

**WORKING CAPITAL MANAGEMENT PRACTICES AND FINANCIAL  
PERFORMANCE OF DAIRY PROCESSING FIRMS IN KENYA**

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## DECLARATION

### Declaration by Candidate

This research project is my original work and has not been presented for a degree in any other university.

Signature.....

Date.....

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### Declaration by Supervisor

I confirm that the work in this research project was done by the candidate under my supervision.

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## **DEDICATION**

This research project is dedicated to my parents; my father Benson Kidaha, my mother Olivia Kidaha and siblings; Denis, Elvis, Angela and Felix for their love, support and encouragement throughout my studies.

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## **ABBREVIATIONS AND ACRONYMS**

|                |  |
|----------------|--|
| <b>CCC</b>     | Cash Conversion Cycle                                  |
| <b>EOQ</b>     | Economic Order Quantity                                |
| <b>EWASCO</b>  | Embu Water and Sanitation Company                      |
| <b>FAO</b>     | Food and Agricultural Organization                     |
| <b>G.O.K</b>   | Government of Kenya                                    |
| <b>GDP</b>     | Gross Domestic Product                                 |
| <b>KCC</b>     | Kenya Co-operative Creameries                          |
| <b>KNBS</b>    | Kenya National Bureau of Statistics                    |
| <b>KRA</b>     | Kenya Revenue Authority                                |
| <b>NACOSTI</b> | National Commission for Science and Technology         |
| <b>OECD</b>    | Organisation for Economic Co-operation and Development |
| <b>ROA</b>     | Return on Assets                                       |
| <b>ROE</b>     | Return on Equity                                       |
| <b>SME</b>     | Small and Medium Enterprises                           |
| <b>SPSS</b>    | Statistical Package for Social Sciences                |
| <b>USA</b>     | United States of America                               |
| <b>VAT</b>     | Value Added Tax  |
| <b>WCM</b>     | Working Capital Management                             |

## **OPERATIONAL DEFINITION OF TERMS**

- Cash Management** The administration of cash balances to realize optimal levels that ensure sufficient liquidity and profit maximization. The use of cash budgets, cash conversion cycle, maintaining speculative cash balances and establishing optimal cash balances will be the indicators of cash management.
- Creditors Management** Involves managing trade credit facilities in order to profit from short term financing while avoiding any additional cost resulting from delayed payments. In this study, average payment period, quantity discount and lagging in payments are used as measures of creditors management.
- Dairy Processing Firms** Dairy firms registered by the Kenya Dairy Board which are classified as major processors and mini dairy firms.
- Debtors Management** The decisions of a business on amounts of credit sale and the corresponding credit terms in order to attract new customers while ensuring sufficient liquidity levels for the business. The proxies for debtors' management are credit policy, collection period, use of incentives for prompt payments and factoring of receivables.
- Financial Performance** The achievement of financial objectives as set by the management of an organization. The net profit margin, which is a ratio of profits after taxes to total turnover, shall be measured.

**Inventory Management**

The approaches a business uses to ensure acquisition of best raw materials and the storage of both processed and unprocessed products while preparing for sales in an efficient way to as to optimize the daily function of the organization. The inventory management practices for the study includes inventory budgeting, establishment of optimal inventory levels, tracking of inventory, stock out costs and inventory turnover.

**Working Capital**

The available liquid funds at a business's disposal to finance daily operations. The difference between current liabilities and assets describes working capital of a business.

**Working Capital****Management Practices**

It is how working capital of a business is administered to balance between profitability and liquidity objectives. In this study, inventory management practices, debtors, creditors and cash management practices constitute working capital management.

## ABSTRACT

The significance of the dairy sector in Kenya's economy cannot be over emphasized. This is because the sector contributes 4% of the national gross domestic product and 19% of the agricultural gross domestic product for an economy that heavily relies on agriculture. The dairy sectors currently employ more than 2 million Kenyans. With reforms set for the agriculture sector, the government seeks to streamline the dairy industry for economic prosperity. A raft of measures has been proposed with Ksh. 8.8 billion set to be injected as working capital for the dairy industry. The dairy sector has not been performing well as evidenced by the complaints from dairy farmers due to the low returns on their produce, high mortality rate of dairy ventures and hostile acquisitions of smaller dairy processing firms by large dominant players in the market. In order to achieve the success of business entities, working capital is an essential element. The effect of working capital management practices on the financial performance of dairy processing undertakings in Kenya has been examined in this study. The purpose of the study was to determine the effect of working capital management practices on the financial performance of dairy undertakings in Kenya. In this study, the specific objectives were to establish the effect of inventory management practices, debtor management practices, creditors' management practices, and cash management practices on dairy firms' financial performance. The theories that guided the study are; Keynesian liquidity preference theory, Cash Conversion Cycle theory, Stewardship theory, Risk return trade-off theory and Transaction Cost Economics Theory. The study population comprised the 221 dairy processing firms classified as major and mini processors by the Kenya Dairy Board. For the study, 69 firms were selected using stratified random sampling techniques. Data collection was carried out by a self-administered structured questionnaire. In order to assess the validity and reliability of data measurement instruments, a pilot study has been carried out. For data analysis Descriptive statistics have been applied, such as average, variance and standardized deviation; Inferential Statistics of correlation, simple and multiple regressions. Tables have been used to present the results of this analysis. A normality test, a linear test, and a multi collinearity test were carried out in the study. In order to analyze the data, a statistical package for social sciences software was used. The study found that cash management practice, debtor's management practice, creditors management practice and cash management practice had a positive significant effect on financial performance of dairy processing firms in Kenya. The study concludes that effective inventory management helps in reducing costs associated with excess inventory. Implementing efficient debtor's management practices enables the dairy processing firms in Kenya to reduce the amount of outstanding debt owed to them by customers. Effective management of suppliers, lenders, or other creditors enables the dairy processing companies to improve their cash flow, reduce costs, and ultimately enhance their profitability. The effective cash management strategies ensure that dairy processing companies have sufficient cash on hand to meet their day-to-day operational expenses. The study recommends that the dairy processing firms in Kenya should accurately track and manage inventory levels to avoid overstocking and minimize the risk of spoilage or obsolescence. Timely collection of outstanding payments reduces the need for companies to rely on external financing or overdraft facilities to meet their operational expenses. The dairy processing firms should negotiate favorable payment terms with suppliers so as to improve their cash flow and reduce the amount of interest they pay on outstanding debts. The dairy processing firms should optimize their cash flow to ensure that they have enough liquidity to meet their day-to-day operational expenses, such as purchasing raw materials, paying suppliers, and covering overhead costs.

## CHAPTER ONE: INTRODUCTION

### 1.1 Background to the Study

Companies are primarily interested in maximising shareholder value. By increasing profitability, this can be achieved. Bravo-Biosca, Criscuolo and Menon (2016) suggest that the primary purpose of commercial establishments is to increase profitability, including sales, income, and asset growth. A business that is profitable increases satisfaction of its key stakeholders; owners, creditors, customers and the government. A firm's financial performance also determines its long-term going concern (Mahrani & Soewarno, 2018). The foundation of a business's financial performance is on the management of its working capital (Boisjolly, 2020). Tasked with enhancing shareholders value through profitability are managers (Anggraini, Hamiza, Doktoralina & Anah, 2018). However, the profit maximization objective may interfere with the smooth operation of a business due to the existence of a trade-off between liquidity and profitability (Panigrahi, Raul & Gijare, 2018). Liquidity refers to the availability of funds to pay off current liabilities as they fall due. High liquidity levels guarantee operational efficiency but at the same time constrain profit maximization objective (Panigrahi, 2019). Management, thus, have to make decisions that synchronize the twin objective of profitability (Alvarez, Sensini & Vazquez, 2021). They have to make decisions on optimal working capital (Habib & Mourad, 2022).

According to Sensini and Vazquez (2021), working capital is current assets less current liabilities. Broadly current assets are cash, short term financial investments, inventory and accounts receivables while on current liabilities are short term monetary obligations including short-term debt, accounts payable, accrued taxes and expenses. Therefore, working capital is the liquid funds required for daily operations. Businesses need to have adequate working capital to

mitigate on the insolvency risks (Kasozi, 2017). Management endeavors to eliminate such a risk may impair profitability objective since high level of working capital curtails profit maximization objective (Dalayeen, 2017). This makes management decisions quite frequent repetitive and time consuming (Ejike & Agha, 2018).

Management of working capital involves the management of inventories, debtors, creditors and cash (Akenga, 2017). Controlling and Planning of these current liabilities and assets is paramount in order to mitigate the risk of insolvency while maximizing on profitability (Waswa, Mukras & Oima, 2018). Soet, Muturi and Oluoch (2018) goes further to explain that efficient working capital management contributes to a higher value of a firm while Ndegwa (2017) assert that a firm's profitability is ascertained through the corporate strategy developed through WCM in creating shareholder's wealth.

Working capital management has a significant impact on the financial performance of dairy companies in Turkey because it improves liquidity, enhances profitability, increases operational efficiency, and contributes to financial stability. Therefore, it is crucial for dairy companies to prioritize effective working capital management to ensure their long-term success in the industry (Fernandez-Lopez, Rodeiro-Pazos & Rey-Ares, 2020). Umar and Al-Faryan (2023) observe that effective working capital management has positively influenced the financial stability of Turkish dairy companies because the firms have been able to reduce their reliance on external financing and minimize the risk of financial distress. This is particularly important in times of economic uncertainty or market downturns, as companies with strong working capital management are better equipped to weather financial challenges.

Folajinmi and Peter (2020) observe that the Nigerian dairy firms that have implemented working capital management practices which have experienced significant improvements in their financial performance by ensuring that the dairy firms they have sufficient cash on hand to meet their short-term obligations through optimization of the company's cash conversion cycle, which is the time it takes to convert inventory into cash. According to Osazefua (2020) the enhancement of financial performance through effective working capital management practices among Nigerian dairy firms is evident in the form of increased profitability, improved liquidity, and reduced financial risks. Therefore, by implementing these practices, dairy firms can optimize their working capital and achieve sustainable growth in the highly competitive Nigerian dairy industry.

Kamau (2021) observe that effective working capital management has helped dairy processing firms in Kenya to better manage their inventory levels, reduce their debt levels, and negotiate better terms with their suppliers and customers. This has not only improved their financial performance but also strengthened their relationships with key stakeholders in the industry. Muiruri and Mutswenje (2023) indicate that the improvement in working capital management has been a key factor in enhancing the financial performance of dairy processing firms in Kenya, enabling them to remain competitive in the market and achieve sustainable growth in the long run. Therefore, effective working capital management practices has allowed dairy processing firms in Kenya to invest in new technologies, expand their production capacity, and enhance the quality of their products.

### **1.1.1 Financial Performance**

This is the systematic achievement of a firm's objectives in monetary terms (Agola, 2014). The focus of business establishments is to create value to their shareholders. In doing so, they focus

on operational efficiency, profitability, survival for the long-term, growth and ability to respond to threats and convert the threats to opportunities (Turyahebewa, 2013). Financial performance in commercial enterprises is determined by the interplay between revenues and expenses. In this regard, managers are called upon to make decisions that will maximize profitability (Camison & Villar Lopez, 2014). From the foregoing, it's apparent that financial performance has a broad definition. This is because of the various meanings it embodies (Pralalathan & Ranjay, 2011).

To conveniently assess and compare the companies' financial performance, ratio analysis is usually adopted (Burkhardt & Wheeler, 2013). As well as earnings per share, returns on capital, returns on equity deployed, returns on investment, and return on assets, there are also gross profit margins and net profit margins when it comes to financial ratios (Wanjira & Njagiru, 2018). However, the major ones are ROE and the net profit margin (Ongore & Kusa, 2013). For this study, the net operating profit margin has been preferred as a proxy of financial performance for dairy processing firms.

According to Nariswari and Nugraha (2020), net profit margin is a performance ratio that assesses net income gotten by a commercial enterprise as a percentage of the sales revenue. The ratio enables an evaluation of the past financial performance, the present as well as enabling the prediction of future profitability trends (Nugraha, Puspitasari & Amalia, 2020). The ratio is appropriate for this study in a number of ways. First it enables the comparison of different entities regardless of size. Secondly and according to Mahdi and Khaddafi (2020), the ratio gives an overview of the effectiveness of the practices adopted in managing working capital. Further it is the ratio that conveniently facilitates a review of working capital policies. A high and increasing net profit margin is desirable for investors as well as other stakeholders (Heikal, Khaddafi & Ummah, 2014). This therefore distinguishes the ratio as a metric of financial

performance overtime and across different industries. According to Kariuki, Kihoro and Iravo (2018), dairy firms in Kenya make considerable investment in processing equipment and other tangible assets and as such an evaluation of the corresponding returns will be appropriate for comparison overtime and against other investments in the market.

Contrary to Vision 2030 projections of 4% annual growth in the dairy sector, data from KNBS indicate poor trends in the value of marketed milk by dairy firms as well as the average milk prices paid to farmers as shown in tables 1.1 and 1.2 respectively

**Table 1.1: Percentage Value of Marketed Milk**

| Year                              | 2016   | 2017   | 2018  | 2019  | 2020   |
|-----------------------------------|--------|--------|-------|-------|--------|
| Percentage value of marketed milk | 100.00 | 100.12 | 99.91 | 88.92 | 110.97 |

**Source: KNBS (2016-2020)**

Table 1.1 shows the link relative percentages of the value of marketed milk by dairy processing firms. 2016 is taken as the base year for the study. In the year 2017, there was a slight increase of 0.12% then a 0.21% decline in 2018. A further decline of 10.99% was recorded in the year 2019. In 2020, there was a 9.75% increase. Clearly, the percentage changes are below and inconsistent to the annual financial growth projections of the sector.

**Table 1.2: Average Percentage Milk Prices to Farmers**

| Year                       | 2016   | 2017   | 2018  | 2019  | 2020   |
|----------------------------|--------|--------|-------|-------|--------|
| Percentage price per liter | 100.00 | 109.99 | 90.58 | 84.99 | 106.67 |

**Source: KNBS (2016-2020)**

Table 1.2 shows the link relative percentages in the prices of milk paid to farmers by dairy processing firms. 2016 is taken as the base year. The year 2017 recorded a 9.99% increase in the average prices paid to farmers then a 19.41% decline in 2018. A further decline by 5.59% was recorded in the year 2019 followed by a 21.68% increase in 2020. The trend generally depicts a shortfall in the financial performance of dairy performance of dairy processing firms over the 5-year period.

### **1.1.2 Working Capital Management Practice**

The practice of managing working capital refers to the strategic management of a company's current assets and liabilities to ensure the efficient utilization of resources and the maintenance of a healthy cash flow (Pass & Pike, 2019). Nazir and Afza (2022) observe that working capital management practice is a way of managing working capital involves monitoring and controlling a company's current assets and liabilities to ensure that it has enough liquidity to meet its short-term financial obligations. This includes managing cash flow, inventory levels, accounts receivable, and accounts payable to optimize the company's financial health and efficiency. Therefore, the working capital management practices adopted for this study included; inventory management practice, debtors' management practice, creditors management practice and cash management practice.

Ndiwa (2022) observe that effective inventory management can lead to improved profitability, reduced costs, increased cash flow, and enhanced customer satisfaction. On the other hand, poor inventory management can result in financial losses, increased expenses, and decreased customer loyalty. Gebisa (2023) observe that dairy processing companies often deal with perishable products, such as milk and dairy products, which have a limited shelf life. Therefore, by

implementing efficient inventory management practices, companies can minimize the amount of inventory held in stock, thereby reducing costs associated with storage, handling, and spoilage.

Debtor's management practices refer to the strategies and decisions made by a company or individual in managing their financial obligations and debts. This includes how they prioritize and allocate funds, negotiate payment terms with creditors, and overall handle their financial responsibilities (Kevin & Omagwa, 2017). According to Msomi, Matemane and Zungu (2021) effective management practices of the debtor involve creating a budget, monitoring cash flow, and setting aside funds for debt repayment. They may also involve seeking out alternative sources of financing, such as loans or lines of credit, to help meet financial obligations. Therefore, by effectively managing debtors, dairy processing companies can ensure that they have enough cash on hand to meet their short-term obligations, such as paying suppliers and employees. This can help prevent liquidity problems and potential insolvency.

Olabisi, Oladejo, Adegoke and Abioro (2019) observe that creditors' management practices involves overseeing the relationship between a company and its creditors to ensure that payments are made on time and in accordance with agreed upon terms. This includes monitoring outstanding debts, negotiating payment terms, and resolving any disputes that may arise. According to Pike and Cheng (2021) effective creditor's management practices are essential for maintaining positive relationships with suppliers and lenders, as well as for ensuring the financial stability of the company. This may involve implementing policies and procedures to streamline the payment process, conducting regular reviews of outstanding debts, and communicating openly and transparently with creditors. Therefore, by effectively managing creditors' practices, a company can minimize the risk of late payments, improve cash flow, and maintain a strong financial position.

Cash management practices ensures that a company has enough liquidity to meet its short-term obligations, such as paying suppliers and employees, while also maximizing returns on excess cash which involves monitoring and controlling the company's short-term assets, such as cash, inventory, and accounts receivable, as well as its short-term liabilities, such as accounts payable and short-term debt (Ahmad, 2018). Smirat and Yousef (2021) observe that effective cash management practices can help dairy processing companies mitigate risks associated with fluctuations in commodity prices, currency exchange rates, and other market variables. Therefore, by maintaining a strong cash position, companies can better weather economic downturns and unexpected expenses.

### **1.1.3 Dairy Processing Firms in Kenya**

Kenya has been in the dairy business for at least the last 100 years (National Dairy Master Plan, 2010). However, since the country was a colony of the British, the natives were not allowed to participate in commercial dairy farming during the colonial period. Over the years, the sector has grown in leaps and bounds to become the second largest in Africa in terms of the number of people it employs; 1.2 million people (KDB, 2015) and milk production; 5 billion kilograms annually (OECD/FAO, 2004). According to a report by the Kenya Dairy Milk production, milk collection, milk processing and milk marketing are all covered by employment in the dairy sector by hawkers, brokers, self-help groups and hotels, according to the Board (2014). The Kenya Bureau of Standards, the Ministry of Agriculture and the Ministry of Health play a significant role in this sector. Kenya's dairy industry is the single largest Agricultural subsector responsible for 19% of Agricultural GDP and on aggregate 4.0% of the National GDP (KDB 2018). Further statistics show that the industry is on average growing at a rate of between 5-7% per year thus highlighting future opportunities for the sector.

Kenya Co-operative Creameries (KCC) was established in 1922 and was the first and dominant player in the industry until liberalization of the sector was instituted by the G.O.K in 1991. The liberalization sought to minimize the institutional, technical and economic challenges in the sector. Lack of government support, corruption and mismanagement led to the subsequent collapse of KCC in 2000. Currently there are about 40 active major milk processors and 181 mini dairies in the country. Brookside, New KCC, Githunguri dairies and Daima dairies being the largest collectively processing 1.5million kgs of milk per day which accounts for 85% of the processed milk in the country (Rademaker, Koech, Jansen & Lee ,2016). As a result of the acquisition of smaller brands over the years, Brookside Dairies is now the dominant player in the industry (Makoni, Mwai, Redda, Van der Zijp & Van der Lee, 2014).

The sector can be classified as either formal or informal. Kenya Dairy Board is responsible for developing, regulating and promoting the formal dairy industry, which was established by an act of parliament. The informal sector constitutes the bulk of the industry with 88% of the marketed milk transacted (KDB, 2015). Quality and safety standards are the biggest concerns in the informal sector over and above nonpayment of statutory fees. The demand for milk and associated dairy products both for domestic and export markets is on the rise (Business Daily, 2016). However, there is a high mortality of new ventures in this sector due to poor financing, misappropriation, corruption and inefficiencies in the daily operations of these units (Muriuki, 2011). According to Baiya and Kithinji (2010) there exists unexploited opportunities in the dairy sector since processed milk products can be stored and supplied to the market when demand for such increases.

## **1.2 Statement of the Problem**

Kenya's long term development blue print is captured in vision 2030 launched in 2008. Among its key Pillars, Agricultural sector has been earmarked for reforms. The government has keen interest in the dairy subsector where particularly seeking to address working capital in the sector. This is towards the sectors contribution to the national development plan. The dairy industry contributes 19% of Agricultural GDP (Kenya Dairy Board, 2018) and 4% of the National GDP (Mwangi & Gakobo, 2018). However, in Kenya, the dairy sector has been neglected (KNBS, 2019). Dairy processing firms experience low profit margins between 10-20% (Bebe, Rademaker, Kilelu & Tonui, 2017). Further, it has been observed that the performance of dairy processing firms has been declining since 2014 (FAO,2018). Consequently, there has been a high mortality rate of dairy ventures due to unsatisfactory and unsustainable returns in the investments (Mwangi &Gakobo, 2018). The industry has also experienced predation of smaller dairy firms resulting in an unfavorable oligopolistic market structure characterized by a few dominant processors (Mbaya, Maina & Namusonge, 2021). The inefficiencies in the sector have consequently attracted competition from international markets such as the USA who recently lobbied for unfettered access into the Kenyan markets (Business Daily, 2020. According to KDB (2019), the country's annual demand for processed milk outstrips supply by 1.93 billion liters.

The business models of dairy processing firms rely on effective working capital management practices for sustainable monetary performance and growth of the units. The practices adopted in managing working capital have a direct influence on a firm's profitability and liquidity (Anh, Huong &Hang, 2020). Desirable profitability can be achieved from sufficient liquidity to finance operational costs while minimizing idle cash balances which have minimal contribution to profit margins. Working capital management practices call for decisions that invest cash balances,

receivables and inventory while ensuring utilization of short-term finance available to the firm. Managers are required to appropriately manage businesses' working capital in order for investments to be financially viable (Jian & Akbar, 2020).

Quite a number of researches have been done to explore how financial commercial enterprises' performance and working capital management are related. Kiptoo (2017) investigated the effect of working capital management practices on financial performance of tea processing firms in Kenya and the findings of the study indicated that working capital management practices significantly affected the financial performance of tea processing firms. However, the study examined tea processing firms thus presenting a contextual gap. Mbathi (2022) investigated the effect of working capital management practices on profitability of small and medium enterprises in Makueni County and the findings indicate that cash conversion cycle, inventory-holding period and accounts payable period have significant positive effect on profitability of SMEs. However, this study presents a contextual gap as it focused on SMEs. Ogotu (2022) investigated the effect of working capital management practices on financial performance in Kenya and the study revealed that different working capital components have varying effects on the financial performance of manufacturing enterprises. However, the study sampled respondents using convenience sampling method thus presenting a methodological gap. This study sought to bridge the highlighted gaps by investigating working capital management practices and Kenyan dairy processing firms' financial performance.

### **1.3 Objectives of the Study**

#### **1.3.1 General Objective**

The general objective of this study was to investigate the effect of working capital management practices on the financial performance of dairy processing firms in Kenya.

### **1.3.2 Specific Objectives**

The study was guided by the following specific objectives;

- i. To examine the effect of inventory management practice on the financial performance of dairy processing firms in Kenya.
- ii. To establish the effect of debtor's management practice on the financial performance of dairy processing firms in Kenya.
- iii. To assess the effect of creditors management practice on the financial performance of dairy processing firms in Kenya.
- iv. To explore the effect of cash management practice on the financial performance of dairy processing firms in Kenya.

### **1.4 Research Hypotheses**

The study tested the following hypotheses:

- H0<sub>1</sub>:** Inventory management practice does not have significant effect on the financial performance of dairy processing firms in Kenya.
- H0<sub>2</sub>:** Debtor's management practice does not have significant effect on the financial performance of dairy processing firms in Kenya.
- H0<sub>3</sub>:** Creditors management practice does not have significant effect on the financial performance of dairy processing firms in Kenya.
- H0<sub>4</sub>:** Cash management practice does not have significant effect on the financial performance of dairy processing firms in Kenya.

### **1.5 Significance of the Study**

A number of stakeholders are bound to be affected by these findings. First of all, the managers of dairy processing companies would be able to gain an insight into working capital components in

their business units by looking at monetary performance and interdependencies between them. Secondly, economic policy makers both at the county and national level will also benefit from the research findings. This is because the research findings will shed light on the specific targets areas to spur economic activities with regard to the dairy sector. Appropriate policies that will boost operational efficiency of these units can thus be developed. The Kenya Revenue Authority (KRA) will benefit on the research findings. This is in regard to the potential impact of VAT imposition on dairy products. Thus, a decision on whether higher revenues can be generated with VAT in relation to economic activity. Potential investors in the growing sector will also gain invaluable understanding of WCM to enhance commercialization of the sector for enhanced profitability and increased value. Using the literature review to review relevant findings, future researchers in this field can also take advantage of the study's findings.

### **1.6 Scope of the Study**

The study focused on financial performance of dairy processing firms in Kenya. The working capital management practices adopted for this study included; inventory management practice, debtors' management practice, creditors management practice and cash management practice. The financial performance was measured in terms of net profit margin. Researcher collected both primary and secondary data using structured questionnaires, which supplied metrics for inventory and creditors management, cash management and debtor management, as well as net profit margins over a five-year period.. The respondents for the study were finance managers of these units. The Board had registered 40 firms as the major processors and 181 firms as the mini dairy units. Yamane formula was used to sample 69 units.

### **1.7 Limitations of the Study**

The study was limited in a number of ways. First, the distribution of the dairy firms in the country is highly random. In some regions there is a high concentration of these units whereas in other regions there are very few dairy firms. The study therefore adopted stratified random sampling method the registered dairy processing firms in Kenya. Secondly the respondents to the research questionnaires were adamant not to participate in the research process. To overcome this, the researcher had an introductory letter from Kenyatta University for assurance that the research is purely for academic purpose. The researcher used a well-structured questionnaire in ascertaining how between working capital management practices and Kenyan dairy processing firms' financial performance are related. The study also collected quite sensitive data on financial metrics. This is because all dairy processing firms in the country, except New KCC, are privately owned entities and thus some information was perceived sensitive. The researcher therefore needed a commitment letter to guarantee confidentiality of the required information and a research permit from NACOSTI.

### **1.8 Organization of the Study**

There are five chapters in this research project. Presented in Chapter 1, this investigation discusses the background, objectives, problem, hypotheses, significance, limitations, and scope of the study. A summary and conceptual framework are presented in the second chapter of the investigation. This chapter also presents theoretical and empirical research. A presentation of empirical research that is consistent with the variables in the study is also included. Specifically, the third chapter discusses design, empirical model, operationalization and measurement, population, sample, data collection, data analysis, as well as issues of ethics. In chapter four, the results of the research are presented and interpreted based on the data

analysis. The fifth chapter of the study summarizes the study's findings, conclusions, policy recommendations, as well as recommendations for further research.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

The chapter presents a theoretical review of the literature on study theory and an empirical evaluation of studies carried out by other researchers focusing on variables to be studied. At the end, a summary of empirical evaluations and conceptual frameworks is provided.

### **2.2 Theoretical Review**

To develop the research framework, this study utilized five theories pertinent to the variables. The section therefore presents the Keynesian liquidity preference theory, the cash conversion cycle theory, Risk return trade off theory, the economic order quantity model and the stewardship theory.

#### **2.2.1 Keynesian Liquidity Preference Theory**

The British economist John Maynard Keynes produced this theory in 1936. It is a theory of demand for money. According to this theory, individuals and organizations prefer to hold liquid cash based on their demand on a daily basis. Keynes postulated that the aggregate demand for money can be split into three motives; transactionary, precautionary and speculative motives. Transactionary demand is the amount that individuals hold to finance routine operations which are normally the primary functions of a business. Precautionary balances are the amounts that individuals hold to cater for unforeseen contingencies which could potentially have adverse effects on business operations while speculative balances are meant to take advantage of favorable business opportunities in the course of operation Asensio (2017). Further Keynes illustrated that transactionary and precautionary motives are a function of the aggregate income while the speculative demand for money is a function of the prevailing interest rate in the economy. It therefore follows that as the number of transaction and risk exposure increases an

entity will have higher demand for money. Both prices, which determine the speculative demand for money has an inverse relationship with prevailing market interest rates.

The inter-relationship between the level of income and the market interest thus affects working capital decisions. Working capital components, inventory accounts payable and accounts receivable constitute the demand for money. According to Bhunia (2010) liquidity decisions are very important to both internal and external stakeholders of a business due to its daily nature. Business entities need to invest enough of available funds in current assets for smooth operation (Pandey, 2010). Makori and Jagongo (2013) assert that liquidity has a trade off with profitability and thus needs significant administration. This theory helps anchor the independent variable, that is, cash management as it relates financial performance of dairy processing firms

The Keynesian liquidity preference theory, which emphasizes the importance of individuals and firms holding liquid assets to meet unexpected expenses or take advantage of investment opportunities and the way in which they can affect dairy processing firms is through their cash management practices. If firms prioritize holding liquid assets to ensure they have enough cash on hand to cover short-term obligations, they may be less likely to invest in long-term projects or expansion opportunities. This conservative approach to cash management could limit the growth potential of dairy processing firms and impact their overall financial performance. Therefore, this theory was used to explain cash management practice variable.

### **2.2.2 The Cash Conversion Cycle Theory**

In 1974, Gitman made this theory his own. Cash conversion cycle is considered as a method of achieving a sales target by interacting working capital components. The cash conversion cycle is a measurement of the time in days a firm takes to convert its investment in current assets into

cash flow from sales. The average collection period of an organization and the conversion period of its inventory determine the organization's operating cycle (Owino, 2014). By summing inventory conversion periods and dividing average collection periods by average payment periods, we can obtain the CCC (Muscatolla, 2014). To avoid the risk of depriving the organization of liquid funds for operation, a shorter CCC is preferred. This will also relieve the organization of the strain to invest in current assets (Arnold, 2008). Business should therefore struggle to have a negative CCC trend. This will release cash for profit maximizing opportunities like investment in new capital and infrastructure for enhanced future profitability (Ali,2011) However in the quest to have a shorter CCC, caution should be taken not to compromise on profitability through increased incidental operational costs (Vijayalakshmi & Bansal, 2013). Prudent management of the CCC has a positive correlation with business profitability (Agha, 2014).

The key impacts of the CCC theory on the financial performance of organizations is its ability to highlight inefficiencies in the company's working capital management. By analyzing the CCC, companies can identify areas where they can improve their cash flow and reduce the time it takes to convert their investments into cash. This can lead to increased liquidity and improved financial performance (Obeidat, Almomani & Almomani, 2021). Hussain, Hassan, Quddus and Rafiq (2021) observe that the CCC theory can help organizations optimize their inventory management. By reducing the time it takes to convert inventory into sales, companies can minimize holding costs and improve their cash flow. This can result in higher profitability and improved financial performance.

The cash conversion cycle theory is relevant to the study because it has a significant impact on the financial performance of dairy processing companies. Therefore, by effectively managing

their working capital, accounts receivable, and accounts payable, these companies can improve their liquidity, profitability, and financial stability. Additionally, the theory helps them make informed investment decisions that align with their cash flow requirements and financial goals.

### **2.2.3 Risk Return Trade Off Theory**

Harry Markowitz propounded it in 1952 and it states that a tradeoff exists between return and risk. Essentially risk and return are the ends of a straight line, so that as you move towards one end you are automatically moving away from the other. Investors are assumed to be rational in decision making. This implies that they will demand higher returns for every marginal risk. According to Nwidobie (2012), investors will only accept additional risk if only they are compensated with additional returns. The risk return trade-off is fundamental in financing decisions made by managers for the primary objective of shareholder's wealth maximization. They have to balance between uncertainties of low working capital levels for higher profitability vis-a-vis low profitability and sufficient liquidity. Working capital management practices dictate risk return relationships. According to Valipour and Moradi (2012), the overall financing cost which is determined by financial risk can be effectively reduced through proper working capital management practices.

The theory of balancing risk and return in relation to the financial performance of organizations is a fundamental concept in finance that guides decision-making processes for businesses. It recognizes that there is an inherent trade-off between the potential for higher returns and the level of risk involved in any investment or business activity (Bassem, 2022). In essence, Poelloe (2023) observe that this theory suggests that organizations should strive to find an optimal balance between risk and return to maximize their financial performance. This balance is crucial because taking on too much risk can lead to potential losses and financial instability, while being

too risk-averse may result in missed opportunities for growth and profitability. The theory of risk-return trade-off suggests that in order to achieve higher returns, an investor must be willing to take on higher levels of risk. This concept can be applied to the financial performance of dairy processing firms in Kenya, as they must carefully balance the risks they take on in order to maximize their returns. By carefully weighing the risks and potential returns of different strategies, dairy processing firms in Kenya can make informed decisions that will ultimately impact their financial performance. Those firms that are able to effectively manage risk while pursuing opportunities for growth are likely to see higher returns and greater success in the long term. The theory was used to explain the debtor's management practice variable.

#### **2.2.4 The Economic Order Quantity Model**

This model was developed by Ford W. Harris in 1913. The EOQ establishes the optimal levels of inventory that a business should maintain. This is based on the fact that the practices adopted in inventory management will affect the business' monetary performance. The economic order quantity determined by the model ensures a business does not overstock or understock in order to effectively link the sales and production departments respectively. In this regard it recognizes the existence of an optimal stock level (Musyoka & Ngugi, 2021).

The model is anchored on two major costs, that is; holding costs which include storage costs, insurance costs, security costs, spoilage costs and opportunity costs, holding costs which include clerical costs, cost of preparing purchase orders, telephone and inspection costs. The model requires a business to determine its annual demand. With the three variables, that is; holding cost, ordering cost and annual demand, the EOQ gives the most optimal stock that a merchandizing entity should hold in order to minimize all inventory associated costs. The model operates on some assumptions such as instantaneous replenishment of stock, fixed purchase price

and a constant lead time. Dairy processing firms can utilize the EOQ model in their inventory management practices. This will help in minimizing inventory costs by about 4.4% (Musyoka & Ngugi, 2021).

The economic order quantity (EOQ) model is a widely used inventory management technique that helps companies determine the optimal order quantity for their products. In the context of dairy processing companies in Kenya, the implementation of the EOQ model can have a significant impact on their financial performance. Secondly, the EOQ model enables dairy processing companies to optimize their ordering costs. Furthermore, the EOQ model helps dairy processing companies in Kenya to enhance their production planning and scheduling. Therefore, the dairy processing companies in Kenya can achieve cost savings, increase operational efficiency, and ultimately improve their financial performance by minimizing inventory holding costs, optimizing ordering costs, enhancing production planning, and improving customer service levels. This model was used to explain the inventory management practice variable.

### **2.2.5 The Stewardship Theory**

Donaldson and Davis developed it in 1991 and further propounded by Davis, James and Kenneth in 1997. The theory focuses on the primary purpose of managers as stewards to generate sustainable profitability of the commercial enterprises entrusted to them by shareholders. The theory asserts that manager's satisfaction should only be attained when the firm is attaining the maximum profits possible. It therefore suggests complete autonomy between owners and their investment. The shareholders then assess the performance of their investments using profitability measures such as return on investment, gross and net profit margin (Carton, Murphy & Clark, 2014). The theory emphasizes on the key responsibility of businesses to enhance profits for their shareholders as noted by Galant and Cadez (2017).

For businesses to financially succeed and survive in the long term, short term financial decisions are vital. These decisions relate to working capital management (Waswa, Mukras & Oima, 2018). Working capital is the lifeblood of businesses and as such the stewards have to be prudent in its management for sustainable profitability (Ademola, 2014). The theory amalgamates management functions while recognizing that commercial enterprise's key objective is financial prosperity.

The theory of stewardship in relation to the financial performance of dairy processing companies in Kenya emphasizes the responsibility of management to act as stewards of the company's resources and assets. Stewardship theory suggests that managers should act in the best interest of the company and its stakeholders, making decisions that maximize long-term value and ensure the sustainability of the business. In the context of dairy processing companies in Kenya, the theory of stewardship is particularly relevant due to the importance of efficient resource management and the need to navigate various challenges in the industry. Financial performance, the dependent variable in the study, is underpinned by this theory.

### **2.2.6 Transaction Cost Economics Theory**

In 1979, Williamson presented this theory. The theory proposes ways of organizing business transactions in order to minimize operational costs both inside and outside the organization. According to the theory, a business will attempt to minimize the cost of selling a product to its customers as well as minimize internal operational costs. The source of such costs include; unpredictable environment which gives vague information to the company, secondly opportunistic suppliers also pose a risk to a company's operations especially when they are few and thus able to manipulate the prices of their supplies. Assets specificity which refers to a specific use of a vital component in the production process from a particular contracted

manufacturer forms the third source of transaction cost for firms. The theory explains that the optimal firm size is determined by their internal transaction cost. Companies can therefore in source or outsource some products and/ or services in the best way that suits the company.

The costs in creditors management constitute a significant amount of the total operation costs for many businesses (Kithinji, Wepukulu, Gekara & Mwanzia, 2022). These ultimately determine long term survival and growth of a business. Quite a number of businesses have collapsed due to poor planning and ineffective control of operational costs by the financial managers (Owolabi & Alu, 2012). Management is therefore required to develop and implement policies that minimize their creditors management costs. Optimal decisions on accounts payables become paramount. This theory also highlights the necessity of having an effective payment schedule and maintaining sufficient cash flows which will minimize internal transaction costs as a key determinant of financial performance for the organization. The theory also emphasizes the need for businesses to establish favorable credit terms with its customers for competitive advantages in the market place. The concepts of this theory emphasize on the importance of accounts payable management as an independent variable of this study towards financial performance.

Transaction cost economics theory has had a significant impact on the financial performance of dairy processing firms in Kenya by enabling these firms to better understand and manage the costs associated with sourcing raw milk, processing it into dairy products, and distributing these products to consumers. Transaction cost economics theory has emphasized the importance of building long-term relationships with suppliers and customers. By developing trust and cooperation with key stakeholders, dairy processing firms in Kenya can reduce the likelihood of opportunistic behavior and transaction costs associated with contract enforcement. The concepts

of this theory emphasize on the importance of accounts payable management as an independent variable of this study towards financial performance.

## **2.3 Empirical Review**

In this section, past empirical studies that have examined the relationship between assets and liabilities in working capital are discussed. A systematic literature review of dependent variables and independent variables was conducted to determine their association with the objectives.

### **2.3.1 Inventory Management Practice and Financial Performance**

Musau, Namusonge, Makokha and Ngeno (2017) analyzed inventory management's effect on organizational performance of Kenyan textile manufacturing firms. The study's objectives were to establish how inventory management variables, inventory accuracy, stock outs, availability of stock, capacity utilization and stock coverage relate with organizational performance measures; profitability, reliability, responsiveness, flexibility and cost. In this study, convergent parallel mixed methods research was employed. Primary data was obtained using a questionnaire and interviews from a sample of employees of the 15 textile companies in Nairobi County. Textile companies' performance has been shown to be influenced by inventory management. A descriptive research design was used in the current study to examine how inventory management practices influence profitability at Kenyan dairy processors. However, a contextual gap was identified as the dynamics of textile industry vary with the dairy sector.

A study by Adekoya and Olumayokun (2019) investigated how inventory management and profitability were affected by the Nigerian Stock Exchange listing of hospitality firms. A longitudinal and quantitative research approach was deployed. Secondary data was collected for the period 2008-2017 from five companies in the hospitality industry. Specific objectives of the study were to determine whether inventory management was associated with earnings per

share and dividend per share of listed hospitality companies. According to the research, inventory management contributes significantly to earnings per share and dividends per share of Nigerian hospitality companies listed on the stock market. This study examined the financial performance of Kenyan dairy firms based on their inventory management practices. The study adopted a descriptive and inferential statistical approach using an explanation-based approach. However, a methodological gap was identified as the variables were operationalized differently from the present study. Further, the market dynamics in west Africa differ significantly from the Kenyan context thus contextual gap.

Muchaendepi, Mbohwa, Hamandishe, and Kanyepe (2019) investigated how inventory management affects the financial performance of SMEs in the manufacturing sector in Harare, Zimbabwe. The population was 667 registered SMEs in the manufacturing sector. Purposive sampling was then utilized in selecting a final sample of 244 participants who provided primary data through questionnaires. In a study conducted by the University of Michigan, inventory management was strongly linked to financial performance. The present study focused on the Kenyan dairy industry. An explanatory research design was adopted and descriptive and inferential statistics computed for data analysis purposes. However, the definition of SME's limits the size of business units. There is also a contextual gap as the study focused only on SMEs in Zimbabwe.

Mulandi and Ismail (2019) sought to establish how inventory management practices affect Kenyan commercial state corporations' performance. In this study, the specific objective was to evaluate the effects of a just-in-time inventory system and planning system for material requirements on performance in a National Corporation. Transaction cost theory and theory of constraints guided the study. The study population was 33 state owned commercial corporations.

A census study was conducted. The primary data for this descriptive study was collected through an organized questionnaire. Primary data collection was conducted using a structured questionnaire. A descriptive research design was adopted. This study examined how inventory management practices affect financial performance in the Kenyan dairy industry. However, there is a knowledge gap as the study was conducted only on state corporations.

Karki (2020) explored how inventory management affected profitability of Uniliver Nepal Limited. The specific objectives were to ascertain the relation between the value of finished goods and net income, inventory management practices with profitability. The study used regression analysis and showed that the management of inventory significantly affects profitability. A study of dairy processing firms in Kenya investigated how inventory management practices affect profitability. However, this study was conducted in a different market; Nepal and only focused on inventory management.

### **2.3.2 Debtor's Management Practice and Financial Performance**

Jindal, Jain and Vartika (2017) conducted study to assess how receivable management affect commercial vehicles industry's profitability in India. Secondary data which was collected over the period between 2009 to 2016 from a sample of 6 companies was used. Descriptive statistics evaluated data. It was established that debtor's turnover ratio notably and positively impacted profitability of commercial vehicle industry in India. The present study focused on Kenyan dairy industry where primary data was collected. In particular, the objective was to evaluate the effects of debtors' management practices on the score of net profit margin, as measured by debtors' financial performance. However, this study was done in a different country, in a different industry and operationalized the independent variables differently from the present study thus a contextual and conceptual gap.

The contribution of accounts receivable period to the profitability of quoted companies in Nigeria was examined by Nwude and Agbo (2018). Companies listed on the Nigerian Stock Exchange that are engaged in the insurance business were included in the index. Ex Post facto study approach was deployed and secondary data collected from audited monetary records of a sample of 20 insurance firms for the year 2000 to 2011. ROA ratio was used as a proxy for monetary performance while the metrics for independent variables was accounts receivable period using firm size, growth, current ratio and fixed financial total assets ratio as the control variables. The study findings revealed an insignificant negative connection between Nigerian Insurance companies' profitability and accounts receivable period. The present study focused on the Kenyan dairy industry where primary data was collected to explore the association between financial performance and debtors' management practices as measured by net profit. Explanatory research design was employed. However, the findings do not apply to the Kenyan market due to the different macro-economic factors across the different countries.

Mori and Richard (2018) investigated how debtors affect performance of SMEs in Tanzania. Research was guided by the asymmetric information theory and trade-off theory, which were both used to collect secondary data. Inferential and descriptive statistics were applied for the data analysis. Credit sales and bad debts were tested on the regression model which similarly had two dependent variables; cash revenue and operational costs. Two control variables, that is, owner and business related, were used for the study. The study findings were that higher debts negatively affect profitability of SMEs. The present study adopts an explanatory research design to ascertain how Kenyan dairy processing firms' financial performance and debtors' management practices are related. However, the study focused on SME's.

It was determined that the performance of Embu Water and Sanitation Company could be improved if accounts receivable management was improved at the company. Munene and Tibbs (2018) conducted this study in Embu, Kenya. In this study, we were specifically interested in examining how Embu Water and Sanitation Company's average collection period, cash conversion period, and inventory turnover period affected financial performance. Secondary data spanning from 2012-2016 was used in the study. This study was conducted with a descriptive research design. Data was evaluated using inferential and descriptive statistics. The findings showed that average collection period has notably and positively associated with return on equity. The present study focused on dairy processing firms in Kenya and investigate WCM practices on registered Kenyan dairy processing firms' financial performance. Stratified simple random samples were used to collect primary data for analysis in an explanation-based research design. However, there is a knowledge and contextual gap as the study only focused on a single unit of analysis (EWASCO).

Kakamega County SME's' growth is attributed to accounts receivable financing, according to Sindai (2018). A descriptive research design was deployed to explore the practices in accounts receivable financing and their relationship on growth measured through profitability. The study population was all the SME's registered by Kakamega County Government. Stratification was based on geographical location and simple random sampling selected 359 SMEs for the study. The main tools for collecting data were questionnaires; however, primary and secondary data have also been collected. For evaluation, both inferential and descriptive statistics were employed whereby accounts receivable financing practices were found to affect SMEs' growth through profitability. The present study explored how debtors' management practices affect Kenyan dairy processing firms' financial performance. Stratification was based on Kenya Dairy

Board classification of dairy processors as mini and major processors. Explanatory research design was adopted for the study.

### **2.3.3 Creditor's Management Practice and Financial Performance**

Habib, Khan and Wazir (2016) investigated how debt impact firm profitability. The study population was the non-financial sector of Pakistan. Panel data between 2003 and 2012 were obtained from a sample of non 340financial firms listed on the Karachi Securities Exchange. The return on assets has been used as a proxy for the dependent variables, while the ratio of short term debt to assets and the total debt to assets have been the independent variables. A random effect regression analysis has been carried out. The return on assets has been used as a proxy for the dependent variables, while the ratio of short term debt to assets and the total debt to assets have been the independent variables. A random effect regression analysis has been carried out. The current study obtained primary data which was evaluated using inferential and descriptive statistics. Explanatory research design was adopted. Net profit margin was used as the proxy for financial performance while creditors management practices constituted the independent variables. However, contextual and conceptual gaps exist as the study was conducted in Pakistan with different operationalization of credit management.

Moodley, Ward and Muller (2017) conducted a study to determine how payables management and the corresponding return to investors are connected. All companies listed on the Johannesburg Stock Exchange were part of the study population. A sample of 160 companies was selected which constituted of 99% market capitalization. The study objective was to determine the effect of absolute change in payable days for all industries on the JSE main board, change in payable days to investors with significant investment in payables on the JSE main board, change in payables days for top 40% for industries with significant investment in payable

days for bottom 40% investors with significant investment in payables on the JSE main board. Financial statements of the company between the period 1985-2014 provided secondary data. A quasi-experimental time series research design was adopted for the study. The result reported a notable positive connection between changes in average payment period and shareholder return. This research investigated how creditors management practices affect Kenyan dairy processing firms' financial performance. Explanatory research design was adopted while descriptive and inferential statistics were applied for data analysis. Primary data was used for the study. However, contextual and methodological gaps have been identified.

Likalama and Kirwa (2017) assessed management of accounts payable's effect on profitability of Agro- firms in Eldoret business center. The target population was 51 agro firms which had 510 respondents. Using purposive sampling method in which 214 respondents were selected. Primary data was collected using questionnaires. The models guiding the study were Baumol, Miller-Orr Model and stone models. A descriptive survey design was deployed while descriptive and inferential statistics evaluated data. Diagnostic tests were, normality, multi collinearity and homoscedasticity tests. A strong connection between management of payables and profitability was reported. Therefore, in order to maximize shareholders value, management needs to effectively and efficiently manage accounts payable. In contrast, the present study focused on dairy processing firms where explanatory research design was employed. Stratified simple random sampling techniques were used for data collection. Both simple and multiple regression models were used to express dependent and independent variables' association. However, the study was limited to Agro-Firms within Eldoret town.

Kalegera (2019) explored how payment delays affected construction firms' financial performance in Vihiga County, Kenya. Population of the study comprised of 40 manufacturing

firms in Vihiga County. Secondary data was collected from a sample size of 32 construction companies which had been selected through stratified random sampling and census survey designs. A cross sectional research approach was preferred. Two dependent variables; profitability and liquidity were used against payment delays as the independent variable. The study concluded that payment delays do not affect financial performance. The study however suggested that payment delays should be reduced as it can potentially affect other business processes. Using net profit margin measurements to assess the effect of creditors' management practices on financial performance within the dairy industry, the present study focused on the dairy industry. Primary data and explanatory research design were used in this study. However, this study looked at a different market segment while also concentrating on a single county thus its results cannot be generalized for the whole country.

Several dairy marketing cooperatives in Kenya were studied by Gitau (2021) for the influence credit management had on their financial performance. Based on the audited financial statements from 2009 to 2018, secondary data was collected. The study targeted 1245 dairy farmers who are members of the 4 dairy cooperatives in Kisii, Nyamira, Bomet and Kericho counties. A census study was then undertaken. A descriptive panel research approach was adopted in determining how credit management affect return on investment of the dairy marketing firms. Applying multiple panel regression models for the data analysis, it was established that management of credit significantly affect return on investment. Based on Kenya Dairy Board registration data, the present study examined dairy processing firms. This study examined how creditors management practices affect net profit margins, which measures financial performance. Stratified random samples were used to provide primary data that was used for descriptive and

inferential analysis. An explanatory research design was adopted. However, the study was limited in scope presenting a knowledge gap.

#### **2.3.4 Cash Management Practice and Financial Performance**

An examination of how SME's in Nyeri town deal with cash management practices has been conducted by Kinyanjui, Kiagu and Riro (2017). The purpose of this study was to analyze the relationship between cash holding practices, cash management technology, and cash pooling practices for SME's in Nyeri town and their financial performance. All 311 registered SMEs were the subjects of the study. A semi structured questionnaire obtained data from a sample of 62 respondents. Cash management practices in Nyeri town had positive impacts on SME's financial performance according to descriptive and inferential analysis. The current study focuses on dairy processing firms in Kenya and adopted explanatory research design to investigate how cash management practices affect financial performance. However, descriptive research design adopted thus presenting a methodological gap.

Nso (2018) examined how cash management and micro-finance institutions' profitability in Cameroon are related. The study was guided by inventory theoretical approach, Miller orr Model and Orgler's Model. Convenient sampling method was utilized to choose a sample of 30 Micro Finance institutions from the targeted population of over 500 licensed Micro Finance institutions in Cameroon. From correlation analysis, it was established that financial performance is determined by the cash management approaches adopted by a firm. The study opined that cash management should be embedded in the organizational culture for enhanced liquidity and long-term profitability. The present study investigates creditors management practices affect Kenyan dairy processing firms' financial performance. A descriptive and inferential statistical approach was employed to analyze the data and deploy an explanation-based research approach.

Primary data was collected by employing stratified simple random sampling technique. However, the study has a contextual gap as it was conducted in Cameroon thus its findings cannot be generalized for Kenya's setting.

Oteyo (2018) assessed how cash management affect SMEs' financial performance in Nakuru County. Specific objectives have been set out in the study; how variables such as bank and cash reconciliation, cash position, cash planning and credit management affect economic performance of SMEs. An exploratory survey design was adopted for the study. In Nakuru County, there are 9666 SMEs registered, and 73 representative samples were selected using quota sampling methods. Primary and secondary data collection methods were utilized where questionnaires and interviews were the main instruments of data collection. Correlation analysis of the data revealed a strong notable association between SMEs' financial performance and cash management. A study was conducted to examine the financial performance of Kenyan dairy companies that practiced cash management. The specific objectives delve on the practices adopted in management of cash. A descriptive and inferential statistical approach was used for data analysis of the study, which employed an explanatory research design. However, the study only focused on SMEs in Nakuru County. The findings therefore cannot be generalized to be applicable to dairy firms across the country.

In Kenya, Soet, Muturi and Oluoch (2018) analyzed how operating cash flow management affects mutual funds' financial performance. An empirical causal study was conducted on the Capital Markets Authority's mutual funds registered in Kenya using a causal research technique. The proxy for the independent was operating cash flow management while ROA and returns on equity were the metrics for the dependent variable. The study used secondary data and utilized descriptive and inferential statistics in evaluation. Agency theory guided the research. The results

pointed that management of operating cash flow notably and positively affect ROA while the effect was insignificant with ROE. The present study used primary data and focused on Kenyan registered dairy processing firms. The specific objective was to examine cash management practices' effects on financial performance. However, the study focused on a different industry thus presenting a contextual gap.

An analysis of the impact of cash management on financial performance of business firms in the Lira District in Northern Uganda was conducted by Eton, Gilbert, Fabian, Bernard and Dennis (2019). Structured questionnaires obtained primary data from a range of business owners who had been classified into different strata groups. The independent variable in the study was financial performance whereas cash flow was the dependent variable. The study findings reported that cash management has an insignificant connection to monetary performance of the business units in Lira District in Northern Uganda. The study indicated that the business owners had good management skills of cash receivable, holding inventory and cash generation. However, the business units had challenges in cash forecasting for the long term. A descriptive research design was used in this study and the topic of this study was the Kenyan dairy industry. Financial performance (Net profit margin) was the dependent variable whereas cash management practices was the independent variable. The data were analyzed using descriptive and inferential statistics. However, a methodological gap exists whereby a cross sectional study approach was adopted.

#### **2.4 Summary of Literature Reviewed and Research Gaps**

This section displays the empirical literature review summary and the research gaps identified. The empirical literature reviewed relates to debtors, inventory, creditors cash management practices. Table 2.1 provides the summary and the research gaps identified.

**Table 2.1: Summary of Literature Reviewed and Research Gaps**

| <b>Author &amp; Year</b>    | <b>Focus</b>   | <b>Outcomes</b>   | <b>Gaps</b>  | <b>Current Study Focus</b>  |
|-----------------------------|--|---|--|---|
| Gitau (2021)                | Influence of credit management on financial performance of dairy marketing cooperatives. | Return on investment depends on how credit is managed in an organization.   | The study was limited in scope presenting a knowledge gap.   | The study analyzed all the components of working capital on dairy processing firms in Kenya.  |
| Karki (2020)                | Inventory management effects on profitability: Evidence from Unilever Nepal Limited.     | Inventory needs prudent management as it directly affects financial performance.                                  | This study was conducted in a different market; Nepal and only focused on inventory management.  | The study was conducted in Kenya to investigate all working capital components on financial performance.  |
| Eton <i>et al.</i> (2019)   | Business firms' financial performance in Northern Uganda and Cash management             | There is an insignificant effect on cash management strategies on monetary performance of business organizations. | A methodological gap exists whereby a cross sectional study approach was adopted.  | A causal analysis of working capital management in relation to financial performance was used in the present study as an explanation for the results. |
| Adekoya & Olumayekun (2019) | Inventory Management and Hospitality firms' Profitability                                | Inventory Management significantly and positively impact earnings per share and dividends per share.              | A methodological gap was identified as the variables were operationalized differently from the present study. Further, the market dynamics in west Africa differ significantly from the Kenyan context | A working capital management evaluation was conducted in the Kenyan dairy industry using an explanation research design.                              |

|                                  |  |  |   |   |
|----------------------------------|--|--|---|---|
|                                  |  |  | thus contextual gap.  |   |
| Muchaendepi <i>et al.</i> (2019) | A study of inventory management in Harare's manufacturing sector and the performance of SMEs       | SMEs in Harare were limited in Inventory management technique which consequently affects the levels of their profitability.  | The definition of SME's limits the size of business units. There is also a contextual gap as the study focused only on SMEs in Zimbabwe.                  | Both large and mini dairy processors registered by the Kenya Dairy Board was investigated.  |
| Mulandi & Ismail (2019)          | Inventory management practices' effects on Kenyan commercial state corporations performance        | Organizations should invest in competitive inventory management systems to enhance efficiency and ultimately their financial performance.                          | There is a knowledge gap as the study was conducted only on state corporations.   | The present study investigated both public (New KCC) and private entities.  |
| Kalegera (2019)                  | Construction firms in Vihiga County have experienced payment delays and poor financial performance | Payment delays have no effect on construction firms' financial performance   | This study looked at a different market segment while also concentrating on a single county thus its results cannot be generalized for the whole country. | Interest is on the dairy sector of the economy with samples selected from the entire population of registered dairy firms in Kenya. |
| NSO (2018)                       | How cash management and MFIs' profitability are associated   | Liquidity and profitability of MFIs depend on cash management techniques being applied.  | The study has a contextual gap as it was conducted in Cameroon thus its findings cannot be generalized for Kenya's setting.                               | Study participants were Kenyan dairy processing firms registered with the government.   |
| Oteyo (2018)                     | Cash management and Kenyan SMEs' financial performance.  | The study established a need for financial managers of SMEs to undergo training on financial management so as to enhance the profitability of their organizations. | The study only focused on SMEs in Nakuru County. The findings therefore cannot be generalized to be applicable to dairy firms across the country.         | The unit of analysis was both large and small enterprises in the dairy sector.  |
| Soet <i>et al.</i> (2018)        | Operating cash flow effect on  | The management of operating  | The study focused on a  | The study   |

|                                |   |   |  |   |
|--------------------------------|---|---|--|---|
|                                | Kenya Mutual funds' financial performance.  | cash flow positively and notably affect mutual funds' ROA while also having an insignificant effect on ROE  | different industry thus presenting a contextual gap.   | focused on registered dairy processing firms in Kenya.  |
| Nwude & Agbo (2018)            | Accounts Receivable management effect on profitability.   | Accounts receivable period negatively and insignificantly impact with firms' financial performance  | The findings do not apply to the Kenyan market due to the different macro-economic factors across the different countries. | The gap was filled by focusing on the Kenyan Dairy industry.  |
| Mori & Richard (2018)          | The effect of Debtors on profitability of SMEs.   | Higher debts negatively affect the profitability of SMEs  | The study focused on SME's.  | Neither large nor small businesses were included in the study.  |
| Munene & Tibbs (2018)          | An analysis of how accounts receivable management affected the financial performance of Embu Water and Sanitation Company | Embu Water and Sanitation Company's (EWASCO's) average collection period is significant and positively correlated with its financial performance. | There is a knowledge and contextual gap as the study only focused on a single unit of analysis (EWASCO).                   | The study focused on all registered dairy processing firms in Kenya   |
| Moodly <i>et al.</i> (2017)    | How payables Management and return to investors are related   | There's a notable positive connection between changes in average payment period and return to investors   | Contextual and methodological gaps have been identified. .   | An explanatory research design was used to study the practices in working capital management in the context of Kenyan dairy processing firms. |
| Likalama <i>et al.</i> (2017)  | Assessing accounts payables management as a determinant of profitability on Agro-firms in Eldoret Business Centre.        | Profitability strongly depends on effective management of payables.   | The study was limited to Agro-Firms within Eldoret town.   | All dairy processing firms within the country was sampled for analysis.   |
| Kinyanjui <i>et al.</i> (2017) | A study of the financial performance of Nyeri Town SMEs in terms of cash  | The financial performance of SMEs in Nyeri town is positively affected by cash  | Descriptive research design adopted thus presenting a  | A causal research design was employed in the present study.   |

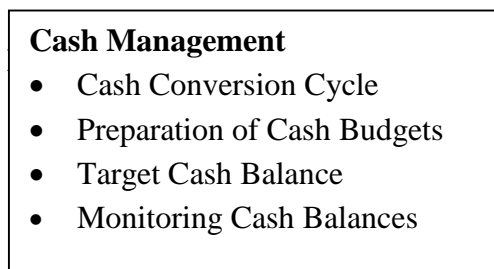
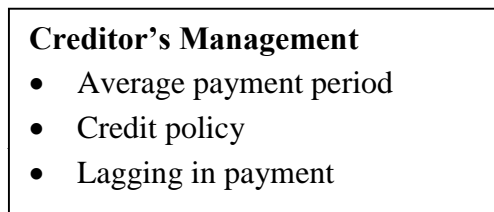
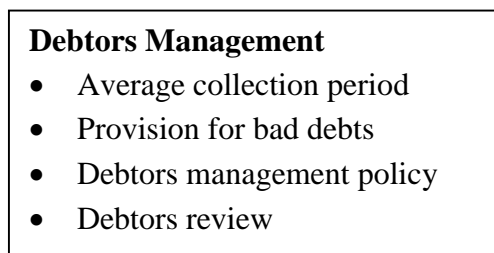
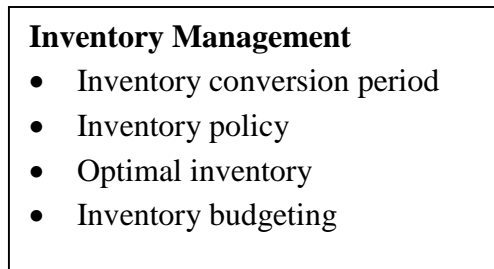
|                             | management practices   | management approaches adopted.                                   | methodological gap.  |  |
|-----------------------------|--|--|--|--|
| Musau <i>et al.</i> (2017)  | Among Kenyan textile manufacturing firms, inventory management affects organizational performance. | Textile firms' performance is influenced by inventory management | A contextual gap was identified as the dynamics of textile industry vary with the dairy sector.  | To examine Working capital management practices and Kenyan dairy processing firms' monetary Performance.                                     |
| Jindal <i>et al.</i> (2017) | How receivable management affect commercial vehicles industry's profitability in India.            | Debtor's turnover notably affects return on capital employed.    | This study was done in a different country, in a different industry and operationalized the independent variables differently from the present study thus a contextual and conceptual gap. | The study focused on the Kenyan dairy industry to investigate working capital management practices as it relates with financial performance. |
| Habib <i>et al.</i> (2016)  | How debt impact firm profitability. The study population was the non-financial sector of Pakistan  | Debt and profitability have a notable and negative connection.   | Contextual and conceptual gaps exist as the study was conducted in Pakistan with different operationalization of credit management.  | The study comprehensively addressed all working capital components and focused on the Kenyan dairy industry.                                 |

**Source: Empirical Literature Review (2016-2021)**

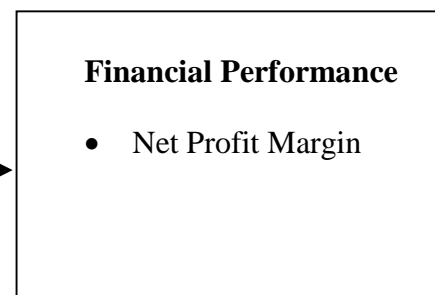
## 2.5 Conceptual Framework

This section presents a conceptual framework developed from the reviewed empirical and theoretical literature to show how independent and dependent variables are associated. Figure 2.1 depicts the conceptual framework.

### Independent Variables



### Dependent Variable



Source: Researcher (2023)

After conducting a comprehensive literature review, a conceptual framework was developed to represent the study's variables. The conceptual framework defines financial performance in terms of the net profit margin while determining financial performance are the independent variables; Inventory Management practices such as, inventory conversion period, optimal inventory levels and inventory budgeting, Debtors Management practices that include average collection period, use of collateral, credit policies and extension of discounts, Creditors Management Practices such as average payment period, quantity discounts and lagging in payments, and Cash Management Practices such as the cash conversion cycle, cash budgeting, optimal cash balances and investment of idle cash balances.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

Research methodology, which is composed of the research design population for a study, sample and sampling procedure, data collection process, validity of scientific instruments, reliability and statistical analysis are addressed in this chapter.

### **3.2 Research Design**

This study adopted descriptive research design. According to Kim, Sefcik and Bradway (2017) descriptive research design is a methodology that focuses on observing and describing the characteristics of a population or phenomenon without manipulating variables. One of the key advantages of descriptive research design according to Nassaji (2020) is that it allows researchers to gather a large amount of information about a topic, which can then be used to identify patterns, trends, and relationships. This could help researchers to generate hypotheses for further research, or to inform decision-making in a particular field. Therefore, descriptive research design was used to collect data through questionnaires in order to provide a detailed description of the subject being studied.

### **3.3 Target Population**

Mugenda and Mugenda (2003) Objects, events, or individuals in a particular field of inquiry that have common attributes are considered as a population. Based on data collected by the Kenya Dairy Board, the study examined all dairy processing companies registered with them. The board has registered 40 major processors and 181 mini dairy firms (Appendix II). As a result, the unit of analysis consisted of 221 dairy processing firms based in Kenya, whereas the unit of observation consisted of 221 finance managers. Table 3.1 present the distribution of the target population.

**Table 3.1: Target Population**

| Category     | Population Size | Percentage |
|--------------|-----------------|------------|
| Processor    | 181             | 18         |
| Mini – dairy | 40              | 82         |
| <b>Total</b> | <b>221</b>      | <b>100</b> |

**Source: Kenya Dairy Board (2023)**

### 3.4 Sampling Design and Sampling Size

This study used stratified random sampling technique in data collection. According to Saleemi (2008) the method is appropriate for data collection when the population is not homogenous and also affords every item of the population an equal chance of being included in the sample. This ensured that a representative sample is selected that facilitated accurate generalization for the whole population (Lavrakas, 2008). The method is ideal in research work as it provides unbiased information for making informed judgements (Payne & Payne, 2011). Kothari (2012) recommends not using too large or too small samples. This study was conducted using a 90% confidence level and 69 dairy companies as a sample size according to Shema (2017);

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

Where n = Sample size

N = Population size

e = Level of precision

Yamane (1967)

Therefore, with a population size of 221 and 90% confidence level, the sample size was determined as;

$$n = \frac{221}{1 + 221 \times 0.1^2}$$

$$= 69$$

Table 3.2 shows the sample size distribution. In this study, the sample size of 26 processors and 116 mini-dairies was established through a weighted average of the predetermined sample size of 142 units.

**Table 3.2: Sample Size Distribution**

| Category     | Number of Firms | Sample Size | Percentage |
|--------------|-----------------|-------------|------------|
| Processor    | 40              | 12          | 17         |
| Mini – dairy | 181             | 57          | 83         |
| <b>Total</b> | <b>221</b>      | <b>69</b>   | <b>100</b> |

**Source: Kenya Dairy Board (2023)**

### 3.5 Data Collection Instrument

We collected primary data using a structured questionnaire that participants self-administered. A hand-delivered questionnaire was given to the respondents. Data were collected by using structured questionnaires as the primary source of information (Appendix II). Primary data was chosen for this study because apart from New KCC, dairy firms in the country are privately owned entities and therefore, in order to guarantee objectivity of such a study, primary data is the best for the data collection process (Cooper & Schindler 2011). The questionnaire was divided into six sections. Part A collected general information and focused on the respondents. Part B collected information on inventory management practices. Part C covered debtor’s management practices, Part D covered creditors management practices, Part E covered cash management practices and Part F collected estimates of financial performance, that is, net profit after tax and annual sales turnover. The questionnaires had a five-point Likert score providing measures between strong agreement to strong disagreement.

### **3.6 Pilot Study**

A pilot study was done to ascertain the research tool's reliability and validity. This is as recommended by Mugenda and Mugenda (2003). The pilot test was used to assess clarity of the questionnaire items and thus refine the questionnaire in order to eliminate biasness and enhance accuracy for data recording. The respondents in the pre-testing process were not part of the selected sample to limit influenced conclusions due to respondents' sensitization (Mugenda & Mugenda, 2003). A pilot group of 11 respondents, who constitute 5% of the study population, was selected for this study on stratified sampling basis. This is in line with Mugenda and Mugenda (2003) who recommend a range of between 1% - 10%.

#### **3.6.1 Validity of Research Instrument**

The validity of research instruments refers to their ability to measure what they are supposed to measure (Jankowicz, 2005). Inferences drawn from a study are valid as long as they are accurate and meaningful (Mugenda & Mugenda, 2003). The researcher tested for construct and content validity. According to Greener (2008), construct validity ensures that a research method measures what the researcher intends to be measured. Factor analysis was used to validate the hypothetical constructs. The research questionnaires were given to experts in the field of study including lecturers of accounting and finance, as well as the supervisor as recommended by Soaga (2012). Face validity also referred to as content validity was assessed through comparison of expectation to the concept.

#### **3.6.2 Reliability of Research Instrument**

Research instruments are measured for their reliability by how consistent they are over repeated trials (Mugenda & Mugenda, 2008). The researcher tested for internal consistency as a measure of reliability using Cronbach's alpha co-efficient. A score above 0.7 indicates high reliability,

0.5-0.7 indicates sufficient consistency and a score below 0.5 reflects low consistency in the data collection instruments. For this study and according to Cooper and Schindler (2008) a cut of point of 0.7 was considered.

### **3.7 Data Collection Procedure**

Self-administered questionnaires were hand delivered to the respondents. The questionnaires were distributed after obtaining a letter of approval from Kenyatta University and a research permit from NACOSTI. This was necessary so as to inform the respondents that the research is purely for academic purposes. The financial managers or senior management personnel involved in financial matters of the organizations were the targeted respondents. 96 questionnaires were distributed then collected after the agreed time duration. The filled responses were collected and used for data analysis.

### **3.8 Data Analysis and Presentation**

Data analysis entails modeling and transforming raw data in an orderly manner to enable decision making by highlighting important information (Cooper & Schindler, 2003). A closed ended questionnaire provided Likert scores which was coded for both descriptive and inferential statistical analysis. Descriptive statistics includes the mean, frequencies, percentages and standard deviation while inferential statistics includes Pearson correlation and multiple regression. Descriptive statistics provide a concise picture that facilitates easy understanding and comparison of data in a research work (Saleemi, 2008) while correlation analysis will be used to establish how the independent and dependent variables are related. Kothari (2004) posits that multiple regression analysis is important in exploring the cause-effect relationship between variables. This study was in line with Karungu's (2019) hypothesis, which had a 95% level of

confidence, which is ideal for social sciences. In order to analyze and present the data, SPSS version 24 was used.

### **3.9 Model Specification**

Linear regression model was developed for the study on which the research hypothesis was tested. A multiple regression model was then developed from the simple linear regression models and was as follows:

$$Y_{it} = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

$Y_{it}$  = Financial performance of the company i period t

$\beta_0$  = Intercept of Equation

$X_1$  = Inventory management

$X_2$  = Debtors Management

$X_3$  = Creditors management

$X_4$  = Cash Management

$\varepsilon$  = Error term

$\beta_{1-4}$  = regression coefficient

### **3.10 Operationalization and Measurement of Study Variables**

The study had four independent variables which include debtors' management inventory management, creditors and cash management. Financial performance is the dependent variable.

Table 3.3 shows how the variables will be operationalized.

**Table 3.3: Operationalization and Measurement of Study Variables**

| Variable              | Type                 | Operationalization  | Indicators  | Measurement Scale    |
|-----------------------|----------------------|---|---|----------------------|
| Debtors management    | Independent variable | It was measured by the methods an organization uses to administer and control its accounts receivables.   | <ul style="list-style-type: none"> <li>• Average collection period</li> <li>• Credit policy</li> <li>• Incentives for payment</li> <li>• Collateral</li> </ul>          | 5Point Likert Scale  |
| Creditors management  | Independent variable | This was assessed by the approaches and strategies used to efficiently manage accounts payable in order to effectively leverage on accounts payable | <ul style="list-style-type: none"> <li>• Payment period</li> <li>• Lagging in payment</li> <li>• Penalties on late payments</li> <li>• Optimal credit levels</li> </ul> | 5 Point Likert Scale |
| Inventory management  | Independent variable | It was measured by the approaches a firm uses to ensure its material needs and costs are well taken care of   | <ul style="list-style-type: none"> <li>• Inventory conversion period</li> <li>• Holding costs</li> <li>• Optimal inventory</li> <li>• Inventory budgets</li> </ul>      | 5 Point Likert Scale |
| Financial performance | Dependent variable   | The profitability of a dairy firm based on its total assets   | $\text{Net profit margin} = \frac{\text{Net profit after tax}}{\text{annual sales turnover}} \times 100$  | Ratio                |

Source: Researcher (2023)

### 3.11 Diagnostic Tests

Three Diagnostics tests were performed to ensure the reliability of the regression model. These are Normality, Linearity and Multi-Collinearity.

#### 3.11.1 Normality Test

An independent and dependent variable are tested for normality by performing a normality test (2010). The test is important for validating the linear regression model of the variables in the

study Berut (2020). For accurate generalizations about the population from samples, random samples have to follow a normal distribution (Mugenda & Mugenda 2003). This was tested using the values of skewness and kurtosis Myoung (2008). The null hypothesis to be tested was;  
H<sub>0</sub>: Sample statistics do not follow the normal distribution.

### **3.11.2 Linearity Test**

Linearity refers to the linear relationship that exists between study's variables in regression models Hair, Black, Babin & Anderson (2010). The Pearson correlation co-efficient was used to test linearity where values greater than 0.05 indicate linearity (Karungu, 2019). Using SPSS, linearity can also be established by the scatter plots generated from the standardized of independent and dependent variables (Pallant , 2010). The null hypothesis to be tested was;  
H<sub>0</sub>: The dependent variable is not linearly related to the independent variables

### **3.11.3 Multicollinearity Test**

Multi collinearity refers to the correlation between independent variables in a multivariate regression model which consequently subverts statistical significance of the study variables. Multi Collinearity was assessed using the Variance Inflation Factor and Tolerance factor as recommended by Kothari (2005). A mean variance inflation factor below 5 was considered acceptable (Odhiambo & Mokori 2019). The null hypothesis to be tested was;  
H<sub>0</sub>: There is no collinear relationship between the variables of the study

## **3.12 Ethical Consideration**

The term ethics refers to the standards and conduct that define what constitutes acceptable and unacceptable research conduct (Resnik, Elliot & Miller 2015). According to Mugenda and Mugenda (2003), ethical issues in research guarantee the credibility and integrity of a research process. To obtain consent of the respondent, the researcher explicitly stated that the research

process is purely for academic purposes and further explain the benefits of the research findings. The researcher also guaranteed confidentiality and anonymity of respondent as advocated by Cooper and Schindler (2014). The questionnaire was structured to obtain information on the study variables in a clear, easy and understandable way. The academic work of other scholars has been duly acknowledged and referenced.

## CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSIONS

### 4.1 Introduction

A detailed description of the study's objectives and results is provided in this chapter. Each of the variables was presented as descriptive, inferential, and frequency information. The researcher identified key findings and compared them with literature and findings from other academics and scholars to assess consistency.

### 4.2 Response Rate

Results on the study response rate are presented in Table 4.1.

**Table 4.1: Response Rate**

| Category                    | Frequency | Percentage |
|-----------------------------|-----------|------------|
| Questionnaires Returned     | 59        | 85         |
| Questionnaires Not Returned | 10        | 15         |
| <b>Total</b>                | <b>69</b> | <b>100</b> |

**Source: Research Data (2023)**

Among the 59 study participants out of 69 possible, a response rate of 85 was obtained according to Table 4.1. In addition to follow-up activities, the researcher was successful in achieving the response rate. It is recommended to analyze and publish data with a return rate of 50%, 60%, or 70% based on Babbie (2004). Compared to Babbie (2004) standards, the response rate was excellent.

### 4.3 Reliability Test Results

Reliability indicates the consistence and accuracy of the measurement tool, that is, the possibility and the extent of getting similar results from the measurement tool given that the tool is used several times on the same subjects and at different times. The study relied on Cronbach alpha as

a measure of reliability. Cronbach alpha varies between  $0 \pm 1$ . Davick (2014) recommended a value of greater than or equal to 0.7. The finding of each variable is presented in Table 4.2.

**Table 4.2: Reliability Test**

| <b>Variable</b>                | <b>Cronbach's Alpha</b> | <b>Comment</b>  |
|--------------------------------|-------------------------|-----------------|
| Inventory management practices | 0.769                   | Reliable        |
| Debtors management practices   | 0.848                   | Reliable        |
| Creditors management practices | 0.797                   | Reliable        |
| Cash management practices      | 0.812                   | Reliable        |
| Financial performance          | 0.824                   | Reliable        |
| <b>Average</b>                 | <b>0.810</b>            | <b>Reliable</b> |

**Source: Research Data (2023)**

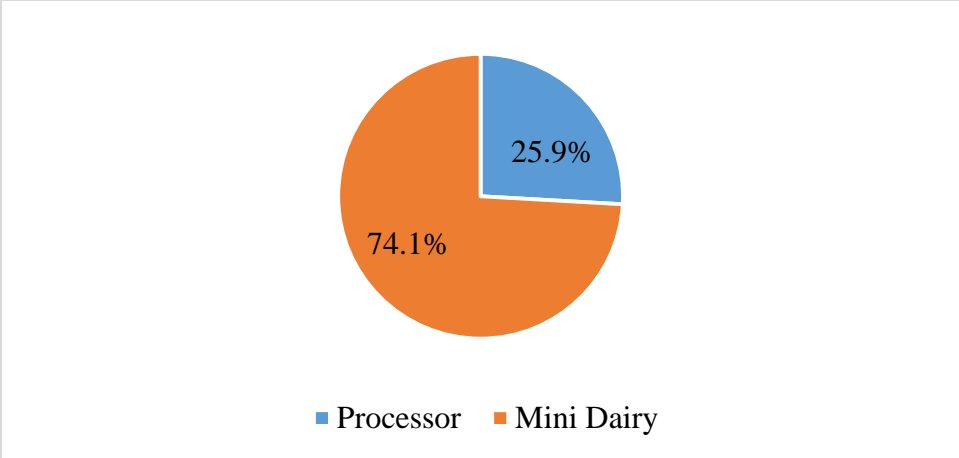
As indicated in Table 4.2, debtors management practices had the highest Cronbach alpha of 0.848, followed by financial performance with alpha of 0.824, cash management practices with 0.812, creditors management practices with alpha of 0.797 and inventory management practices with alpha of 0.769, in overall the measurement tool had Cronbach alpha of 0.810. All the Cronbach alpha values were greater than 0.7, thus the questionnaire was deemed to be reliable and fit to be used for further analysis. A Cronbach alpha of greater than 0.7 is indicative of a reliable research instrument, according to Cooper and Schindler (2008).

#### **4.4 General Information**

General information regarding the type, registration, and number of years of operation of dairy firms is presented in this subsection.

##### **4.4.1 Type of the Dairy Firm**

Study participants were assessed by the researcher for the type of dairy firm they worked for. Figure 4.1 illustrates these findings.



**Figure 4.1: Type of the Dairy Firm**

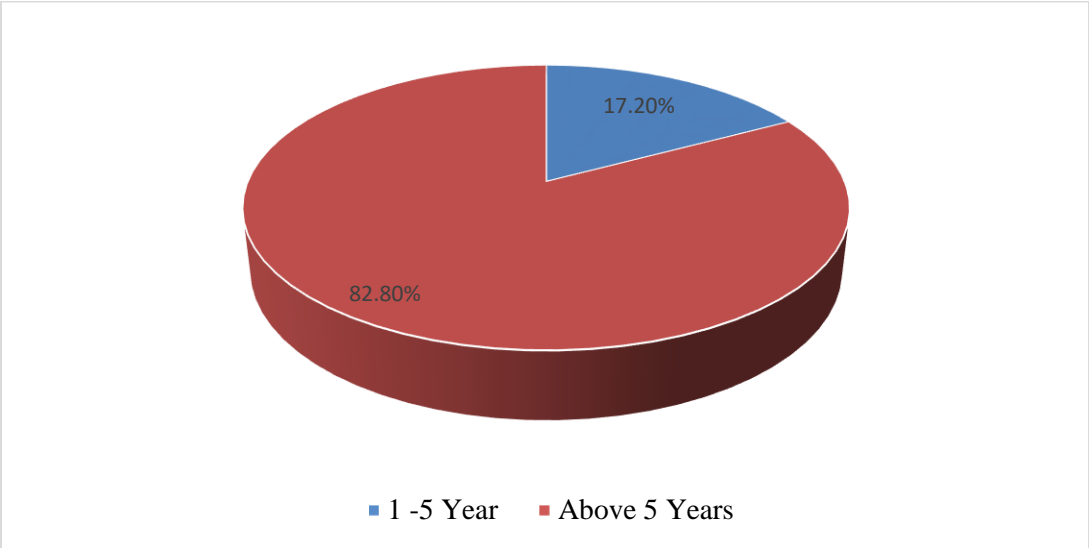
**Source: Research Data (2023)**

As illustrated in Figure 4.1, the vast majority of participants (74.1%) stated they were mini-dairies, while 25.9% indicated they were processors. Kenya's dairy firms were overwhelmingly mini dairies, based on this data.

**4.4.2 Year of Operation**

Respondents were asked to indicate the number of years that their firm have been in operation.

Figure 4.2 presents the findings of the study.



## Figure 4.2: Years of Operation

Source: Research Data (2023)

According to Figure 4.2 of the study, the vast majority of respondents (82.8%) reported their firm has been operating for more than five years, whereas 17.2% indicated that it has been operating for less than five years. According to this, the majority of dairy firms have been operating for over five years.

## 4.5 Descriptive Analysis of Study Variables

Several independent variables are presented here, including inventory management practices, debtors' management practices, creditors' management practices, and cash management practices.

### 4.5.1 Inventory Management Practice

This study examined whether dairy processing firms in Kenya practice various aspects of inventory management practices. Table 4.3 summarizes the findings.

**Table 4.3: Descriptive Statistics on Inventory Management Practices**

| Statement   | Mean | Std. Dev |
|---|------|----------|
| The firm maintains optimal levels of inventory.               | 4.12 | 0.879    |
| Inventory management is automated.                            | 3.85 | 1.149    |
| The firm prepares inventory budgets.                          | 4.56 | 0.438    |
| Inventory constitutes a significant amount of current assets. | 4.59 | 0.409    |
| The firm has a high inventory turnover.                       | 4.38 | 0.617    |
| The firm tracks inventory by batch and expiry date.           | 4.53 | 0.477    |
| Lean inventory is maintained.                                 | 4.08 | 0.901    |
| The firm experiences stock out costs.                         | 4.18 | 0.819    |
| The firm has stable supplies of raw materials                 | 3.58 | 1.420    |
| Inventory levels are reviewed on a regular basis              | 3.91 | 1.090    |

|  |             |              |
|--|-------------|--------------|
| The firm forecasts its demand              | 4.28        | 0.719        |
| <b>Average mean and standard deviation</b> | <b>4.19</b> | <b>0.811</b> |

**Source: Research Data (2023)**

The results presented in Table 4.3 indicate that the average mean and standard deviation score was 4.19 and 0.811 respectively which show the respondents' agreement on statements describing the effect of inventory management practice on the financial performance of dairy processing firms in Kenya based on likert scale. The finding concurs with Musau, Namusonge, Makokha and Ngeno (2017) analyzed inventory management's effect on organizational performance of Kenyan textile manufacturing firms. The study revealed that the Textile companies' performance has been shown to be influenced by inventory management.

The respondents strongly agreed on the statements that; inventory constitutes a significant amount of current assets (M=4.59, SD=0.409), the firm prepares inventory budgets (M=4.56, SD=0.438), the firm tracks inventory by batch and expiry date (M=4.53, SD=0.477). The finding concur with a study by Adekoya and Olumayokun (2019) investigated how inventory management and profitability were affected by the Nigerian Stock Exchange listing of hospitality firms. According to the research, inventory management contributes significantly to earnings per share and dividends per share of Nigerian hospitality companies listed on the stock market.

The respondents agreed on the statements that; the firm has a high inventory turnover (M=4.38, SD=0.617), the firm forecasts its demand (M=4.28, SD=0.719), the firm experiences stock out costs (M=4.18, SD=0.819), the firm maintains optimal levels of inventory, (M=4.12, SD=0.879), lean inventory is maintained (M=4.08, SD=0.901), inventory levels are reviewed on a regular basis (M=3.91, SD=1.090), inventory management is automated (M=3.85, SD=1.149), the firm has stable supplies of raw materials (M=3.58, SD=1.420). The finding agree with Muchaendepi,

Mbohwa, Hamandishe, and Kanyepe (2019) study which investigated how inventory management affects the financial performance of SMEs in the manufacturing sector in Harare, Zimbabwe. The inventory management was strongly linked to financial performance.

#### 4.5.2 Debtor's Management Practice

In order to determine whether dairy processing firms in Kenya practice various aspects of debtor's management, the researcher examined their practices. Table 4.4 summarizes the findings.

**Table 4.4: Descriptive Statistics on Debtors Management Practices**

| <b>Statement</b>  | <b>Mean</b> | <b>Std. Dev</b> |
|---|-------------|-----------------|
| The firm makes credit sales.                              | 4.50        | 0.399           |
| The firm collects its debts within a good period of time. | 4.61        | 0.379           |
| The firm conducts regular credit analysis of customers.   | 4.58        | 0.417           |
| Credit period affects the firm's sales volume.            | 3.57        | 1.428           |
| Trade credit should be discouraged.                       | 4.23        | 0.779           |
| The firm offers incentives for prompt payment.            | 4.52        | 0.479           |
| A stringent credit policy is adopted.                     | 3.93        | 1.068           |
| Factoring of receivables should be encouraged.            | 3.57        | 1.428           |
| Cash discount is offered to customers.                    | 4.22        | 0.778           |
| Bad debts constitute a significant amount of total sales. | 4.51        | 0.488           |
| Debtors affect operational efficiency                     | 3.67        | 1.322           |
| <b>Average mean and standard deviation</b>                | <b>4.17</b> | <b>0.815</b>    |

**Source: Research Data (2023)**

The results presented in Table 4.4 indicate that the average mean and standard deviation score was 4.17 and 0.815 respectively which show the respondents' agreement on statements describing the effect of debtor's management practice on the financial performance of dairy processing firms in Kenya based on likert scale. The finding is in line with Jindal, Jain and

Vartika (2017) who conducted study to assess how receivable management affect commercial vehicles industry's profitability in India and established that debtor's turnover ratio notably and positively impacted profitability of commercial vehicle industry in India.

The respondents strongly agreed on the following statements; the firm collects its debts within a good period of time (M=4.61, SD=0.379), The firm conducts regular credit analysis of customers (M=4.58, SD=0.417), the firm offers incentives for prompt payment (M=4.52, SD=0.479), Bad debts constitute a significant amount of total sales (M=4.51, SD=0.488), the firm makes credit sales (M=4.50, SD=0.399). The finding concur with Mori and Richard (2018) who investigated how debtors affect performance of SMEs in Tanzania. The study findings were that higher debts negatively affect profitability of SMEs.

The respondents agreed on the following statements; trade credit should be discouraged (M=4.23, SD=0.7798), cash discount is offered to customers (M=4.22, SD=0.778), a stringent credit policy is adopted (M=3.93, SD=1.063), debtors affect operational efficiency (M=3.67, SD=1.322), credit period affects the firm's sales volume (M=3.57, SD=1.428). The finding agree with the contribution of accounts receivable period to the profitability of quoted companies in Nigeria was examined by Nwude and Agbo (2018). The study findings revealed an insignificant negative connection between Nigerian Insurance companies' profitability and accounts receivable period.

#### **4.5.3 Creditor's Management Practice**

As part of the study, the researcher examined the practices of dairy processing firms in Kenya that relate to creditor management. Table 4.5 summarizes the findings.

**Table 4.5: Descriptive Statistics on Creditors Management Practices**

| <b>Statement</b>   | <b>Mean</b> | <b>Std. Dev</b> |
|--|-------------|-----------------|
| The firm seeks longer payment periods from suppliers.                        | 4.29        | 0.705           |
| Credit policies affect liquidity position of the firm.                       | 3.80        | 1.19            |
| The firm applies the principle of lagging when making payments to creditors. | 4.58        | 0.418           |
| The firm utilizes credit facilities from suppliers.                          | 3.94        | 1.044           |
| The firm suffers interest costs due to late payment to suppliers.            | 4.36        | 0.637           |
| The firm reviews its credit policies to ensure optimal leverage.             | 4.55        | 0.449           |
| The firm utilizes trade discount available on timely payment.                | 4.63        | 0.367           |
| The firm has a stable accounts payable turnover ratio.                       | 3.94        | 1.057           |
| The firm seeks favorable credit terms from its suppliers.                    | 4.20        | 0.799           |
| Payment to creditors affect stability of supplies.                           | 4.57        | 0.428           |
| <b>Average mean and standard deviation</b>                                   | <b>4.29</b> | <b>0.709</b>    |

**Source: Research Data (2023)**

The results presented in Table 4.5 indicate that the average mean and standard deviation score was 4.29 and 0.709 respectively which show the respondents' agreement on statements describing the effect of creditor's management practice on the financial performance of dairy processing firms in Kenya based on likert scale. The finding agree with Moodley, Ward and Muller (2017) research on how payables management and the corresponding return to investors are connected. The result reported a notable positive connection between changes in average payment period and shareholder return.

The respondents strongly agreed on the following statements; the firm utilizes trade discount available on timely payment (M=4.63, SD=0.367), the firm applies the principle of lagging when making payments to creditors (M=4.58, SD=0.418), payment to creditors affect stability of supplies (M=4.57, SD=0.428), the firm reviews its credit policies to ensure optimal leverage

(M=4.55, SD=0.449). The finding concur with Kalegera (2019) research on explored how payment delays affected construction firms' financial performance in Vihiga County, Kenya. The study concluded that payment delays do not affect financial performance. The study however suggested that payment delays should be reduced as it can potentially affect other business processes.

The respondents agreed on the following statements; the firm suffers interest costs due to late payment to suppliers (M=4.36, SD=0.637), the firm seeks longer payment periods from suppliers (M=4.29, SD=0.705), The firm seeks favorable credit terms from its suppliers (M=4.20, SD=0.799), the firm utilizes credit facilities from suppliers (M=3.94, SD=1.044), credit policies affect liquidity position of the firm (M=3.80, SD=1.19). The finding agree with Likalama and Kirwa (2017) research on management of accounts payable's effect on profitability of Agro- firms in Eldoret business center. A strong connection between management of payables and profitability was reported.

#### **4.5.4 Cash Management Practice**

This study examined dairy processing firms' cash management practices in Kenya in order to establish if they were similar. In Table 4.6, the findings are presented.

**Table 4.6: Descriptive Statistics on Cash Management Practices**

| <b>Statement</b>  | <b>Mean</b> | <b>Std. Dev</b> |
|---|-------------|-----------------|
| The business maintains optimal cash balances                      | 3.47        | 1.529           |
| The business utilizes cash budgeting                              | 4.20        | 0.792           |
| The firm experiences a decreasing cash conversion cycle overtime. | 4.59        | 0.409           |
| The firm maintains speculative cash balances.                     | 4.52        | 0.477           |
| The firm reconciles cash transactions on a regular basis.         | 4.61        | 0.388           |

|  |             |              |
|--|-------------|--------------|
| The firm utilizes bank overdraft facilities.                     | 3.95        | 1.049        |
| There is adequate cash planning and forecasting by the business. | 4.05        | 0.948        |
| The firm keeps adequate records of cash management               | 4.11        | 0.899        |
| The firm utilizes centralized banking                            | 4.06        | 0.897        |
| <b>Average</b>   | <b>4.17</b> | <b>0.821</b> |

**Source: Research Data (2023)**

The results presented in Table 4.6 indicate that the average mean and standard deviation score was 417 and 0.821 respectively which show the respondents' agreement on statements describing the effect of cash management practice on the financial performance of dairy processing firms in Kenya based on likert scale. The finding agrees with Nso (2018) research how cash management and micro-finance institutions' profitability in Cameroon are related. From correlation analysis, it was established that financial performance is determined by the cash management approaches adopted by a firm.

The statements that were strongly agreed by the respondents were; the firm reconciles cash transactions on a regular basis (M=4.61, SD=0.388), the firm experiences a decreasing cash conversion cycle overtime (M=4.59, SD=0.409), the firm maintains speculative cash balances (M=4.52, SD=0.477). The finding concurs with Oteyo (2018) research on how cash management affect SMEs' financial performance in Nakuru County. Correlation analysis of the data revealed a strong notable association between SMEs' financial performance and cash management.

The statements that were agreed by the respondents were; the business utilizes cash budgeting (M=4.20, SD=0.792), The firm utilizes centralized banking (M=4.06, SD=0.897), The firm keeps adequate records of cash management (M=4.11, 0.899), there is adequate cash planning and forecasting by the business (M=4.05, SD=0.948), the firm utilizes bank overdraft facilities (M=3.95, SD=1.049), the business maintains optimal cash balances (M=3.47, SD=1.529). The

finding agree with Soet, Muturi and Oluoch (2018) research on how operating cash flow management affects mutual funds' financial performance. The results pointed that management of operating cash flow notably and positively affect ROA while the effect was insignificant with ROE.

#### 4.5.5 Financial Performance

It was the objective of the researcher to determine whether dairy firms in Kenya have been able to realize various performance indicators in terms of financial performance. As shown in Table 4.7, the findings were highlighted.

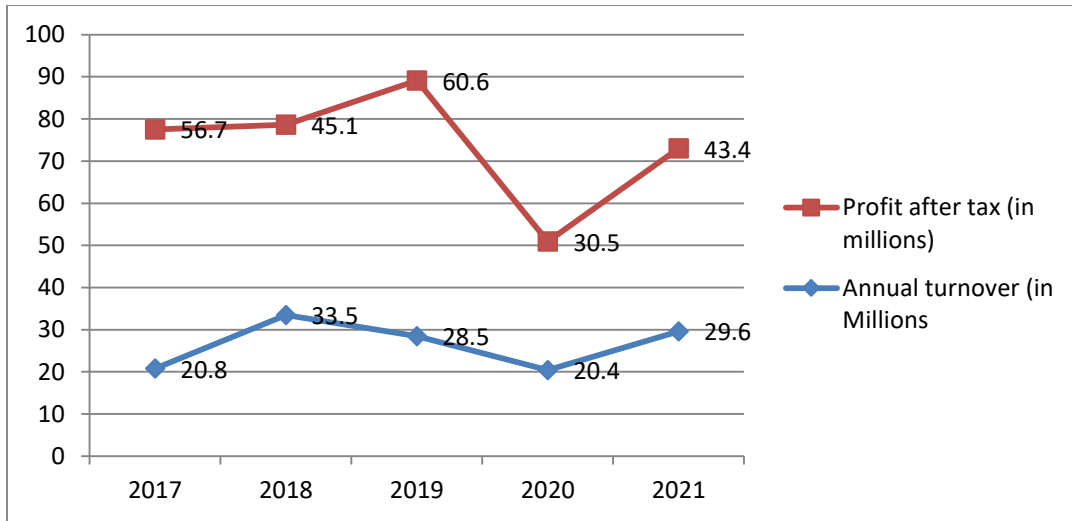
**Table 4.7: Financial Performance**

| <b>Year</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Mean</b> | <b>Std. Deviation</b> |
|-------------|----------------|----------------|-------------|-----------------------|
| 2017        | 0.017          | 0.070          | 0.045       | 0.023                 |
| 2018        | 0.001          | 0.081          | 0.050       | 0.024                 |
| 2029        | 0.022          | 0.101          | 0.053       | 0.027                 |
| 2020        | 0.047          | 0.734          | 0.282       | 0.217                 |
| 2021        | 0.073          | 0.092          | 0.082       | 0.009                 |

**Source: Research Data (2023)**

A comparison of dairy firms' financial performance from 2017 to 2021 is presented in Table 4.7. Financial performance was derived from net profit margin. Based on the study findings in Table 4.7, 2020 portrayed the highest financial performance with a mean of 28.2% while 2017 recorded the lowest financial performance of 4.5%.

The respondents were further asked to indicate the organizational financial trends for the last 5 years in terms of profit after tax and annual turnover. The findings are presented in Figure 4.3.



**Figure 4.3: Net Profit Margin**

**Source: Research Data (2024)**

The results presented in Figure 4.3 shows that the profit after tax was 56.7 million Kshs in the year 2017, this trend kept on rising through the year 2018 and 2019 reaching a high of 60.6 million Kshs. However, there was high decline in the year 2020 which could be attributed to the effect of COVID-19. The finding also show that the annual turnover was 20.8 million Kshs in the year 2017, the organization had an almost a constant increase with a slight drop in the year 2020.

## 4.6 Inferential Statistics of Study Variables

### 4.6.1 Correlation Analysis

In terms of association and strength of association, correlation findings explain the relationship between two study variables. There is a range of outcomes ranging from -1 to 1, with -1 suggesting a strongly negative correlation and +1 suggesting a strongly positive correlation. An inclination to zero indicates a weak association between the factors being studied and zero indicates no link between them. According to Pearson's Correlation Analysis, the results are shown in Table 4.11.

**Table 4.8: Correlation Analysis Results**

|                           |                 | Financial<br>performan<br>ce | Inventory<br>managem<br>ent | Debtors<br>Managem<br>ent | Creditors<br>managem<br>ent | Cash Ma<br>nagement |
|---------------------------|-----------------|------------------------------|-----------------------------|---------------------------|-----------------------------|---------------------|
| Financial perfor<br>mance | Pearson         | 1                            |                             |                           |                             |                     |
|                           | Correlation     |                              |                             |                           |                             |                     |
|                           | Sig. (2-tailed) |                              |                             |                           |                             |                     |
|                           | N               | 59                           |                             |                           |                             |                     |
| Inventory mana<br>gement  | Pearson         | .350**                       | 1                           |                           |                             |                     |
|                           | Correlation     |                              |                             |                           |                             |                     |
|                           | Sig. (2-tailed) | .007                         |                             |                           |                             |                     |
|                           | N               | 59                           | 59                          |                           |                             |                     |
| Debtors<br>Management     | Pearson         | .534**                       | .029                        | 1                         |                             |                     |
|                           | Correlation     |                              |                             |                           |                             |                     |
|                           | Sig. (2-tailed) | .000                         | .825                        |                           |                             |                     |
|                           | N               | 59                           | 59                          | 59                        |                             |                     |
| Creditors mana<br>gement  | Pearson         | .369**                       | .706**                      | .020                      | 1                           |                     |
|                           | Correlation     |                              |                             |                           |                             |                     |
|                           | Sig. (2-tailed) | .004                         | .000                        | .880                      |                             |                     |
|                           | N               | 59                           | 59                          | 59                        | 59                          |                     |
| Cash Managem<br>ent       | Pearson         | .587**                       | .615**                      | .180                      | .620**                      | 1                   |
|                           | Correlation     |                              |                             |                           |                             |                     |
|                           | Sig. (2-tailed) | .000                         | .000                        | .172                      | .000                        |                     |
|                           | N               | 59                           | 59                          | 59                        | 59                          | 59                  |

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

Table 4.8 shows that the relationship between inventory management practices and profitability of dairy companies in Kenya, as shown by Pearsons  $r = -0.83$ , has been very favourable. A significant relationship was shown by  $p=0.35 < 0.05$ . The Pearsons  $r = 0.534$  showed that there is a very favourable relationship between debtors' management practices and the performance of dairy undertakings in Kenya. The relationship was significant as shown by  $p=0.007 < 0.05$ . In Kenya, further debtor management practices have shown a strong relationship with the financial performance of dairy undertakings as measured by ( $R = 0.369$ .) The relationship was significant as shown by  $p=0.04 < 0.05$ . A strong correlation was also found between cash management

practices and financial performance of dairy firms in Kenya ( $r = 0.587$ ). The relationship was significant as shown by  $p=0.000 < 0.05$ .

These findings are consistent with those of Karki (2020) who explored how inventory management affected profitability of Uniliver Nepal Limited and showed that the management of inventory significantly affects profitability. The results also agree with Sindai (2018) who tried establishing how accounts receivable financing affect the growth of SME's in Kakamega County and revealed that accounts receivable financing practices were found to affect SMEs' growth through profitability. The study findings are consistent with Gitau (2021) who studied credit management's influence on financial performance of dairy marketing cooperatives in Kenya and established that management of credit significantly affect return on investment

#### **4.7 Diagnostic Test**

The Study applied the relapse demonstrative test to assess the presumptions made. This test assumes a relevant part in deciding if any suppositions of the relapse have been abused in any capacity. Any such infringement of the presumptions may prompt insufficiency of the model being used.

##### **4.7.1 Normality Test Results**

To test for normality, the researcher used the Shapiro-Wilk test. Below are the null hypotheses as well as the alternative hypotheses.

H<sub>0</sub>: the secondary data was not normal.

H<sub>1</sub>: the secondary data is normal

A p-value more than 0.05, would lead to rejecting the null hypothesis and vice versa. Table 4.9 summarizes the outcomes of normality test

**Table 4.9: Linearity Test of Assumption**

| Variables                      | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |      |      |
|--------------------------------|---------------------------------|----|------|--------------|------|------|
|                                | Statistic                       | Df | Sig. | Statistic    | Df   | Sig. |
| Financial performance          | .288                            | 59 | .331 | .747         | .331 | .401 |
| Inventory management practices | .364                            | 59 | .331 | .656         | .331 | .401 |
| Debtors management practices   | .329                            | 59 | .331 | .703         | .331 | .401 |
| Creditors management practices | .349                            | 59 | .331 | .616         | .331 | .401 |
| Cash management practices      | .342                            | 59 | .331 | .643         | .331 | .401 |

**Source: Research Data (2023)**

For each of the financial performance, inventory management practices, debtor management practices, creditors management practices, and cash management practices in Table 4.8, the Shapiro-Walk1 values1 were 0.401. A significant value of 0.331 was found during the Kolmogorov-Smirnov test for financial performance, inventory management, debtors' management, creditors' management, and cash management practices.. The data revealed a p-value of higher than 0.05 hence rejecting the null hypothesis and accepting the alternative hypothesis which means the normality test revealed the data was normally distributed. This data was henceforth suitable for usage in guiding parametric tests like ANOVA, Pearson's correlation as well as regression analysis.

#### **4.7.2 Linearity Test Results**

In Osborne and Waters (2002), linear regression can be used to estimate population parameters when the dependent and independent variables are linearly related. The Pearson correlation coefficient was used. The findings of the study are shown in Table 4.10.

**Table 4.10: Linearity Test of Assumption**

| <b>Variable</b>                | <b>Pearson Correlation</b> | <b>Sig.</b> | <b>Conclusion</b>   |
|--------------------------------|----------------------------|-------------|---------------------|
| Inventory management practices | .350**                     | .007        | Linear Relationship |
| Debtors management practices   | .534**                     | .000        | Linear Relationship |
| Creditors management practices | .369**                     | .004        | Linear Relationship |
| Cash management practices      | .587**                     | 0.000       | Linear Relationship |

**Source: Research Data (2023)**

The null hypothesis stated that inventory management practices, debtor management practices, creditors management practices, and cash management practices did not have a linear relationship to financial performance. Linearity was determined by Pearson correlation coefficients with values less than 0.05 indicating linearity. Based on the study findings in Table 4.10 there existed linear relationship in inventory management practices ( $r=0.35$ ,  $p=0.002<0.007$ ), debtors management practices ( $r=0.534$ ,  $p=0.000<0.005$ ), creditors management practices ( $r=0.369$ ,  $p=0.04<0.005$ ) and cash management practices ( $r=0.587$ ,  $p=0.000<0.005$ ). According to the findings of the study, the null hypothesis was rejected, as the p values of all the variables in the study were below 0.05, and the alternative hypothesis was accepted and concluded that there was a linear relationship between inventory management practices, debtors management practices, creditors management practices, cash management practices and financial performance.

**4.7.3 Multicollinearity Test Results**

Multicollinearity exists if the relationship between the two variables tested in the study is moderate or high in the multiple regression model. In order to determine the severity of multicollinearity, a Variance Inflation Factor was used. The variance of the coefficient's estimates shall be measured with a variance inflation factor, which is defined as VUIF for independent variables that are linked to dependent variables.

**Table 4.11: Coefficients of Collinearity**

| <b>Variable</b>                | <b>Tolerance</b> | <b>VIF</b> |
|--------------------------------|------------------|------------|
| Inventory management practices | .249             | 4.016      |
| Debtors management practices   | .623             | 1.605      |
| Creditors management practices | .427             | 2.342      |
| Cash management practices      | .297             | 3.367      |
| Financial performance          | .714             | 1.401      |

**Source: Research Data (2023)**

The null hypothesis to be tested was;

H0: Between independent variables there is no multicollinearity.

A mean variance inflation factor below 5 was considered acceptable (Odhiambo & Mokori 2019). In the results The values of the VIF below 5 were found to be no multicollinearity problem for the variables in the study, Table 4.11 shows. This was to mean that the study variables were not strongly correlated to affect the study findings

## 4.8 Regression Analysis

Multiple regressions have been used to test the impact of inventory management practices, debtor management practices, creditor management practices and cash management practices on the financial performance of dairy companies in Kenya.

The study conducted the following model summary and results presented in Table 4.12

**Table 4.3: Model Summary**

| <b>R</b>          | <b>R Square</b> | <b>Adjusted R Square</b> | <b>Std. Error of the Estimate</b> |
|-------------------|-----------------|--------------------------|-----------------------------------|
| .916 <sup>a</sup> | .839            | .799                     | 1.211                             |

a. Predictors: (Constant), inventory management practices, debtors' management practices, Creditors management practices, Cash management practices

### **Source: Research Data (2023)**

Table 4.12 shows that, as shown in r value of 0.96, the inventory management practices, debtors management practices, creditors management practices and cash management practices have an important effect on dairy firms' profitability in Kenya. In Kenya, inventory management practices, debtors' management practices, creditors management practices, and cash management practices accounted for 83.9% of financial performance variance, as indicated by a R squared of 0.839. However, it is not possible to explain the 16.3% variation in financial performance; this implies that other variables have not been taken into account for these studies. Therefore, this study recommends that further investigation should be carried out in relation to these unidentified variables which resulted in the difference of 16.3% and how they could affect the financial performance of Kenya's milk producers.

As part of the regression analysis procedure, analysis of variance (ANOVA) was conducted to determine the significance of the regression model. Table 4.13 presents the ANOVA results and

illustrates how well the regression model explains the observed variances in financial performance.

**Table 4.13: ANOVA**

| <b>Model</b> |              | <b>Sum of Squares</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>Sig.</b> |
|--------------|--------------|-----------------------|-----------|--------------------|----------|-------------|
| 1            | Regression   | 145.224               | 4         | 36.306             | 20.844   | 0.000       |
|              | Residual     | 94.068                | 54        | 1.742              |          |             |
|              | <b>Total</b> | <b>239.292</b>        | <b>58</b> |                    |          |             |

a. Dependent Variable: Financial performance of dairy firms in Kenya in Kenya

b. Predictors :( Constant), inventory management practices, debtors' management practices, Creditors management practices, Cash management practices

**Source: Research Data (2023)**

The ANOVA results in Table 4.13 show that the F statistics value was 20.844, with a p-value of  $0.00 < 0.05$ . It is clear from this that the model is significant and appropriate for a study because PValue is very important. The financial performance of dairy firms in Kenya is likely to be impacted by business ethics (management practices for inventory and debtors, creditors and cash).

This is similar to the findings of Akbar, Jiang and Achak 2020 which focused on working capital management practices for nonfinancial companies listed in Pakistan's stock market and found that financial management practices were a key factor influencing NGO finances sustainability. They are also in agreement with Kinuthia, Maimba and Mwangi (2019) who adopted a descriptive research design in investigating management of working capital and Kenyan firms' profitability and found working capital management practices as important predictors of financial performance.

In order to investigate the dynamics of individual variables and their effects on a dependent variable, a regression coefficient table has been adopted. Table 4.14 shows the regression coefficients.

**Table 4.14: Regression Coefficients**

|                                | Unstandardized Coefficients |            | Standardized Coefficients |        |       |
|--------------------------------|-----------------------------|------------|---------------------------|--------|-------|
|                                | B                           | Std. Error | Beta                      | t      | Sig.  |
| (Constant)                     | 4.123                       | 0.364      |                           | 11.326 | 0.000 |
| Inventory management practices | 0.712                       | 0.241      | 0.134                     | 2.954  | 0.005 |
| Debtors management practices   | 0.671                       | 0.234      | 0.121                     | 2.867  | 0.007 |
| Creditors management practices | 0.634                       | 0.301      | 0.172                     | 2.106  | 0.042 |
| Cash management practices      | 0.549                       | 0.222      | 0.142                     | 2.473  | 0.025 |

a. Dependent Variable: Financial performance of dairy firms in Kenya in Kenya

**Source: Research Data (2023)**

The overall regression model for this model was:

$$Y = 4.123 + 0.712 \text{ inventory management practices} + 0.671 \text{ debtors management practices} + 0.634 \text{ creditors management practices} + 0.549 \text{ cash management practices} + \epsilon$$

The constant of 4.123 implies that the financial performance of dairy undertakings in Kenya will increase by 4.123 in relation to the constant increase in inventory management practices, debtors management practices, creditors management practices and cash management practices by one unit. The financial performance of dairy companies in Kenya is positively influenced by inventory management practices. It states that the financial performance of Kenya's dairy companies will be increased by 0.72 as a result of unit increases in inventory management procedures. The financial performance of dairy companies in Kenya has been positively affected by debtor management practices, which would result in a 0.67 increase in operating income per unit as a result of the increased number of units. Moreover, the practice of creditors' management

has shown a positive effect on financial performance of dairy undertakings in Kenya by 0.634 units as a result of unit increases. In addition, cash management practices have had a positive impact on the financial performance of dairy undertakings in Kenya in Kenya, which means that, as a result of the increase in the number of units, the financial performance of dairy undertakings in Kenya in Kenya has increased by 0.549 units.

#### **4.9 Hypotheses Testing**

Based on the specific objectives of the study, the following hypotheses have been tested.

##### **4.9.1 Inventory Management Practice and Financial Performance**

Therefore, the null hypothesis that inventory management practices have no significant effect on the financial performance of dairy processing companies in Kenya has been rejected and the alternative hypothesis that inventory management practices have a significant effect on the financial performance of dairy processing companies in Kenya has been supported, since the p-value of 0.007 was less than 0.05 of significance. It is similar to the results analyzed by Musau, Namusonge, Makokha and Ngeno (2017) who found there is a significant relationship between inventory management and the performance of textile manufacturing firms in Kenya. The study examined how inventory management impacts organizational performance of textile manufacturing firms in Kenya. As opposed to this, this study seeks to explain the profitability of dairy processing companies in Kenya using an explanatory research approach.

##### **4.9.2 Debtor's Management Practice and Financial Performance**

Therefore, the null hypothesis that debtor management practices have no significant effect on the financial performance of dairy processing companies in Kenya has been rejected and the alternative hypothesis that debtor management practices have a significant effect on the financial performance of dairy processing companies in Kenya has been supported, since the p-value of

0.000 was less than 0.05 of significance. This is in line with research carried out by Jindal, Jain and Vartika of 2017 to assess the impact of receivables management on Indian car sales profitability. According to their study, commercial vehicle industry profitability is positively related to debtor turnover ratios. On the other hand, a study by Nwude and Agbo (2018) in Nigeria examined the relationship between the time taken to pay the accounts receivable and the profitability of listed companies. The results of the study showed that there was a statistical insignificant negative correlation as to the profitability of Nigeria's insurance companies and their duration of accounts receivables.

#### **4.9.3 Creditor's Management Practice and Financial Performance**

Therefore, the null hypothesis that creditor management practices have no significant effect on the financial performance of dairy processing companies in Kenya has been rejected and the alternative hypothesis that creditor management practices have a significant effect on the financial performance of dairy processing companies in Kenya has been supported, since the p-value of 0.004 was less than 0.05 of significance. The findings of Moodley, Ward and Muller's study in 2017 were consistent with that argument as they examined the relationship among payable management and investor returns. Their research has shown a significant positive correlation between the changes in the average payment period and the return of the shareholders. Similarly, a study by Likalama and Kirwa (2017) examined the impact of account payable management on profitability for agricultural undertakings in Eldoret Business Center. The study revealed a significant correlation between the effective management of payments and their overall profitability for these companies. Consequently, it is necessary for the management to be proficient and careful in administration of accounts payable with a view to maximising shareholder value.

#### **4.9.4 Cash Management Practice and Financial Performance**

Consequently, the null hypothesis that cash management practices have no significant impact on dairy processing firms' financial performance in Kenya was rejected because a p-value of 0.000 was less than 0.05 level of significance. The alternative hypothesis that cash management practices influence dairy processing firms' financial performance in Kenya has been supported. Kinyanjui, Kiagu, and Riro (2017) examined the influence of cash management practices on the financial performance of small and medium-sized enterprises (SMEs) in Nyeri town and found similar results. The study has shown that cash management practices in Nyeri city have a favourable relationship with the financial performance of SMEs. Similarly, Nso (2018) investigated the relationship between cash management and the profitability of microfinance institutions in the country. The study revealed that cash management strategies used by these institutions contribute to their financial success. A critical component of improving liquidity and achieving long-term profitability is corporate culture integration of cash management.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter serves as the researcher's summary of the key findings against the research objectives. As a result, policy recommendations and suggestions for other study areas were provided as a result of the study's conclusion regarding the associations between the variables.

### **5.2 Summary of the Study**

The study sought to examine the effect of inventory management practice on the financial performance of dairy processing firms in Kenya. The study revealed that inventory management practice had a positive significant effect on the financial performance of dairy processing firms in Kenya. The inventory constitutes a significant amount of current assets, the firm prepares inventory budgets, the firm tracks inventory by batch and expiry date the firm has a high inventory turnover, the firm forecasts its demand, the firm experiences stock out costs and the firm maintains optimal levels of inventory.

The study sought to establish the effect of debtor's management practice on the financial performance of dairy processing firms in Kenya. The study found that debtor's management practice had a positive significant effect on the financial performance of dairy processing firms in Kenya. The firm collects its debts within a good period of time, the firm conducts regular credit analysis of customers, the firm offers incentives for prompt payment, bad debts constitute a significant amount of total sales, the firm makes credit sales, trade credit should be discouraged, cash discount is offered to customers and a stringent credit policy is adopted.

The study sought to assess the effect of creditors management practice on the financial performance of dairy processing firms in Kenya. The study established that creditors management practice had a positive significant effect on the financial performance of dairy

processing firms in Kenya. The firm utilizes trade discount available on timely payment, the firm applies the principle of lagging when making payments to creditors, payment to creditors affect stability of supplies, the firm reviews its credit policies to ensure optimal leverage, the firm suffers interest costs due to late payment to suppliers and the firm seeks longer payment periods from suppliers.

The study sought to explore the effect of cash management practice on the financial performance of dairy processing firms in Kenya. The study found that cash management practice had a positive significant effect on the financial performance of dairy processing firms in Kenya. The firm reconciles cash transactions on a regular basis, the firm experiences a decreasing cash conversion cycle overtime, the firm maintains speculative cash balances, the business utilizes cash budgeting, the firm utilizes centralized banking and the firm keeps adequate records of cash management.

### **5.3 Conclusions of the Study**

The study concludes that effective inventory management helps in reducing costs associated with excess inventory. Inventory management ensures that the right amount of inventory is available at the right time. This helps in reducing stockouts and backorders, allowing companies to fulfill customer orders promptly. As a result, the company can generate revenue faster, leading to improved cash flow and liquidity. Efficient inventory management enables companies to optimize their production and sales processes. Inventory management systems provide valuable data and insights that can be used for demand forecasting and production planning. Effective inventory management facilitates better coordination and communication with suppliers and distributors.

The study concludes that implementing efficient debtor's management practices enables the dairy processing firms in Kenya to reduce the amount of outstanding debt owed to them by customers. This helps improve cash flow and liquidity, as the firm will have more funds available to invest in operations, pay suppliers, and cover other expenses. Effective debtor's management practices help reduce the risk of bad debts and write-offs. By closely monitoring and managing customer credit, firms can identify potential issues early on and take proactive steps to address them. This can help minimize losses and protect the firm's bottom line. Furthermore, by improving the collection process and enforcing payment terms, firms can accelerate the cash conversion cycle and improve overall efficiency. This can lead to increased profitability and a stronger financial position for the firm.

The study concludes that effective management of suppliers, lenders, or other creditors enables the dairy processing companies to improve their cash flow, reduce costs, and ultimately enhance their profitability. Managing creditors effectively can also help dairy processing companies avoid late payment penalties or interest charges. By staying on top of payment deadlines and communicating effectively with creditors, companies can avoid unnecessary fees and charges that can eat into their profits.

The study concludes that effective cash management strategies ensure that dairy processing companies have sufficient cash on hand to meet their day-to-day operational expenses. This helps in maintaining a healthy liquidity position, reducing the risk of insolvency, and ensuring smooth operations. Cash management strategies help in optimizing working capital by efficiently managing accounts receivable, accounts payable, and inventory levels. This ensures that the company has enough cash to cover its short-term obligations while minimizing the risk of excess inventory or late payments.

#### **5.4 Recommendations of the Study**

The study recommends that the dairy processing firms in Kenya should accurately track and manage inventory levels to avoid overstocking and minimize the risk of spoilage or obsolescence. The firms should adopt a real-time visibility into inventory levels to identify and prioritize high-demand products, leading to increased sales and profitability. The firms should have an accurate demand forecasting to avoid overproduction or underproduction, leading to better resource allocation and cost savings. This, in turn, positively impacts the financial outcomes of dairy processing companies. The firms should have accurate inventory data so as to optimize their supply chain processes, reduce lead times, and negotiate better terms with suppliers.

The study recommends that timely collection of outstanding payments reduces the need for companies to rely on external financing or overdraft facilities to meet their operational expenses. This, in turn, reduces interest costs and improves overall profitability. By implementing robust credit assessment processes, companies can identify customers with a higher likelihood of defaulting on their payments. Enhancing debtor management can also lead to improved customer relationships. By implementing efficient debt collection techniques, companies can maintain a professional and respectful approach towards customers while ensuring timely payment.

The study recommends that the dairy processing firms should negotiate favorable payment terms with suppliers so as to improve their cash flow and reduce the amount of interest they pay on outstanding debts. Implement more efficient inventory management practices in order to reduce the amount of working capital tied up in inventory and free up cash for other uses. This can help to improve their financial performance by reducing their reliance on external financing and

improving their liquidity. The firms can also improve their creditor management by implementing better systems for tracking and monitoring payments.

The study recommends that the dairy processing firms should optimize their cash flow to ensure that they have enough liquidity to meet their day-to-day operational expenses, such as purchasing raw materials, paying suppliers, and covering overhead costs. This can help prevent cash shortages and minimize the need for costly short-term borrowing or reliance on external financing. Secondly, by actively managing their cash reserves, dairy processing companies can take advantage of investment opportunities that can generate additional income and improve their overall profitability. Furthermore, effective cash management can also help dairy processing companies reduce their financial risks and improve their financial stability.

### **5.5 Policy Recommendations of the Study**

Working capital management practices play a crucial role in the financial performance of dairy processing companies in Kenya. Effective management of working capital, which includes managing cash, inventory, accounts receivable, and accounts payable, can significantly impact a company's profitability, liquidity, and overall financial health. Therefore, policy makers may recognize the importance of providing support and incentives for dairy processing firms to adopt efficient working capital management practices. This could include providing access to affordable financing options, promoting financial literacy programs, and offering tax incentives for investments in working capital management systems.

Secondly, policy makers may also consider implementing regulations or guidelines to ensure that dairy processing firms adhere to best practices in working capital management. This could involve setting standards for inventory turnover, receivables collection periods, and payables

management, and conducting regular audits to monitor compliance. Lastly, policy makers may also consider the impact of working capital management practices on the overall competitiveness of the dairy processing industry in Kenya.

### **5.6 Suggestions for Further Study**

It was determined that the R<sup>2</sup> was 83.9% based on the results of the study. Thus, inventory management practices, debtors' management practices, creditors' management practices, and cash management practices all contribute to financial performance to the tune of 83.9%. Furthermore, this study demonstrates that 16.1% of financial performance can be explained by other factors not included in this study. The 16.1% of financial performance can be explained by other research methods. It is possible to conduct research in a different industry, such as MFIs, using the same study variables. The results will be compared with those of the existing study to determine whether they will be similar or differ. The study findings will also be confirmed in those contexts if the findings are applicable to the current study.

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## APPENDICES

### Appendix I: Kenyatta University Approval Letter



KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [dean\\_graduate@ku.ac.ke](mailto:dean_graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 810901 Ext. 4150

Internal Memo

FROM: Executive Dean, Graduate School

DATE: 23<sup>rd</sup> August, 2023

TO: Kidaha Arnold Zavani  
C/o Accounting and Finance Dept.

REF: D53/NKU/PT/27843/2018

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 16<sup>th</sup> August, 2023 approved your Research Project Proposal for the M.B.A Degree Entitled, **“Working Capital Management Practices and Financial Performance of Dairy Processing Firms in Kenya.”**

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and progress report Forms per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your project before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

  
Tha...

ANNIBEL MWANIKI  
FOR: EXECUTIVE DEAN, GRADUATE SCHOOL






c.c: Chairman, Accounting and Finance.

Supervisors:

1. Dr. Daniel Makori  
C/o Department of Accounting and Finance  
Kenyatta University

AM/mo

## Appendix II: NACOSTI Research Permit

|   |   |
|---|---|
| <br><b>REPUBLIC OF KENYA</b>   | <br><b>NATIONAL COMMISSION FOR<br/>SCIENCE, TECHNOLOGY &amp; INNOVATION</b>                                   |
| <b>Ref No: 607126</b>   | <b>Date of Issue: 08/September/2023</b>   |
| <b>RESEARCH LICENSE</b>   |   |
|    |   |
| <b>This is to Certify that Mr. KIDAHA ZAVANI ARNOLD of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: WORKING CAPITAL MANAGEMENT PRACTICES AND FINANCIAL PERFORMANCE OF DAIRY PROCESSING FIRMS IN KENYA for the period ending : 08/September/2024.</b> |   |
| <b>License No: NACOSTI/P/23/29404</b>   |   |
| <b>607126</b><br><b>Applicant Identification Number</b>   | <br><b>Director General</b><br><b>NATIONAL COMMISSION FOR<br/>SCIENCE, TECHNOLOGY &amp;<br/>INNOVATION</b> |
| <b>Verification QR Code</b>   |   |
|    |   |
| <b>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</b>  |   |
| <b>See overleaf for conditions</b>  |   |

### Appendix III: Research Questionnaire

This questionnaire is intended to gather information on working capital variables which affect the financial performance of dairy processing companies in Kenya. The research is purely for academic purposes. Information obtained will be treated with high confidentiality. At your convenience, you are therefore kindly requested to respond to all the questions.

#### PART A: GENERAL INFORMATION

1. What is the type of your dairy firm?

Processor [    ]

Mini Dairy [    ]

2. How many years has the firm been in operation?

1 – 5years [    ]

Above 5 years [    ]

#### PART B: INVENTORY MANAGEMENT PRACTICES

Please indicate the extent to which you agree with the following aspects of inventory management in your organisation by ticking the appropriate box.

**Key: 1 – Strongly Agree 2 – Agree 3=Neutral 4 = Disagree 5= Strongly Disagree**

| Statement   | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| i. The firm maintains optimal levels of inventory.                |   |   |   |   |   |
| ii. Inventory management is automated.                            |   |   |   |   |   |
| iii. The firm prepares inventory budgets.                         |   |   |   |   |   |
| iv. Inventory constitutes a significant amount of current assets. |   |   |   |   |   |
| v. The firm has a high inventory turnover.                        |   |   |   |   |   |
| vi. The firm tracks inventory by batch and expiry date.           |   |   |   |   |   |

|       |  |  |  |  |  |  |
|-------|--|--|--|--|--|--|
| vii.  | Lean inventory is maintained.                    |  |  |  |  |  |
| viii. | The firm experiences stock out costs.            |  |  |  |  |  |
| ix.   | The firm has stable supplies of raw materials    |  |  |  |  |  |
| x.    | Inventory levels are reviewed on a regular basis |  |  |  |  |  |
| xi.   | The firm forecasts its demand                    |  |  |  |  |  |

**PART C: DEBTORS MANAGEMENT PRACTICES**

Please indicate the extent to which you agree with the following aspects of debtor management by ticking the appropriate box.

**Key: 1 – Strongly Agree 2 – Agree 3=Neutral 4 = Disagree 5= Strongly Disagree**

| Statement   | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| i. The firm makes credit sales.                               |   |   |   |   |   |
| ii. The firm collects its debts within a good period of time. |   |   |   |   |   |
| iii. The firm conducts regular credit analysis of customers.  |   |   |   |   |   |
| iv. Credit period affects the firm’s sales volume.            |   |   |   |   |   |
| v. Trade credit should be discouraged.                        |   |   |   |   |   |
| vi. The firm offers incentives for prompt payment.            |   |   |   |   |   |
| vii. A stringent credit policy is adopted.                    |   |   |   |   |   |
| viii. Factoring of receivables should be encouraged.          |   |   |   |   |   |
| ix. Cash discount is offered to customers.                    |   |   |   |   |   |
| x. Bad debts constitute a significant amount of total sales.  |   |   |   |   |   |
| xi. Debtors affect operational efficiency                     |   |   |   |   |   |

**PART D: CREDITORS MANAGEMENT PRACTICES**

Please tick the appropriate boxes to indicate your level of agreement with the following aspects of creditor management.

**Key: 1 – Strongly Agree 2 – Agree 3=Neutral 4 = Disagree 5= Strongly Disagree**

| <b>Statement</b>  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|---|----------|----------|----------|----------|----------|
| i. The firm seeks longer payment periods from suppliers.                          |          |          |          |          |          |
| ii. Credit policies affect liquidity position of the firm.                        |          |          |          |          |          |
| iii. The firm applies the principle of lagging when making payments to creditors. |          |          |          |          |          |
| iv. The firm utilizes credit facilities from suppliers.                           |          |          |          |          |          |
| v. The firm suffers interest costs due to late payment to suppliers.              |          |          |          |          |          |
| vi. The firm reviews its credit policies to ensure optimal leverage.              |          |          |          |          |          |
| vii. The firm utilizes trade discount available on timely payment.                |          |          |          |          |          |
| viii. The firm has a stable accounts payable turnover ratio.                      |          |          |          |          |          |
| ix. The firm seeks favorable credit terms from its suppliers.                     |          |          |          |          |          |
| x. Payment to creditors affect stability of supplies.                             |          |          |          |          |          |

**PART E: CASH MANAGEMENT PRACTICES**

Select the appropriate checkbox to indicate how much you agree or disagree with the following aspects of dairy cash management.

**Key: 1 – Strongly Agree 2 – Agree 3=Neutral 4 = Disagree 5= Strongly Disagree**

| <b>Statement</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|------------------|----------|----------|----------|----------|----------|
|------------------|----------|----------|----------|----------|----------|

|       |   |  |  |  |  |  |
|-------|---|--|--|--|--|--|
| i.    | The business maintains optimal cash balances                      |  |  |  |  |  |
| ii.   | The business utilizes cash budgeting                              |  |  |  |  |  |
| iii.  | The firm experiences a decreasing cash conversion cycle overtime. |  |  |  |  |  |
| iv.   | The firm maintains speculative cash balances.                     |  |  |  |  |  |
| v.    | The firm reconciles cash transactions on a regular basis.         |  |  |  |  |  |
| vi.   | The firm utilizes bank overdraft facilities.                      |  |  |  |  |  |
| vii.  | There is adequate cash planning and forecasting by the business.  |  |  |  |  |  |
| viii. | The firm keeps adequate records of cash management                |  |  |  |  |  |
| ix.   | The firm utilizes centralized banking                             |  |  |  |  |  |

## **PART F: FINANCIAL PERFORMANCE**

The following financial details would be appreciated if you could provide an estimate:

| <b>Financial year</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> |
|-----------------------|-------------|-------------|-------------|-------------|-------------|
| Annual turnover       |             |             |             |             |             |
| Profit after tax      |             |             |             |             |             |

#### Appendix IV: List of Dairy Processing Firms

| MINI DAIRY PERMITS LICENCE ISSUED BETWEEN 2020 TO 2021 |   |                 |
|--|---|-----------------|
| 1  | Aberdare Slopes Fresh Dairy Limited(Gerald Kariuki Maina) | Olkalou         |
| 2  | Africana Dairies Limited                                  | Tharaka Nithi   |
| 3  | Alphaxed Gitau Ndungu                                     | Nairobi Central |
| 4  | Anne Muthithi Mburu                                       | Nairobi Central |
| 5  | Azizah Foods Limited                                      | Nairobi Central |
| 6  | Benson Nganga Kinuthia                                    | Muranga         |
| 7  | Caroline Wangari Muriuki (Mo-Lito's Farm)                 | Nairobi West    |
| 8  | Catherine Muthoni Njeru                                   | Nairobi Central |
| 9  | Charles Ributhi Gathogo                                   | Thika           |
| 10   | Christopher Maina   | Muranga         |
| 11   | Chuka Blessed   | Tharaka Nithi   |
| 12   | Dama Foods Enterprises                                    | Nakuru          |
| 13   | Daniel Chege Mwangi                                       | Muranga         |
| 14   | Daniel Kimani Kanyi                                       | Thika           |
| 15   | Daniel Munene Mavutta                                     | Kirinyaga       |
| 16   | Daniel Njoroge Wanjohi/Happy Fresh Dairy                  | Nyeri           |
| 17   | David Munene Mavutta                                      | Kirinyaga       |
| 18   | David Muturi Kigo   | Nyeri           |
| 19   | David Ndiritu Githaiga                                    | Nyeri           |
| 20   | Demka Dairy   | Nyeri           |
| 21   | Desyl Investment Limited Introduction                     | Nairobi Central |
| 22   | Edsco Fresh Dairy   | Nairobi Central |
| 23   | Egerton University  | Nakuru          |
| 24   | Eliud Konje Njeri   | Nyeri           |
| 25   | Elixir General Supplies                                   | Nyeri           |
| 26   | Elkeiyo Dairies Limited                                   | Eldoret         |
| 27   | Elldz Dairy   | Muranga         |
| 28   | Emidan Enterprises Company                                | Embu            |
| 29   | Engineer Broadvision Progressive Help Group               | Olkalou         |
| 30   | Ephantus Wachuru Ngugi                                    | Thika           |
| 31   | Eric Kamau Karanja  | Thika           |
| 32   | Ernest Ndiangui Mutwiri                                   | Kirinyaga       |
| 33   | Eston Muriithi Wanjiku                                    | Thika           |
| 34   | Eunice Wangui Kiarie                                      | Nairobi Central |
| 35   | Farming Solutions Ltd                                     | Nakuru          |
| 36   | Feronia Gardens   | Muranga         |
| 37   | Francis Ngugi c/o Imani Dairies                           | Muranga         |
| 38   | Freshpoint Limited  | Muranga         |
| 39   | Freshways Dairy Limited                                   | Nyeri           |
| 40   | Freshways Dairy Limited                                   | Olkalou         |
| 41   | Garden Fresh Dairy Self Help Group                        | Nairobi Central |
| 42   | Geothermal Development Company Limited                    | Nakuru          |

|    |   |                 |
|----|---|-----------------|
| 43 | Home Lands Foods                                | Kapsabet        |
| 44 | Hosea Karanja Kariuki                           | Thika           |
| 45 | Imara Dairy                                     | Tharaka Nithi   |
| 46 | Irene Wahu Mwangi                               | Thika           |
| 47 | Isaac Mutura Kiruthi                            | Nyeri           |
| 48 | Italian Gelati & Food Products                  | Mombasa         |
| 49 | Jale Sweet Yoghurt                              | Kirinyaga       |
| 50 | Jamaa Supermarket Limited                       | Olkalou         |
| 51 | Jamaa Supermarket Limited                       | Olkalou         |
| 52 | James Kamau Wanjugu                             | Nyeri           |
| 53 | James Muturi Kiarie                             | Thika           |
| 54 | James Mwangi Kariuki                            | Muranga         |
| 55 | Jehova Jire Self Help Group                     | Thika           |
| 56 | Jeveld Company Ltd                              | Nyeri           |
| 57 | Jey Dee Dairies (Nancy Wambui Ngigi)            | Olkalou         |
| 58 | Joel Ngendo                                     | Naivasha        |
| 59 | John Muiruri Kibe                               | Muranga         |
| 60 | Joseph Kiongera                                 | Thika           |
| 61 | Joseph Muthinji Macharia                        | Olkalou         |
| 62 | Josiah Muthii Kinyua                            | Kirinyaga       |
| 63 | Josphat Karanja Kariuki                         | Muranga         |
| 64 | Jufred Milk Products                            | Kirinyaga       |
| 65 | Julius Gucu Mwaura                              | Muranga         |
| 66 | Julius Kiruga Kimonjo                           | Muranga         |
| 67 | Justus Kamande Mburunje                         | Thika           |
| 68 | Kabete Dairy Farmers Cooperative Society        | Nairobi West    |
| 69 | Keringet Foods                                  | Nakuru          |
| 70 | Kibos Dairy & Farm Produce                      | Kisumu          |
| 71 | Kieni Dairy Products                            | Nyeri           |
| 72 | Kilifi Plantation                               | Mombasa         |
| 73 | Kipchimchim Dairies                             | Kericho         |
| 74 | Kirere Dairy                                    | Muranga         |
| 75 | Kiriita D.F.C.S.                                | Nairobi West    |
| 76 | Kirima Slopes Dairy Cooperative Society Limited | Kirinyaga       |
| 77 | Kitinda Dairy                                   | Bungoma         |
| 78 | La Gloria Farm Products Limited                 | Nairobi Central |
| 79 | Lactolife Dairy Limited                         | Nairobi Central |
| 80 | Letin Dairies                                   | Kapsabet        |
| 81 | Levanta Dairies Limited                         | Thika           |
| 82 | Lijamfarm Best Yoghurt                          | Kirinyaga       |
| 83 | Livingstone Mwaura Ngángá                       | Nyeri           |
| 84 | Lovedeep Singh Rehal                            | Kisumu          |
| 85 | Lovedeep Singh Rehal                            | Kisumu          |
| 86 | Lowland Dairies                                 | Muranga         |
| 87 | Loyalty Dairy Enterprises                       | Thika           |

|     |  |                 |
|-----|--|-----------------|
| 88  | Mackmay Enterprises                                    | Nairobi Central |
| 89  | Margaret Wangui Wangeci                                | Muranga         |
| 90  | Mark Macharia Ngatia                                   | Nairobi Central |
| 91  | Martin Murithi Gicovi                                  | Thika           |
| 92  | Mashinani Dairy (Kamira International Ltd)             | Muranga         |
| 93  | Masii Farmers Cooperative Society Ltd                  | Athi River      |
| 94  | Mburugu Dairy Farmers Co-operative Society Ltd         | Embu            |
| 95  | Melangine Dairies Limited                              | Olkalou         |
| 96  | Meskin Investment Ltd                                  | Nyeri           |
| 97  | Meved Dairy Farm                                       | Kirinyaga       |
| 98  | Miharati Dairy Farmers Co-operative                    | Olkalou         |
| 99  | Milkstorm Limited                                      | Nairobi West    |
| 100 | Mindililwo Zero Grazing                                | Eldoret         |
| 101 | Moana Investment Limited                               | Nyeri           |
| 102 | Morani Ltd   | Nyeri           |
| 103 | Moses Kabiru Wambui                                    | Thika           |
| 104 | Moses Kuria Kimani                                     | Muranga         |
| 105 | Mukaki Holding Limited                                 | Olkalou         |
| 106 | Mulinge Mwangangi                                      | Thika           |
| 107 | Muracia Imwe   | Muranga         |
| 108 | Mwaita Dairy Farmers Self Help Group                   | Kitale          |
| 109 | Mwitha Self Help Group                                 | Kirinyaga       |
| 110 | Naitiri Dairy Farmers Co-operative Society Ltd         | Bungoma         |
| 111 | Ndumberi Dairy Farmers Co-op                           | Nairobi Central |
| 112 | New Generation Dairy                                   | Kericho         |
| 113 | Njofra Dairies Ltd                                     | Nakuru          |
| 114 | Nuru Kenya Social Enterprises                          | Kisii           |
| 115 | Nyaga Fresh Milk Products                              | Kirinyaga       |
| 116 | Nyala Dairy Multipurpose Co-operative Society          | Nyeri           |
| 117 | Nyamira Peri-urban Cooperative Society Limited         | Kisii           |
| 118 | Olkalou Dairy Limited                                  | Olkalou         |
| 119 | Organic Dairies  | Nairobi Central |
| 120 | Osiepe Practical Action Communicaty Based Organisation | Kisumu          |
| 121 | Patrick Mwangi Ngugi                                   | Thika           |
| 122 | Patrick Ngumi Wanjiku                                  | Muranga         |
| 123 | Patrick Wachira Njogu                                  | Nyeri           |
| 124 | Patrick Wainaina Muiruri                               | Thika           |
| 125 | Paul Nganga Njunge                                     | Thika           |
| 126 | Peter Gathoga Mburu                                    | Muranga         |
| 127 | Peter Kigonda Wainaina                                 | Olkalou         |
| 128 | Peter Muriuki Ndura                                    | Nyeri           |
| 129 | Peter Muturi Waithaka                                  | Kirinyaga       |
| 130 | Peter Nganga Mwangi                                    | Thika           |
| 131 | Podago Self Help Group                                 | Kirinyaga       |
| 132 | Powerstar Jambo Supermarket                            | Nairobi Central |

|     |  |                 |
|-----|--|-----------------|
| 133 | Premier Milk Atm                           | Tharaka Nithi   |
| 134 | Quick Budget Stores Ltd                    | Meru            |
| 135 | Qwetu Savannah Dairy                       | Muranga         |
| 136 | Raka Milk Processors Ltd                   | Nyeri           |
| 137 | Ramji H. Devani                            | Nairobi South   |
| 138 | Real Food Africa Ltd                       | Nakuru          |
| 139 | Robert Githinji Ndung'u                    | Nyeri           |
| 140 | Rvdt Technology Farm                       | Nakuru          |
| 141 | Saitoti Nketoya                            | Kirinyaga       |
| 142 | Samburu Dairy Farmers Co-operative Society | Olkalou         |
| 143 | Samuel Gacheru Ngunjiri                    | Muranga         |
| 144 | Samuel Kangethe                            | Thika           |
| 145 | Sharp Fresh Dairy                          | Nyeri           |
| 146 | Shefa Dairies                              | Muranga         |
| 147 | Shunem Food Processors                     | Muranga         |
| 148 | Siche Dairy                                | Muranga         |
| 149 | Simon Murithi Mutabari                     | Nyeri           |
| 150 | Simon Ngugi Maina                          | Muranga         |
| 151 | Simon Waithaka Maina                       | Thika           |
| 152 | Social Bites Ltd                           | Nairobi Central |
| 153 | Society Stores                             | Meru            |
| 154 | Soimo Dairies                              | Eldoret         |
| 155 | Southlake Dairies Ltd (Joel Ngendo)        | Naiivasha       |
| 156 | Soweto Dairy Farm                          | Tharaka Nithi   |
| 157 | Sunny Farms                                | Narok           |
| 158 | Sunvalley Limited                          | Tharaka Nithi   |
| 159 | Superior Mwitha Co. Ltd                    | Kirinyaga       |
| 160 | Sylas Kiplagat(Eldama Dairies)             | Kabarnet        |
| 161 | Tarakwo Dairies Company Limited            | Eldoret         |
| 162 | Teita Estate                               | Voi             |
| 163 | The Dairy Deli Company                     | Muranga         |
| 164 | Tulaga Dairy Farmers Co-operative Society  | Olkalou         |
| 165 | Turbo Dairies                              | Kakamega        |
| 166 | Tuyas Fresh Yoghurt                        | Muranga         |
| 167 | Twaweza Dairies Company Limited            | Tharaka Nithi   |
| 168 | Twisty Fresh Yoghurt                       | Muranga         |
| 169 | Ukulima Dairies                            | Nairobi South   |
| 170 | Uma Na Utheri                              | Thika           |
| 171 | University of Embu                         | Embu            |
| 172 | Upper Chania Dairy Limited                 | Olkalou         |
| 173 | Wanjohi Green Valley Dairy                 | Olkalou         |
| 174 | White Sip Dairies                          | Nairobi Central |
| 175 | Winbow Enterprises (Peter Thuo Kago)       | Olkalou         |
| 176 | Yetu Dairies Limited                       | Embu            |
| 177 | Yogsweet Enterprises                       | Nairobi Central |

|   |   |                 |
|---|---|-----------------|
| 178   | Zachary Wahinya Kamau                         | Thika           |
| 179   | Zakayo Talam                                  | Eldoret         |
| 180   | Zaroma Tea General Stores                     | Thika           |
| 181   | Ziwa Delights Enterprises Limited             | Nyeri           |
| <b>REGULATORY PERMIT - PROCESSORS LICENCE ISSUED BETWEEN 2020 TO 2021</b> |   |                 |
| 1   | Afrodane Food Industries                      | Nairobi West    |
| 2   | Amstrong Company Limited                      | Thika           |
| 3   | Aspendos Dairy Limited                        | Muranga         |
| 4   | Bahati Agro Processors                        | Nakuru          |
| 5   | BioFoods Ltd                                  | Nairobi South   |
| 6   | Brookside Dairy Limited                       | Nairobi Central |
| 7   | Canaan Factories Limited                      | Nairobi West    |
| 8   | Countryside Dairy Ltd                         | Olkalou         |
| 9   | Devyani Food Industries (K) Ltd               | Nairobi South   |
| 10  | Devyani Food Industries (K) Ltd               | Nakuru          |
| 11  | Eldoville Farm Ltd                            | Nairobi South   |
| 12  | Githunguri DFCS                               | Nairobi Central |
| 13  | Happy Cow                                     | Nakuru          |
| 14  | Highland Creamers and Foods Limited           | Kisii           |
| 15  | Kabianga Dairy                                | Kericho         |
| 16  | Kamili Packers Limited                        | Nairobi South   |
| 17  | Kevian Kenya Limited                          | Thika           |
| 18  | Kiambaa D.F.C.S. Ltd                          | Nairobi West    |
| 19  | Kinangop Dairies Limited                      | Olkalou         |
| 20  | Limuru Dairy Farmers C. Society               | Nairobi West    |
| 21  | Lucky Dairies                                 | Olkalou         |
| 22  | Meru Central Dairy Co-operative Union Limited | Meru            |
| 23  | Meru Highlands Dairy Limited                  | Meru            |
| 24  | Metkei Farmers Cooperative Society Ltd        | Eldoret         |
| 25  | Mukurwe-ini Wakulima Dairy Ltd                | Nyeri           |
| 26  | Muranga Cooperative Creameries                | Muranga         |
| 27  | New K.C.C. – Eldoret                          | Eldoret         |
| 28  | New K.C.C. – Kitale                           | Kitale          |
| 29  | New K.C.C. – Miritini                         | Mombasa         |
| 30  | New K.C.C. - Sotik Factory                    | Kericho         |
| 31  | New K.C.C. Kiganjo                            | Nyeri           |
| 32  | New K.C.C. Limited                            | Nairobi Central |
| 33  | New K.C.C. Limited                            | Olkalou         |
| 34  | Stanley & Son Limited                         | Athi River      |
| 35  | Suka Farmers Co-operative Society Ltd         | Nakuru          |
| 36  | Sunpower Products                             | Nairobi West    |
| 37  | Superior Highland Dairy                       | Embu            |
| 38  | Uplands Premium Dairies                       | Nairobi Central |
| 39  | Wimssy Limited                                | Nairobi Central |
| 40  | Ziara Dairies Limited                         | Olkalou         |

