. The findings are based on the research objectives. The chapter discusses the general information, the relationship between each variable and the ROA of individual firm, the correlation and the regression analysis.

4.2 Company Profiles

The profile of these 75 companies in the food and beverage industry highlights a mix of medium to large-sized players, a combination of experienced and newer companies, reliance on external funding, and a history of navigating financial challenges during the startup phase. These characteristics showcase the diverse landscape and tenacity of the companies operating in this sector. More than 65% of the companies have a ROA of 3% to 5%, followed by 6% to 10% at 16% of represented companies. This is presented in the chart below.

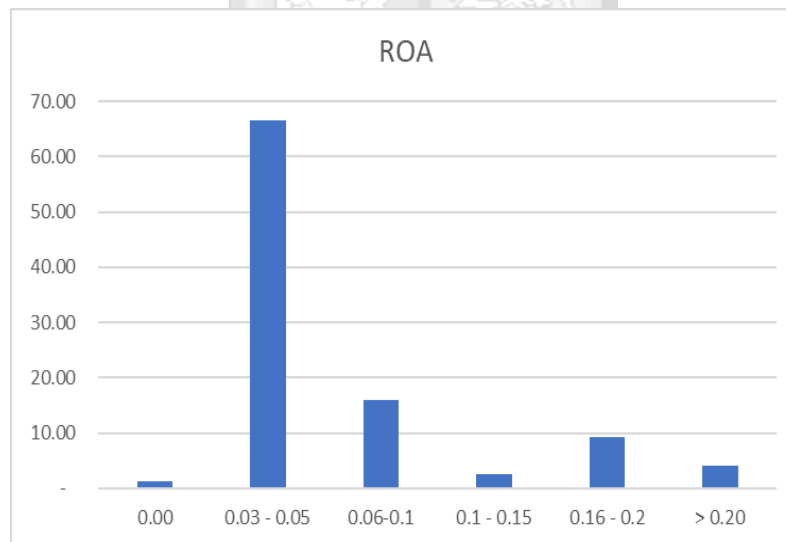


Figure 2: Company Profile: ROA

A high proportion of the companies represented fall within the middle indicating a significant presence of well-established players in the industry. These companies have likely built a strong market position, benefiting from economies of scale and robust distribution networks. Micro companies make up 16% of the companies, small and medium make up 25% and 24%

respectively, and finally, medium-large and large companies make up 16% and 19% of the companies. These are graphically represented below.

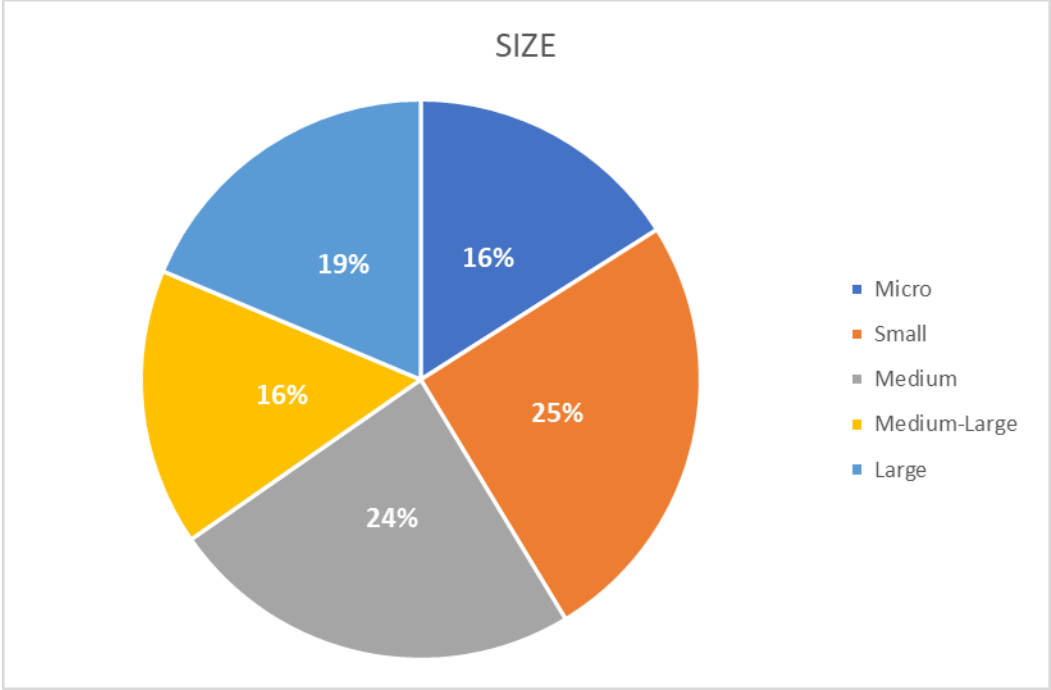


Figure 3: Company Profile: Firm Size

Age-wise, 61% of the companies have been in operation for less than five years, followed by companies between 6 and 10 years, indicating that while there is a mix of both experienced and relatively newer players in the industry, there are more younger players. The presence of long-standing companies suggests stability and a proven track record, while the newer entrants bring innovation and fresh perspectives to the market. As seen in the figure 4 below, the least represented group was of companies between 16 and 20 years old.

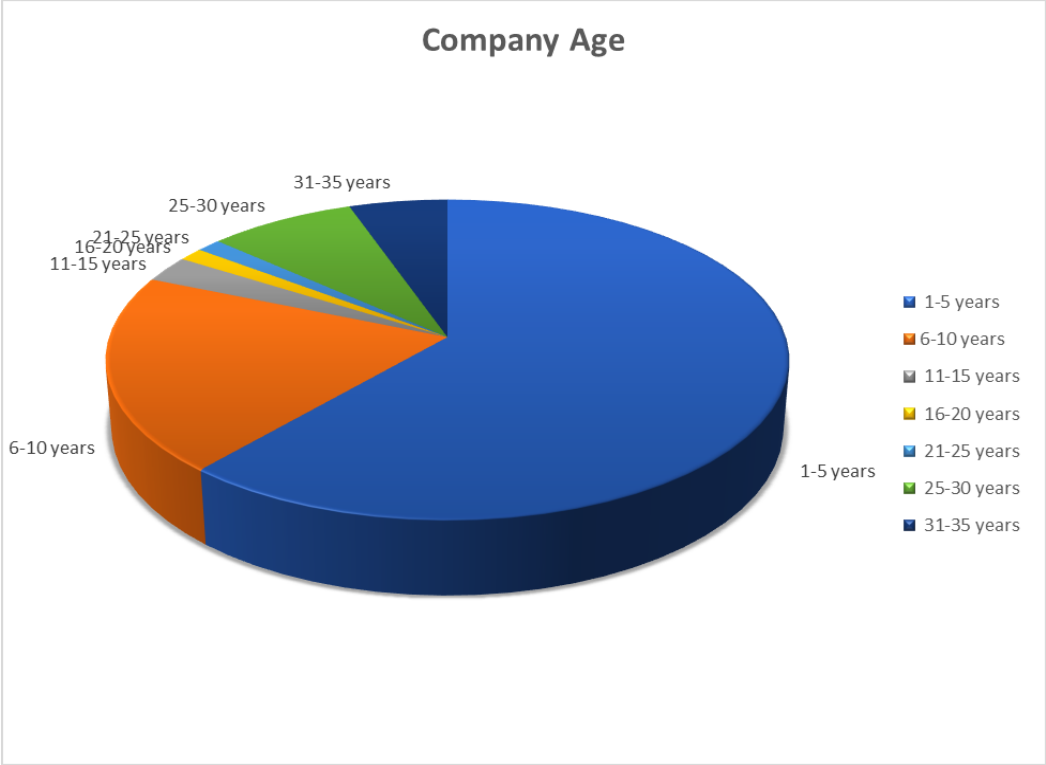


Figure 4: Company Profile: Firm Age

About 67% of companies had an average leverage of 1 or less. External funding may come from sources such as bank loans, private investments, or government support programs. The company leverage profiles are summarised in the charts below.

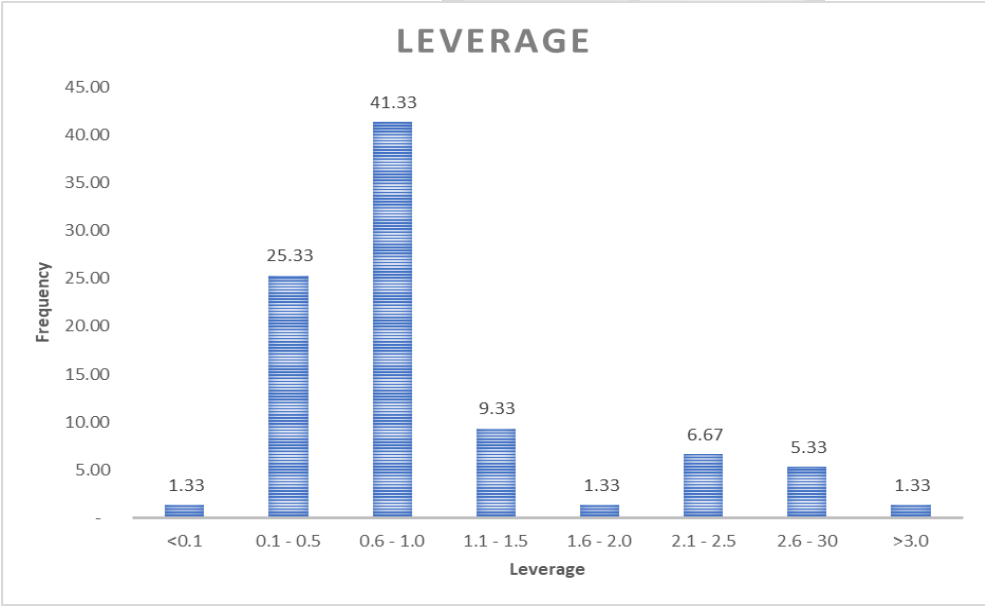


Figure 5: Company Profile: Leverage

Finally, for liquidity, a high population of the companies had a liquidity of between 10% and 40%. Liquidity of 70%-80% and more than 120% were the rarest at 1.33% each. The liquidity profiles are represented in the chart below;

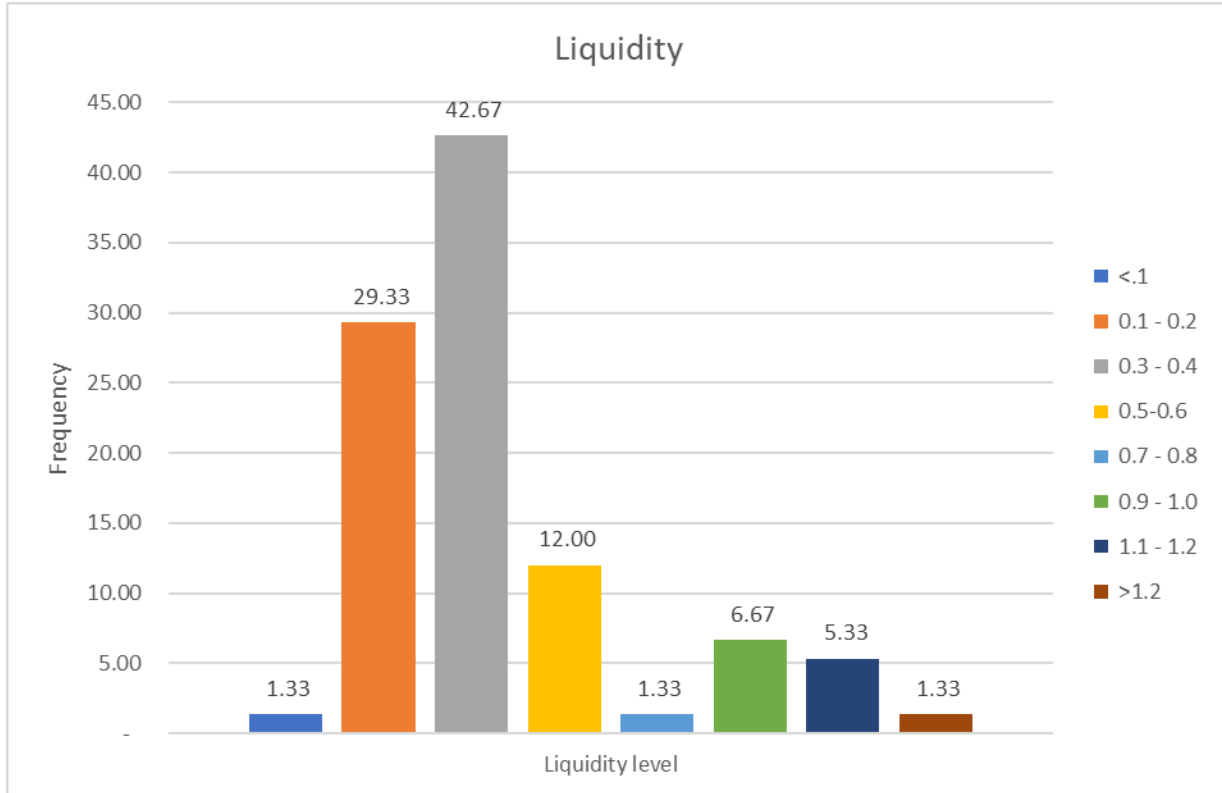


Figure 6: Company Profile: Liquidity

4.3 Descriptive Statistics

Financial performance was measured using the Return on Assets. The mean Returns on Assets was 6.4%5.14% over the period of research, with a low variation at standard deviation of 0.05621 Over the same period, mean leverage was 90.95%, and a standard deviation of 0.77879 indicating that to a very large extent, the firms under study employ debt as the primary source of operations financing with little variation. The mean liquidity was 39.53% and with a of 0.29405 . Mean firm age and size were 8 years and small (denoted by 2) respectively, with

variation of 9.46942 and 1.30278 respectively; signifying that the firms under study vary significantly in both their sizes and ages.

Table 4.1: Descriptive Statistics

Descriptive Statistics					
	N	Min	Max	Mean	Std. Deviation
ROA	750	-.001	.26	.0640	.05621
LEV	750	.06	3.74	.9095	.77879
LIQ	750	.03	1.26	.3953	.29405
AGE	750	.00	38.50	8.0727	9.46942
SIZE	750	1.00	5.00	2.0320	1.30278

Source: SPSS 23 Output

4.4 Inferential Analysis

Panel regression analysis was used to find out the relationship between the dependent and independent variables. The assumptions for regression analysis show whether the data is good to be used for regression analysis or not, resolved by statistical tests which included diagnostic test. The assumptions tested here are normality using the Skewness and kurtosis test, multicollinearity, autocorrelation using the Durbin-Watson test and homogeneity.

4.4.1 Skewness and Kurtosis

Skewness and Kurtosis was carried out to examine the regression assumption that the data was normally distributed. The values varied slightly from zero lying between -0.8 and +0.8 for skewness while for kurtosis they lied between -2 and +2 apart from the data on Return on Assets. This shows that the data on independent variable is normally distributed as shown in the Table 4.2

Table 4.2:Skewness and Kurtosis

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
ROA	750	.075	.008	1.295	.128
LEV	750	.079	.008	1.287	.128
LIQ	750	.060	.008	.574	.078

AGE	750	.027	.008	.635	.078
SIZE	750	.047	.008	-.663	.078

Source: Author (2023)

4.4.2 Multicollinearity Test

The Variance Inflation Factor (VIF) was used to test multicollinearity. Multicollinearity is a situation whereby there is a very high inter-association among the independent variables. When the VIF value is less than 10 it shows that multicollinearity is not significant. All the VIF values, with the exception of Firm Size, were above 10 meaning that multicollinearity was significant. Only Firm size had a VIF factor of 1.13 indicating that there is no multicollinearity between size and other variables. The results are shown in Table 4.3.

Table 4.3: Multicollinearity Test

Variable	VIF	1/VIF
Leverage	9.18	0.108932
Liquidity	47.38	0.021105
Age	17.36	0.057592
Size	1.13	0.886792
Mean VIF	28.76	

Source: Author (2023)

To manage multicollinearity in this scenario, several steps can be taken. One approach is to consider removing one or more highly correlated variables from the model. In this case, liquidity and age exhibit particularly high VIF values, suggesting a high degree of correlation between them. Removing one of these variables might help mitigate the issue of multicollinearity. The high level of multicollinearity for liquidity and age would have led to their removal from the regression model. However, after dropping liquidity, with the highest VIF, multicollinearity was managed as seen in table 4.31 below.

Table 4.4: Repeated Multicollinearity Test

Variable	VIF	1/VIF
Leverage	6.58	0.151975
Age	9.65	0.103627
Size	0.97	1.587301
Mean VIF	5.76	

Source: Author (2023)

4.4.3 Autocorrelation

The statistic below shows the Wooldridge test, the F-statistic, and the p-value for the regression analysis model. The test measures the degree of autocorrelation in the residuals of the regression model, with values equal to -0.5 indicating no autocorrelation. The statistic for the model is 21.222 and a probability of 0.000 > -0.5 indicating autocorrelation.

H0: no first-order autocorrelation

$$F(1, 74) = 21.222$$

$$\text{Prob} > F = 0.0000$$

Source: Author (2023)

4.4.4 Heteroskedasticity Test

The Breusch-Pagan test is a statistical test used to assess the presence of heteroskedasticity in the residuals of a regression model. From the results presented below, however, the chi has a value of 2.81 and a probability of 0.0412. This gives us prove that there is absence of heteroskedasticity in the study, since it is not significant at 5%. Thus, the null hypothesis that states that the residuals have no constant variance and zero mean is rejected.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of ROA

$$\text{chi2}(1) = 2.81$$

$$\text{Prob} > \text{chi2} = 0.0412$$

Author (2023)

4.4.5 Hausman Test

Hausman test was performed in order to make a choice between fixed and random effects model. The null hypothesis is that random effects is the appropriate model. The results of the Hausman test are presented in Table 4.5 below. Given the P-value of 0.6242 ($p > 0.05$) We fail to reject the null hypothesis and therefore the Random-Effects model is the most appropriate for this data set.

Table 4.5 Hausman Specification Test

	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fixed	random	Difference	S.E.
LEV	.0688404	.0689196	-.0000792	.0002454
AGE	.0002363	.0001552	.0000811	.0002025
SIZE	-.0001675	.0000913	-.0002588	.0001522

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\text{chi2}(4) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 2.61$$

$$\text{Prob}>\text{chi2} = 0.6242$$

Source: Author (2023)

4.5 Regression Analysis

The results of the random effects model are shown in Table 4.6 below.

Table 4.7: Random Effects Model Summary

ROA	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LEV	.0689196	.0010147	67.92	0.000	.0669309	.0709084
AGE	.0001552	.0000815	1.90	0.046	-4.58e-06	.000315
SIZE	.0000913	.000206	0.44	0.658	-.0003124	.000495
_cons	-.0013714	.000959	-1.43	0.153	-.003251	.0005082

R-sq: within = 0.9505

between = 0.9959

overall = 0.9937

Number of obs = 750

Number of groups = 75

Obs per group: min = 10

Wald chi2(4) = 30845.25

Prob > chi2 = 0.0000

Source: Author (2023)

The established model for the study was:

$$Y = -0.001374 + 0.06892X_1 + 0.0001552X_2$$

X_1 is Leverage, X_2 is Firm Age. All independent variables have a positive coefficient from the above linear regression model, with only leverage and age being the significant variable. The overall regression model coefficient of determination R-sq: = .9937, Wald chi2(4) = 30845.25, Prob > chi2 = 0.000 < .05 indicating there was a positive and significant relationship between the firm-specific factors and financial performance.

4.6 Discussion

4.6.1. Leverage and ROA

Based on these regression results, the implication is that Leverage plays a meaningful role in determining the Return on Assets for the analyzed data. Firms with higher levels of Leverage may experience higher Return on Assets, suggesting that leverage can be a key factor in influencing financial performance. However, it is important to interpret these results within the specific context of the analysis and consider other factors that may also impact ROA. Tan (2012) used multiple regression analysis to investigate Asian financial crisis corporate performance and financial distress. ROA and leverage were negatively correlated in the study. Explaining that firms with lower leverage levels do better in financial crises. In 2005–2009, Pouraghajan et al. (2012) investigated the capital structure of 28 Tehran stock exchange-listed enterprises. ROA negatively correlated with financial performance of these firms. Shah & Ilyas (2014) examined leverage in Karachi-listed vehicle businesses. The 2005–2010 OLS regression analysis used panel data from 132 firms. Leverage negatively associated with profitability but insignificantly. Our findings are in line with these studies.

4.6.2 Firm Age and ROA

The implication of this regression result is that firm age alone may not be a strong predictor or determinant of financial performance in the context of the analysis. Other variables or factors are

likely to have a more substantial influence on financial performance. It is important to consider additional factors that may contribute to financial performance and explore their relationships with the dependent variable. Majumdar (1997) evaluated Indian enterprises' performance by age. Profitability (ROA) inversely correlated with age in 1020 Indian enterprises between 1992 and 1997. The study found that younger enterprises were more profitable but less productive than older firms. Coad et al. (2013) examined whether Spanish manufacturing enterprises improve with age. Multiple regression analysis examined 62,259 enterprises over 9 years. This analysis found that business age negatively affects profitability (ROA). Noordin & Mohtar (2014) studied SMEs to see if age affects performance. Age boosted value production, innovative capacity, and intellectual capital. Studies on firm age have been inconsistent with different moderating variables yielding different results. Our study found a positive relationship meaning older firms perform better financially.

4.6.4 Firm size and ROA

Firm size does not play a significant role in determining financial performance. Other factors or variables are likely to have a more substantial influence on financial performance in this context. Therefore, firms should focus on identifying and leveraging other drivers of financial performance rather than solely relying on firm size. Alzharani et al. (2012) examined how firm size affects Saudi Arabian financial performance. A regression model assessed firm size and ROA data from 392 listed companies for 2007–2010. ROA was indirectly related to business size. This study found that smaller organizations were more inventive, creative, and change prone. Banz (1981) found that when firms increased, it got harder to perform well. However, both authors also mentioned that larger firms with more experience and information in their industries could outperform their younger counterparts. Almajali et al. (2012) examined Jordanian insurance companies' 2002–2007 financial performance on the Amman stock exchange. The study found that size, leverage, and liquidity affect Jordanian insurance firms' financial performance. Our findings are in line with these studies.

The model specifies that the expected value of ROA is a linear function of the four predictor variables. The intercept term -0.0013714 represents the expected value of ROA when all predictor variables are zero. Each of the regression coefficients indicates the expected change in ROA associated with a one-unit increase in the corresponding predictor variable, holding all

other predictor variables constant. The model can be used to make predictions about the expected value of ROA for a given set of values for the predictor variables. The goodness-of-fit of the model can be assessed using various measures such as R-squared, adjusted R-squared, and root mean squared error.

4.7 Summary of Findings

This study examined the effect of liquidity, firm size, firm age, and leverage on the financial performance of food and beverage manufacturing firms in Kenya. The researchers used a panel data and random effects linear regression model to predict the expected value of return on assets (ROA) based on these four predictor variables. The random effects model was supported by the Hausman score of 0.6242 supporting the null hypothesis that the random effects model is a better fit than the fixed effects model. The results showed that leverage and age had a positive and statistically significant relationship with financial performance, with a beta coefficient of 0.0689196, z-value of 67.92, and significance level of $.000 < .05$., and beta = 0.000155, z-value= 1.90 and significance level pf $.057 > 0.05$. The study also found that firm size had a positive but statistically insignificant relationship with financial performance, with a z-values of 0.44, and significance level of $.658 > .05$ respectively. The intercept term of -0.0013714 represented the expected value of ROA when all predictor variables were zero.



CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter was divided into three sections. An objective-based discussion of the research findings, conclusions, limitations, recommendations, and areas for further study were all highlighted in this chapter.

5.2 Conclusion

This study looked at the effects of liquidity, firm size, firm age, and leverage on the financial performance of food and beverage manufacturing firms in Kenya. The results showed that all four factors had a positive relationship with financial performance. Liquidity indicated a high multicollinearity score, which led it being dropped from the subsequent analysis. Based on the results of the study examining the impact of liquidity, firm size, firm age, and leverage on the financial performance of food and beverage manufacturing firms in Kenya, the research concludes that;

The study found a positive and statistically significant relationship between leverage and financial performance, indicating that higher levels of leverage are associated with improved financial performance. Similarly, firm age also showed a positive and statistically significant relationship with financial performance. Therefore, companies in the region should consider utilizing an optimal level of leverage and recognize the potential benefits of a longer operating history. However, it is crucial to carefully manage leverage levels to avoid excessive financial risk.

Although firm size was found to have a positive relationship with financial performance, the relationship was not statistically significant. This suggests that while firm size may have some influence on financial performance, companies should still prioritize exploring opportunities for growth and expansion.

5.3 Recommendations

From the findings of the study, the following recommendations can be made;

Companies should conduct a detailed analysis of their capital structure and financial obligations to determine the optimal level of leverage. This analysis should consider factors such as interest rates, debt service coverage ratios, and the company's ability to generate consistent cash flows. It is important to strike a balance between leveraging the business to enhance financial performance and maintaining a sustainable level of debt that can be comfortably serviced. Regular monitoring of debt levels and periodic reassessment of the capital structure will help companies adjust their leverage as market conditions and business needs evolve (Chen, 2020). The research findings suggest that leveraging can positively impact a company's financial performance. Therefore, a company may consider using debt financing to fund its operations and investments to achieve higher returns. However, it's essential to ensure that the company's level of leverage is sustainable and manageable.

Food and beverage manufacturing firms should leverage their long operating history to their advantage. Building on their industry experience, companies can develop strategies to strengthen their market position and enhance financial performance. This may involve capitalizing on brand recognition, customer loyalty, and established distribution networks (Chen, 2020). Additionally, companies should invest in continuous learning and development to stay ahead of industry trends and maintain a competitive edge. By adopting a long-term perspective, firms can position themselves as reliable and trusted players in the market, which can positively impact financial performance over time.

While leverage can boost financial performance, it also increases financial risks, such as default risk and interest rate risk. Therefore, a company should monitor and manage its financial risks to mitigate any adverse impacts on its financial performance. Companies should also actively pursue diversification and innovation strategies. Diversification can involve expanding product offerings, entering new markets or customer segments, or even exploring strategic partnerships or acquisitions. This approach helps companies reduce their reliance on a single product or market, thereby mitigating risks and creating new avenues for revenue generation (Ferry Christian Samosir, 2018). Simultaneously, fostering a culture of innovation and investing in research and development can lead to the introduction of new, high-value products or processes. By constantly evolving and adapting to changing customer preferences and market dynamics, firms can stay ahead of the competition and drive financial performance. Diversification of revenue streams can help reduce financial risks and enhance financial performance. Therefore, as

suggested by Doğan (2013), a company could consider diversifying its product offerings, customer base, and geographical locations to reduce reliance on a single source of revenue.

5.4 Limitations of Research

The study and conclusions of the study faced several limitations. The main emerging issues were availability of relevant and reliable data. Kenya's data infrastructure is not as robust as that of many developed countries, and obtaining accurate and up-to-date financial data for a large sample of firms was challenging. Ideally, there are many other companies that have not been documented through the Kenya Association of Manufacturers, and thus, unreachable. They may have limited the ability of the study to draw robust conclusions about the relationships between the independent variables. The study focused exclusively on listed foods and beverages firms, which limits the generalizability of its findings to other industries, countries, and timeframes. Additionally, its concentration on internal or traditional factors may not provide conclusive insights when considering external or uncontrollable factors that significantly impact firm performance. Furthermore, as the study solely examined the manufacturing sector, its findings cannot be extrapolated to other industries within the sector. Therefore, the study's applicability should be understood within the context of its specific scope and industry focus.

5.6 Recommendations for Further Research

Further research on the use of leverage and liquidity to improve financial performance could focus on the optimal balance between these two factors for different types of companies and industries. For example, companies in highly cyclical industries may benefit from lower leverage to weather economic downturns, while companies in more stable industries may be able to take on more leverage to pursue growth opportunities. Additionally, research could also examine the impact of various macroeconomic factors, such as interest rates and economic growth, on the relationship between leverage and financial performance. Another area that could be studied is the effect of the company's management on the use of leverage and liquidity, how their strategies and decision making can affect the overall financial performance. Furthermore, research could also investigate the use of alternative forms of financing, such as equity crowdfunding and peer-to-peer lending, and their potential impact on financial performance.

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APPENDICES

Appendix 1: Population of the study: Food and beverages firms in Kenya as of 2018.

1	Proto energy ltd	97	Global Tea & Commodities (K) Ltd	192	Nagaad Company limited
2	Rabai Power Ltd	98	Global Crown Beverage Ltd	193	Nairobi Bottlers Ltd
3	Repelectric (K) Ltd	99	Gold Crown Foods (EPZ) Ltd	194	Nairobi Flour Mills Ltd
4	Salger Kenya Ltd	100	Golden Africa Kenya Ltd	195	Nairobi Java House Ltd
5	Sunculture Kenya Ltd	101	Gonas Best Ltd	196	NesFood industries Ltd
6	Surge Energy Ltd	102	Grains Industries Ltd	197	Nestle Kenya Ltd
7	Synergy Gases (K) Ltd	103	Grainuts Craft limited	198	Njoro Canning Factory (Kenya) Ltd
8	Welrods Ltd	104	Green Forest Food Ltd	199	Norda Industries Ltd
9	Yocean Group Ltd	105	Halisi Maize Mills Ltd	200	Okerlo Nyangau Bakery
10	Acee Limited	106	Happy cow Ltd	201	Olunguruone Natural Water Ltd
11	Afripon (K) Limited	107	Healthy U Two Thousand Ltd	202	Olivado EPZ Ltd
12	Africa Coffee Roasters (EPZ) Limited	108	Hephzibah Interanational limited	203	Orchard Juice ltd
13	Afrimac Nut Company	109	Heritage Foods limited	204	Palmhouse Dairies Ltd

14	Agri Pro- Pak Ltd	110	Highlands Mineral Water Co. Ltd	205	Patco industries Ltd
15	Agriscope (Africa) Ltd	111	Honey Care Africa	206	Patiala distillers K Ltd
16	Agro Chemical & Food Co	112	Hope Tasty Cake Baker Limited Mihango	207	Pearly LLP
17	Al- Noor Feisal & Co Ltd	113	Isinya Feeds Ltd (Former Sigima Supplies Ltd)	208	Pembe Flour Mills Ltd
18	Alicia Bakers & Confectioners Limited	114	Italian Gelati & Food Product ltd	209	Peshwood Enterprises Ltd
19	Alliance One Tobacco Kenya Ltd	115	James Finlay Kenya Ltd	210	Pradip Enterprises Ltd
20	Al-mahra Industries Ltd	116	Jetlak Foods Ltd	211	Premier Food Industries Ltd
21	Almasi Beverages Ltd	117	Jira Trading Ltd	212	Pride Industries Ltd
22	Alpine Coolers Ltd	118	Jjasm Mini- Distillery	213	Promasidor (Kenya) Ltd
23	Amki Kenya Limited	119	Jungle Group Holding Ltd	214	Propack Kenya Ltd
24	Ankole Grill Limited	120	Kabianga Dairy LTD	215	Pwani Oil Products Ltd
25	APT Commodities Ltd	121	Kalabashi Investment Limited	216	Rafiki Millers Ltd
26	Aquamist Limited	122	Kamarich Empowerment Tea Factory limited	217	Ramm Millers Ltd
27	Azaavi Collections	123	Kamili Packers Ltd	218	RAZCO Ltd
28	Bakemark Ltd	124	Kapa Oil Refineries Ltd	219	Re-Suns Spices Ltd
29	Bakers Corner Ltd	125	Karirani Estates Limited	220	Royal swiss Bakery Ltd
30	Bakex Millers Ltd	126	Kay Salt Ltd (Formerly Krystalline Salt Ltd)	221	Salim Wazarani Kenya company
31	Barakat Bakers limited	127	Kenafric Bakery	222	Salwa kenya Ltd
32	Bdelo Ltd	128	Kenafric industries Ltd	223	Savannah Brands Company
33	Becare Apiaries International limited	129	Kenblest Ltd	224	SBC Kenya Ltd
34	Belfast Millers Ltd	130	Kenblest Processors limited	225	Scrumptions Eats Ltd

35	Beta bakers Limited	131	Kenchic Ltd	226	Selecta Kenya Gmbh & Co.KG
36	Bidco Africa Ltd	132	Kentaste product Limited	227	Shake and Cream
37	Bidcoro Africa Limited	133	Kenya Highland Seed Co. Ltd	228	Sigma Feeds Limited
38	Bio Food Products Ltd	134	Kenya Nut Company Ltd	229	Sima Grains Limited
39	Bloc Enterprise Ltd	135	Kenya Sweets Ltd	230	simply foods Ltd
40	Blueplastic and Water Co. Ltd	136	Kenya Tea Development Agency	231	Sky Foods ltd
41	Brava Food Industries ltd	137	Kenya Tea Packers Ltd (KETEPA)	232	Sky House of Cakes
42	Britania Food Limited	138	Kenya Wine Agencies Ltd	233	Slikridge Ltd
43	British American Tobacco Kenya Plo	139	Kevian Kenya Ltd	234	Spice World Ltd
44	Broadway Bakery Ltd	140	Khetia Drapers Limited	235	Stockfeed enterprises (K) Limited
45	Brookside Dairy Ltd	141	Kibos Dairy & Farm Produce	236	Suguna foods kenya Limited
46	Buffalo Millers	142	Kibos Distillers limited	237	Sunbake Enterprises Ltd
47	Burton and Bamber limited	143	Kibos Sugar and Allied Industries	238	Sunny Processors Limited
48	Butali Sugar Mills Ltd	144	Kigelia Fresh Produce Ltd	239	Suntory Beverage & Food Kenya Limited
49	C Dormans SEZ Limited	145	Kijani Agro Products Limited	240	Supa Snacks ltd
50	C. Czarnikow Sugar(EA) Ltd	146	kiJata Enterprise limited	241	Super sweets Limited
51	Candy Kenya Ltd	147	Kilimanjaro Biscuits Ltd	242	Tapioca Limited
52	Capel Food Ingredients	148	Kina Loaf Bakery Ltd	243	The chocolate Bar Limited
53	Capwell Industries Ltd	149	Kinangop Dairy Ltd	244	The Harvester Eco Farm Limited
54	Carojim Cookery Enterprise	150	Kirinyaga Flour Millers	245	Top Food (EA) Ltd
55	Centrofood Industries Ltd	151	Kitui Flour Mills	246	Transmara Sugar Company

					Ltd
56	Chai Trading Company limited	152	Koba Water Ltd	247	Trisquare Products Ltd
57	Coastal Bottler Ltd	153	Krish Commodites Ltd	248	Tropical Heat ltd
58	Coca-Cola Central East and West Africa Ltd	154	Kwale Internatrional Sugar Company Ltd	249	Tropical Lush Ltd
59	CoffTea Agencies	155	L.A.B International Kenya Ltd	250	Trufoods Ltd
60	Confini Ltd	156	Lactacare Kenya Ltd	251	Umoja Flour Mills Ltd
61	Convex Commodity Merchants limited	157	Lesere Kenya Ltd	252	Unga Group Ltd
62	Cornbelt Flour Mill	158	Mace Foods limited	253	Unipack Investment Limited
63	Crofts Ltd	159	Mafuko Industries Ltd	254	United Millers Ltd
64	Crystal world Agencies ltd	160	Maisha Flour Mills Limited	255	Upfield Kenya Limited
65	crywan enterprises Limited	161	Malachite Ltd	256	Valley Confectionery Ltd
66	Danone Baby Nutrition Africa and Overseas	162	Mama Millers Ltd	257	Victory Farms Ltd
67	Del Monte Kenya Ltd	163	Mamaz Spice limited	258	Wanji Food industries Limited Former Johnson wax
68	Devkan Enterprises limited	164	Mamboleo Distillers Ltd (Former Kenlab Supplies Ltd)	259	Weetabix East africa
69	Devyani Foods Industries(Kenya)Limited	165	Manji food Industries Ltd	260	West Kenya sugar Company Ltd
70	Deylin Ultimate springs Ltd	166	Marakiqana Limited	261	Winnie's Pure Health
71	Diamond industries Ltd	167	Mars Wrigley Confectionery Kenya ltd	262	Xpressions Flora Ltd
72	DPL Festive Ltd	168	Massatech Kenya Limited	263	Zeytuna Enterprises Ltd
73	Eagles Bread	169	Max Grains Limited	264	Zeelandia East Africa Ltd
74	East african Breweries Ltd	170	Mayfair Holding Limited	265	Zheng Hong (K) Ltd
75	East African Sea Food Ltd	171	Mayfeeds Kenya Ltd	266	Agventure Limited

76	Eastern Produce Kenya Ltd (Kakuzi)	172	Melvin Marsh International Ltd	267	Bidco Land o' Lakes Limited
77	Eco living International Limited	173	Menengai Oil Refineries Ltd	268	CFAO Agri Limited
78	Edible oil products Ltd	174	MHS Bakery limited	269	Chiromo Fertilizer Limited
79	Eldoret Grains Ltd	175	Midrow Kenya Ltd	270	Everest Enterprises Limited
80	Elekea Ltd	176	Milly Fruits Processors Ltd	271	Exotic penina Fields Group limited
81	Europack Industries limited	177	Mini Bakery (Nbi) Ltd	272	Farmyard International investment ltd
82	Excel Chemical Ltd	178	Mjengo Ltd	273	Fontana Ltd
83	Farmers Choice Ltd	179	Mombasa Maize millers ltd	274	Groove Ltd
84	Frigoken Ltd	180	morani Ltd	275	Kenya Horticultural Exporters (1977)
85	FRM EA Packers Ltd	181	Mvita Oils Limited	276	Miyonga Fresh Greens Enterprise Limited
86	Gilooil Company Ltd	182	Mwacheka Group Ltd	277	Mount Elgon Orchards Ltd
87	Githunguri Dairy Farmers Co- operative Society	183	Mwakawa Investment Ltd	278	Murara Plants Ltd
88	Glacier Food Industries Ltd	184	Mwananchi Bakery	279	Sierra Flora Ltd
89	Glacier Products Ltd	185	Mypasta Limited	280	Addison Industries Ltd
90	Global Mark Foods Limited	186	Mzuri Sweets Ltd	281	Adix Shoes Ltd
91	All Times Limited	187	Great Yadud Industry Limited	282	The Continenta Suoerior Limited
92	Alpharama Ltd	188	Jeilo Leather Collections Limited	283	Umoja Rubber Products Ltd
93	Bata Shoes Co (K) Ltd	189	Kenya Suitcase manufacturers Ltd	284	Walker Industries kenya limited
94	Budget Shoes Ltd	190	Leather Industries of Kenya Ltd	285	Wazawazi company Ltd

95	C & P Shoes Industries Ltd	191	Patian Enterprises Limited	286	Zingo Investment Ltd
96	Columbus Footwear Limited	192	Reflex Enterprises Limited	287	Abyssinia Iron & Steel ltd
				288	Accurate Steel mills Limited

Sample of the study: Randomly selected Food and beverages firms.

1	Sunculture Kenya Ltd	39	kiJata Enterprise limited
2	Synergy Gases (K) Ltd	40	Kilimanjaro Biscuits Ltd
3	Welrods Ltd	41	Kina Loaf Bakery Ltd
4	Acee Limited	42	Kinangop Dairy Ltd
5	Africa Coffee Roasters (EPZ) Limited	43	Mace Foods limited
6	Al- Noor Feisal & Co Ltd	44	Mafuko Industries Ltd
7	Alicia Bakers & Confectioners Limited	45	Malachite Ltd
8	Bakemark Ltd	46	Marakiqana Limited
9	Barakat Bakers limited	47	Mayfeeds Kenya Ltd
10	Bio Food Products Ltd	48	Nairobi Bottlers Ltd
11	Bloc Enterprise Ltd	49	Nairobi Flour Mills Ltd
12	Brava Food Industries Ltd	50	Walker Industries kenya limited
13	C Dormans SEZ Limited	51	Nestle Kenya Ltd
14	Capel Food Ingredients	52	Okerlo Nyangau Bakery
15	Confini Ltd	53	Olenguruone Natural Water Ltd
16	crywan enterprises Limited	54	Olivado EPZ Ltd
17	Del Monte Kenya Ltd	55	Premier Food Industries Ltd
18	Diamond industries Ltd	56	Propack Kenya Ltd
19	East african Breweries Ltd	57	RAZCO Ltd
20	Elekea Ltd	58	Re-Suns Spices Ltd
21	Excel Chemical Ltd	59	Royal swiss Bakery Ltd

22	Midrow Kenya Ltd	60	Sigma Feeds Limited
23	Mwananchi Bakery	61	Sima Grains Limited
24	Nairobi Java House Ltd	62	Suntory Beverage & Food Kenya Limited
25	Umoja Rubber Products Ltd	63	United Millers Ltd
26	Githunguri Dairy Farmers Co-operative Society	64	Victory Farms Ltd
27	Grainuts Craft limited	65	Winnie's Pure Health
28	Hope Tasty Cake Baker Limited Mihango	66	Exotic penina Fields Group limited
29	Isinya Feeds Ltd (Former Sigima Supplies Ltd)	67	Miyonga Fresh Greens Enterprise Limited
30	James Finlay Kenya Ltd	68	Mount Elgon Orchards Ltd
31	Kabianga Dairy LTD	69	Addison Industries Ltd
32	Kamili Packers Ltd	70	Adix Shoes Ltd
33	Kenchic Ltd	71	Alpharama Ltd
34	Kenya Nut Company Ltd	72	Bata Shoes Co (K) Ltd
35	Kenya Sweets Ltd	73	Budget Shoes Ltd
36	Kevian Kenya Ltd	74	Patian Enterprises Limited
37	Khetia Drapers Limited	75	The Continenta Suoerior Limited
38	Kibos Sugar and Allied Industries		

Appendix 2: Timeline of Activities

Progress Stage	Stage Description	Proposed dates
1.	Scoping of the Research study	2 weeks after meeting with the research supervisor
2.	Choice of Research Topic	
3.	Research Problem clarification, Research objectives, Purpose and Significance	
4.	Literature review	
5.	Research Methodology	3 weeks after revision of numbers 1-4

		based on supervisor's instruction
6.	Completing and submitting the research proposal	1 week after completion of number 5
7.	Proposal Defense & Ethical Clearance	TBA based on school calendar
8.	Data Collection	1 month after approvals are granted in number 7 above
9.	Data analysis and Interpretation	1 month after completion of number 8 above
10.	Research Report writing – first draft	3 weeks after comments from supervisor on number 9
11.	Final draft of research report	1 month after all comments are received from supervisor
12.	Submission of Research for Examination	TBA by school calendar

Appendix 3: Literature Review Table

<i>Study Reviewed</i>	<i>Identified Research Gaps</i>	<i>Action Points of Thesis</i>
Kim et al. (1998) The Determinants of Corporate Liquidity: Theory and Evidence	No clear distinction on the impact of a higher liquidity on the long-term performance of a company.	To examine the impact of a higher liquidity on both the long-term and short-term.
Doğan (2013) Does Firm Size Affect the Firm Profitability? Evidence from Turkey	The profitability of small firms in emerging markets is not analyzed	To determine the profitability of emerging firms in EMDEs
Majumdar (1997) The impact of size and age on firm-level performance: Some evidence from India	Lack of clarity on whether the size of a market affects the financial performance of a firm regardless of size	Assessing the extent to which the market structure affects the financial performance of a firm.
(Korteweg, 2010) The net benefits to leverage	The study does not mention the benefit of leverage on profitability	To show that leverage increases profitability as it enhances internal resource mobilization

<p>Adjaoud, F., & Hermassi, N. (2017). the Impact of Corporate Governance Mechanisms on the Dividend Policy of Canadian Firms: Empirical Study.</p>	<p>the study does not look at factors such as age and leverage on profitability</p>	<p>measure governance mechanisms by Board size, the number of independent members on the Board and duality, CEO Entrenchment, and CEO Compensation.</p>
<p>Almajali, A. Y., Alamro, S. A., & Al-Soub, Y. Z. (2012). Factors Affecting the Financial Performance of Jordanian Insurance Companies Listed at Amman Stock Exchange.</p>	<p>the study does not look into companies that are highly leveraged which are at a risk of bankruptcy.</p>	<p>To identify the effect of Leverage, Age, Size, liquidity, Management competence index on the financial performance of Jordanian insurance companies.</p>
<p>Alzharani, A. M., Che-Ahmad, A., & Aljaaidi, K. S. (2012). Factors Associated With Firm Performance: Empirical Evidence From The Kingdom Of Saudi Arabia.</p>	<p>The study lies on the firm performance models where the models are developed focusing on establishing a relationship between firm size, leverage, and auditor type with firm performance from accounting perspective.</p>	<p>To examine the relations between firm size, leverage and auditor type and firm performance using two proxies ROA and ROE</p>
<p>Azam, Muhammad, S. I. H. (2011). Impact of Working Capital Management on Firms' Performance : Evidence from Non-Financial Institutions of KSE-30 index.</p>	<p>The study indicates that hat there should have proper inventory management system to avoid over stock of inventory resulting efficient outcome of investment.</p>	<p>Investigate the impact of working Capital Management on firms' performance for non-financial institutions</p>
<p>Banz, R. W. (1981). The relationship between return and market value of common stocks. <i>Journal of Financial Economics</i>.</p>	<p>the study does not investigate the relationship between size and other factors such as dividend yield effect.</p>	<p>To examine the emperical relationship between the return and the total market value of NYSE common stocks</p>

<p>Berger, A. N., & Udell, G. F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle.</p>	<p>the study does not investigate how sources of distress in private or public markets and how information processing technology continues to improve</p>	<p>to explore number of facets of small firm finance, the investors and intermediaries that provide it and the private equity and debt markets in which they function</p>
<p>Chen, H. L., Cheng, K. C., & Hsu, Y. H. (2018). Firm size, financial leverage and profitability: Evidence from Taiwan.</p>	<p>research does not consider the impact of macroeconomic events on the results</p>	<p>It examines the relationship between firm size, financial leverage and profitability</p>
<p>Chen, H. (2020). <i>The Impact of Financial Leverage on Firm Performance – Based on the Moderating Role of Operating Leverage.</i></p>	<p>the moderating role of operating leverage on the relationship between financial leverage and firm performance,</p>	<p>to study the impact of financial leverage on firm performance, measured by return on assets (ROA)</p>
<p>Coad, A., Segarra, A., & Teruel, M. (2013). Like milk or wine: Does firm performance improve with age? <i>Structural Change and Economic Dynamics.</i></p>	<p>the study does not investigate how start-up size is expected to have long lasting effect</p>	<p>to find out the effects of age on firm performance and behaviour</p>
<p>Khatab, H., Masood, M., Zaman, K., Saleem, S., & Saeed, B. (2011). Corporate Governance and Firm Performance: A Case study of Karachi Stock Market.</p>	<p>the paper does not include all dimensions of the corporate governance and firm's performance</p>	<p>examine whether profitability ratios affect the performance of the firm</p>
<p>Kim, C.-S., Mauer, D. C., & Sherman, A. E. (1998). The Determinants of Corporate Liquidity: Theory and Evidence.</p>		<p>the study develops a model of optimal corporate investment in liquid assets and the benefit of minimizing the need to fund profitable future in optimal investment opportunities with costly external financing</p>