COMPLIANCE COSTS, ACCESS TO FINANCE AND FINANCIAL PERFORMANCE OF DAIRY FARMING: A case study Gomba District

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UGANDA CHRISTIAN UNIVERSITY
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DECLARATION

I here by declare that information in this report is out of my own knowledge and understanding and any information from other sources is referenced and cited, the other is my own knowledge and understanding and is never been submitted.

Signed .....

Date 7th September 2023.

APPROVAL

This research report done by Akampurira Nicholas was done under My Supervision and is now ready for submission with my Approval.

Signed.....

MR: AHABWE ALEX

Date 07/09/2023

DECLARATION

I here by declare that information in this report is out of my own knowledge and understanding and any information from other sources is referenced and cited, the other is my own knowledge and understanding and is never been submitted**.**

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Date……

APPROVAL

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Signed…….

MR: AHABWE ALEX

Date **……..**

DEDICATION

Dedicated to my Parents Mr Bamara Ezekiel and Mrs Kabushara Jovules and my Brothers and sisters Muheirwe Yofesi, Tusime Angel, Asasirwe Grace, Asiimwe James, Kuhabwa Aron who have supported me in my Journey of Education for their un ceasing support towards my education**.**

ACKNOWLEDGEMENT

I thank the Almighty God for making it possible for me to complete this piece of work. Special thanks to him for the knowledge, wisdom, courage and determination he has granted me. I extend my sincere appreciation to my supervisor MR. AHABWE ALEX who guided me from research proposal to the report writing. He really inspired, motivated and assisted me during the process of this work.

I am greatly indebted to my dear parents for their support, care and courage during my study. I am so grateful my dear parents. May God bless them abundantly?

Thanks also go to the dairy farmers in Gomba district who allowed me to do research on their farms. Respondents who sacrificed their time in giving me relevant information that backed my research. I cannot forget my special relatives Maj Sande John and family, Agaba Benita who have been parents in the absence of my parents and the people in fellowship for spiritual and moral support Phillip Baitwa, Kastigazi Richard and Hope Karigirwa. May our Good Lord reward them**.**

Table of Contents

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

KPMG: klyneld Peat Marwick Goerdeler

IGAD: Inter government Authority on Development

FAO: Food and Agricultural Organisation

NAADS: National Agriculture Advisory Services

DDA: Dairy Development Authority

GDP: Gross Domestic Product

MAAIF: Ministry of Agriculture, Animal industry and fisheries

BoU: Bank of Uganda.

NGO: Non-Government Organisations

IDF: International Dairy Federation

BoU: Bank of Uganda

EDA: Exploratory Data Analysis

SALL: Sameer Agriculture & Livestock Ltd.

ABSTRACT

The intention of the study was toidentifythe compliance costs, access to finance and financial performance in dairy farming Gomba district as the case study. And this study was done under the three objectives,to determine the level of financial performance of dairy farmers dairy in Gomba District, the relationship between compliance cost and financial performance of dairy farmers, the relationship between access to finance and financial performance of dairy farming in Uganda. Collection data of was conducted through the use of a questionnaire and interview guide, and during data collection purposive sampling method was followed, the researcher used both qualitative and quantitative methods were used to analyze and interplete data as a sample size of 49 respondents was used.

In the recamp of the study, the following were identified, Since access to finance is not the main determinant of improved financial performance, the study suggests that farmers and dairy managers to always make rational decisions and proper planning in order for available finances to yield more returns. Encouraged to spot milk breeds of cattle forexample fresians and jessy cows, which produce large volumes of milk hence more milk produced in all seasons generate more income for dairy farming hence improving in financial performance of dairy sector.

The study advises farmers to have loans from trusted financial institutions at low interest rates for financing their dairy sectors in order to meet their obligations in time hence being cost effective to dairy farmers.

Farmers are encouraged to enhance their milk standards as they also maximize milk production, encourages farmers to adopt commercial dairy farming, encourages farmers to adopt capital and labour intensive techniques of production, encourages farmers always to keep records of their dairy farms, dairy farmers and processors should have a strong track record, working to be economically viable while improving the health of the environment, workforce and the broader community and also suggested other areas of research.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This study explores Compliance costs, access to finance and financial performance of dairy farming Gomba district as the Case study. This chapter describes the research background, problem statement, general goals, specific goals, research questions, research hypotheses, research implications, research rationale, research scope, and operational definitions of terms and a conceptual framework.

1.1 Back Ground Of The Study

According to ec.europa.eu 2015, Dairy farmingreffers to production of milk and its products for commercial purposes. The milk products include packed milk, ghee, yoghurt and other products. *According to Romano, Cavicchi, Rocchi, Gianluca 2004*, Compliance costs are obliged costs paid by dairy farmers to meet various regulations and standards related to the production and sale of dairy products and these include fees for testing, inspections and certification, as well as expenses incurred in implementation and maintenance of compliance programs. these are vital because dairy farmers use them to meet the regulatory standards/requirements and consumer expectations for safety and quality, however to some extent are barriers to farmers, especially those under substance farming with scarcity of resources thus indicating compliance programs, this discourages farmers from entering or expanding dairy industry

According to world bank report 2008 The East African dairy sector has undergone significant growth and transformation in recent years, with the emergence of new business models, technologies, and markets. However, compliance costs remain a significant challenge for many dairy farmers in the region. *According to a report by the International Livestock Research Institute (ILRI)*, compliance costs are a major barrier to entry and expansion for smallholder dairy farmers in East Africa, particularly in Kenya and Tanzania. The report notes that regulatory compliance costs can account for up to 20% of a farmer's total production costs, which can make it difficult for farmers to compete in the market and achieve profitability.

According to …..In Kenya, compliance costs have been identified as a major challenge for dairy farmers, particularly those who are involved in informal or unregulated markets and simulate the consequence of other costs of milk production, gross profits and other incomes . According to a

study by the Kenya Dairy Board, compliance costs contribute 40% of the grand production costs for small-scale farmers. The study notes that these costs are often associated with the need to invest in infrastructure and equipment to meet regulatory requirements, as well as the cost of obtaining certifications and permits.

According to a report by the Tanzania Dairy Board, farmers are faced with range of regulatory requirements in relation to milk quality, safety and hygiene, as well as environmental controls and regulations related to waste management and pollution control. The report stresses that these requirements are difficult and expensive for subsistance farmers to put into place, which limits their potential to access big markets for high profitability and gross margins.

According to Wilkes,Odhong, Ndonga 2018, Access to finance is a serious challenge to over come for most dairy farmers in East Africa, particularly small-scale producers who often lack collateral securities, credit histories and financial records, plus financial literacy and discipline. *According to a report by the International Livestock Research Institute (ILRI),* access to finance is a major tarrif toentryand expansion of dairy farmers at small scale in the region. *According to the World Bank 2004,* Most East African Countries, formal financial services are often difficult to access for small-scale farmers, particularly those in rural areas and only 17% of adults in Sub-Saharan Africa have a bank account, compared to 69% globally. This lack of access to formal financial services can make it difficult for farmers to access credit, savings, and insurance products, which are essential for managing cash flow, investing in their businesses, and mitigating risks.

To address these challenges, a range of initiatives have been launched in East Africa to improve access to finance for dairy farmers. For example, the East African Dairy Development Project (EADD) has worked with local financial institutions to develop loan products specifically tailored to the needs of smallholder dairy farmers. These loan products are designed to be flexible, with low interest rates and repayment periods that align with the seasonal nature of dairy farming.

Similarly, the Kenya Dairy Board has established a dairy development fund, which provides financing to small-scale farmers to invest in their businesses and improve productivity. The fund

provides loans at low interest rates, with flexible repayment terms, and is designed to be accessible to farmers who lack collateral or credit histories.

In addition to these initiatives, a range of mobile banking and digital finance services are also emerging in East Africa, which can provide farmers with access to financial services even in remote areas. For example, M-Pesa, a mobile money service launched in Kenya in 2007, has been widely adopted by dairy farmers in the region, enabling them to transfer money, pay bills, and access credit and insurance products through their mobile phones. Access to finance is the availability of capital that dairy farmers would use to invest in their business, expand operations and manage cashflows. These may include loans, lines of credits and other forms of financing that are essential for sustainability and operations of dairy farming. This enables farmers to invest in their dairy farms, purchase equipment and supplies, manage cashflows in periods of low demand and un expected expenses. However, can be difficult to some farmers especially those in regions or places that are risky for lenders, and also, some farmers have no knowledge on financial literacy or business skills needed to effectively manage their finances and safe guard their funding.

According to European investment Bank 2020 the Netherlands, and England have all implemented initiatives to improve access to finance for dairy farmers. In Uganda, *According to Niraj 2019*, the Ugandan government through the Uganda dairy sector 2019, has launched a number of programs to support small-scale dairy farmers. For example, the Dairy Development Authority (DDA) has established a revolving fund to provide credit and technical assistance to smallholder dairy farmers. The fund provides loans at low interest rates, with flexible repayment terms, and is designed to support investments in productivity, quality, and market access. In addition, the Uganda Development Bank has launched a Dairy Development Facility, which provides long-term financing to dairy farmers and processors to support investments in equipment, infrastructure, and value addition. In the Netherlands, the government has established a range of financing programs to support dairy farmers. For example, the Dutch Good Growth Fund provides financing and technical assistance to agricultural businesses, including dairy farms, to support investments in productivity, sustainability, and market access. In addition, the Dutch government has launched a range of programs to promote innovation and technology

adoption in the dairy sector, which can help farmers to improve their competitiveness and profitability.

According to Dairy United kingdom 2023, in England, several initiatives have been put in place by the government inorder to improve the dairy sector by coming up with financial programs to improve investment in productivity and sustainability of dairy products. For example, the Rural Development Program for England provides grants and loans to farmers and rural businesses to support investments in innovation, competitiveness, and environmental sustainability. In addition, the government has established a range of partnerships with industry stakeholders to promote best practices in dairy farming, improve access to markets, and enhance the resilience of the sector.

According to FAO 2015, creating ways for access to finance is paramount for the growth, development and sustainability of the dairy sector in both developed and developing countries. By providing farmers with the financial resources, they need to invest in their businesses, manage risks, and access markets, these initiatives can help to unlock the potential of smallholder dairy farmers and promote economic development in the region

Further more, *According to DEFRA 2016*, all government led projects include both private sector and non government organizations led programs (NGO) that aim at enhancing access to finance for dairy farmers in East Africa and the world at large. For example, *According to the East Africa Dairy Development project (EADD*) is a partnership between Heifer International, the International Livestock Research Institute (ILRI), and local partners in East Africa. The project aimed at working with smallholder dairy farmers to enhance their outputs, access to markets, and access to finance. One of the key components of the project is the establishment of a milk collection and marketing system, which provides farmers with a reliable market for their milk and enables them to access credit and other financial services.

Similarly, *according to European investment Bank 2020*, the Netherlands-based Rabobank Foundation established several programs inorder to influence small dairy farmers by supporting them in East Africa. And this intiative provide loans and technical assistance to dairy farmers and dairy cooperatives, with an aim to enhance productivity, quality, and market access. In

addition, the foundation has introduced partnerships and joint ventures with local financial institutions to develop loan products specifically tailored to the needs of smallholder farmers.

Other NGOs, such as *Farm Africa and Techno serve,* are also working to improve access to finance for dairy farmers in East Africa. These organizations provide technical assistance and training to farmers, as well as support for the establishment of dairy cooperatives and other market linkages. In addition, they work with local financial institutions to develop loan products that are tailored to the needs of smallholder farmers.

Overall, the range of initiatives that are working to improve access to finance for dairy farmers in East Africa highlights the importance of addressing this critical challenge. By providing farmers with the financial resources, they need to invest in their businesses and access markets, these initiatives can help to promote the growth and sustainability of the dairy sector in the region.

According to Department of agriculture, fish and forestry in Australia 2023, Financial Performance measures, how well a dairy farm is performing in regard to revenue, expenses, profitability and other financial metrics. The financial performance of a dairy farm can be affected by factors such as compliance costs, access to finance and market demand and other costs of in-puts like feeds, labour and equipment. In other words, this is the key measure of the success of the dairy farm by determining the profitability and sustainability of the farm for a long run, in order to obtain a strong financial performance, farmers must not only manage costs and optimize productivity, but also stay up to-date with industry trend and consumer preferences. The average farm cash income across all dairy farms in Australia in 2022–23 is projected to be $361,000 per farm – an increase of 10% on the previous year, and a record high for the industry in real terms. The average rate of return to capital is projected to be 3.6% in 2022-23, compared with 3.7% in 2021-22

1.2 Background Of The Study

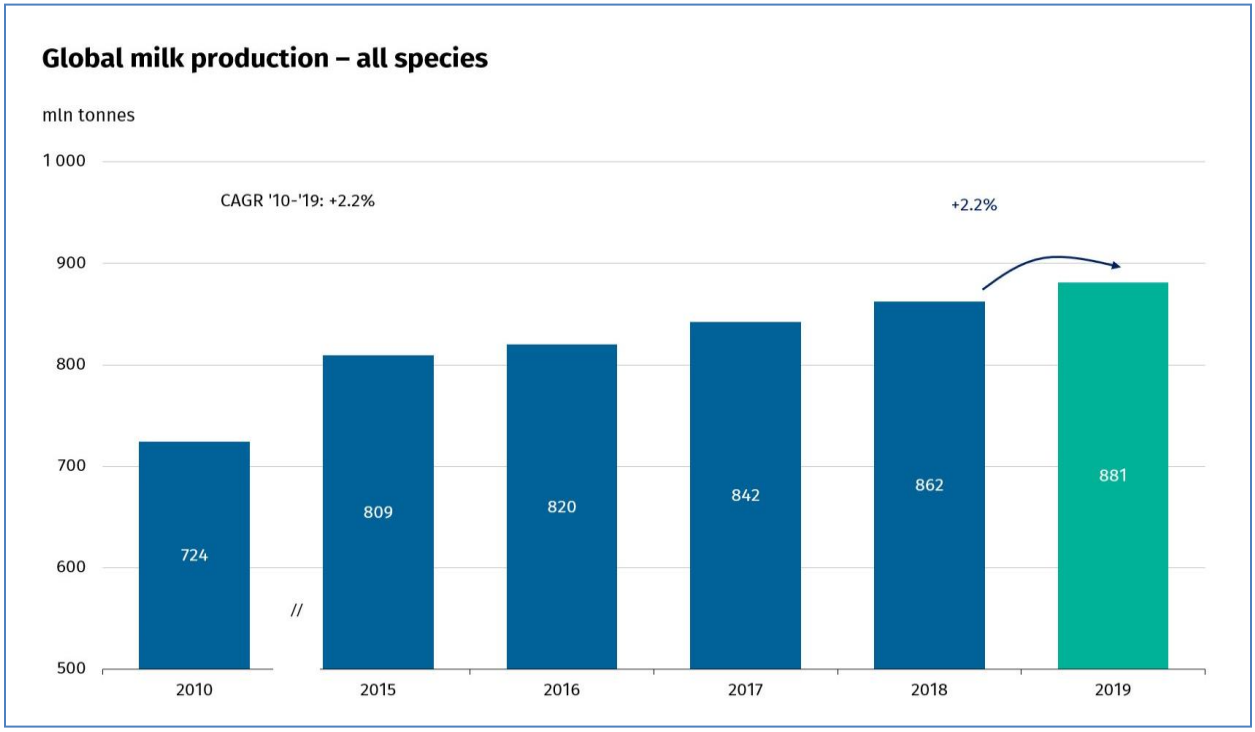
Historically, Dairy farming was in place and is owned by families at small scall traditionally and *According to American Farmers Association North East 2021,* 94% of dairy farms are family owned and operated. Globally, countries leading in dairy farming include India, New Zealand, United States of America and China, they are considered to be the most leading exporters and importers of milk and milk products since 20th century. *According to (FAO) In 2017*, Milk and

milk products increased in general, with around 827,884,000 tons of milk being produced. This increase the aggregate demand and consumption of milk and milk products at large scale, this happens with expectected growth in milk production for longterm of slightly above 2% in 2021, supported by changes in consumption habits, an increased income per capita in developing countries and the growth of world population by 92 million people. This qualifies dairy farming to be among the top three major economic activities in agricultural sector contributing to the growth and the development of the world

1.2.1 Dairy in demand

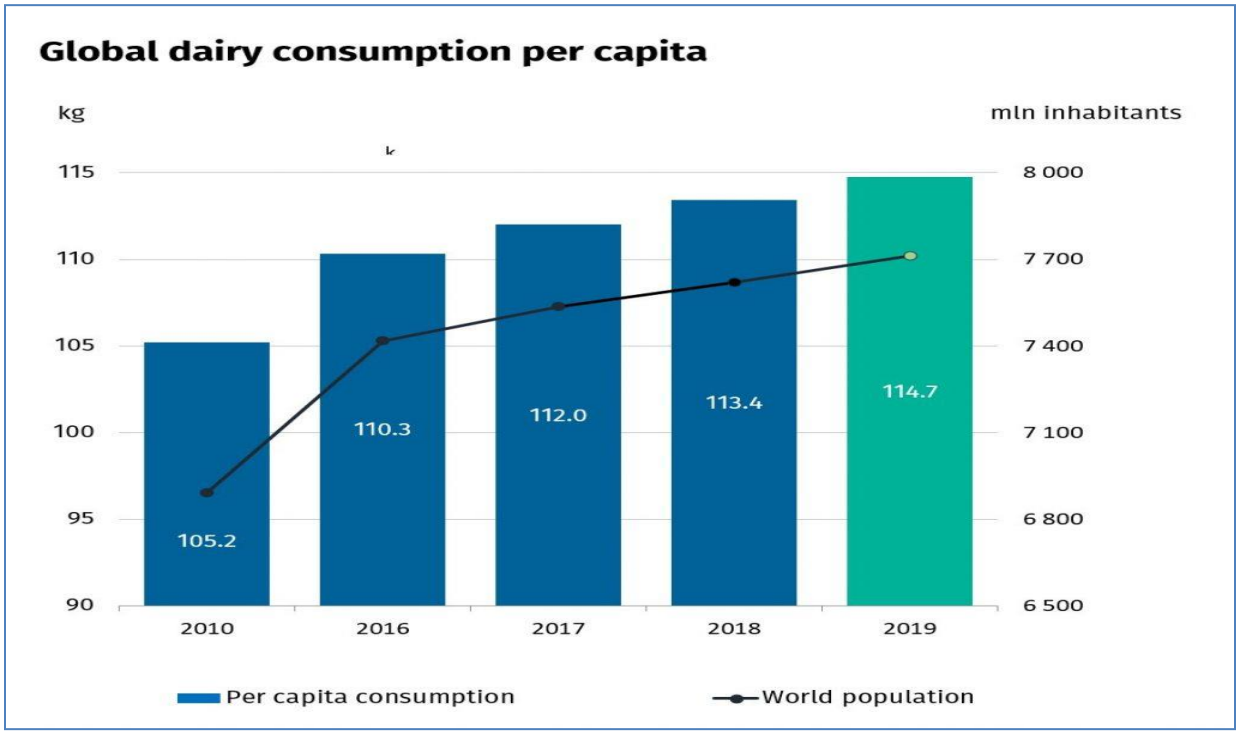
According to International dairy federation 2021, 881(Eight hundred and Eighty one) million tons of milk and powdered milk were produced world wide and per-capita consumption of dairy products reached 114.7 kg in 2019 increased to 1.2%, Milk of a cow is represented as 81% of the total world milk production (714 million tones), however, high growth rate for baffallo and goat milk shows an increase in consumption of the products. 714 billion kg of cow's milk were produced in 2019. Asia is currently the world's leading region for cow's milk production at 32 %

Figure 1: Global milk production-all species



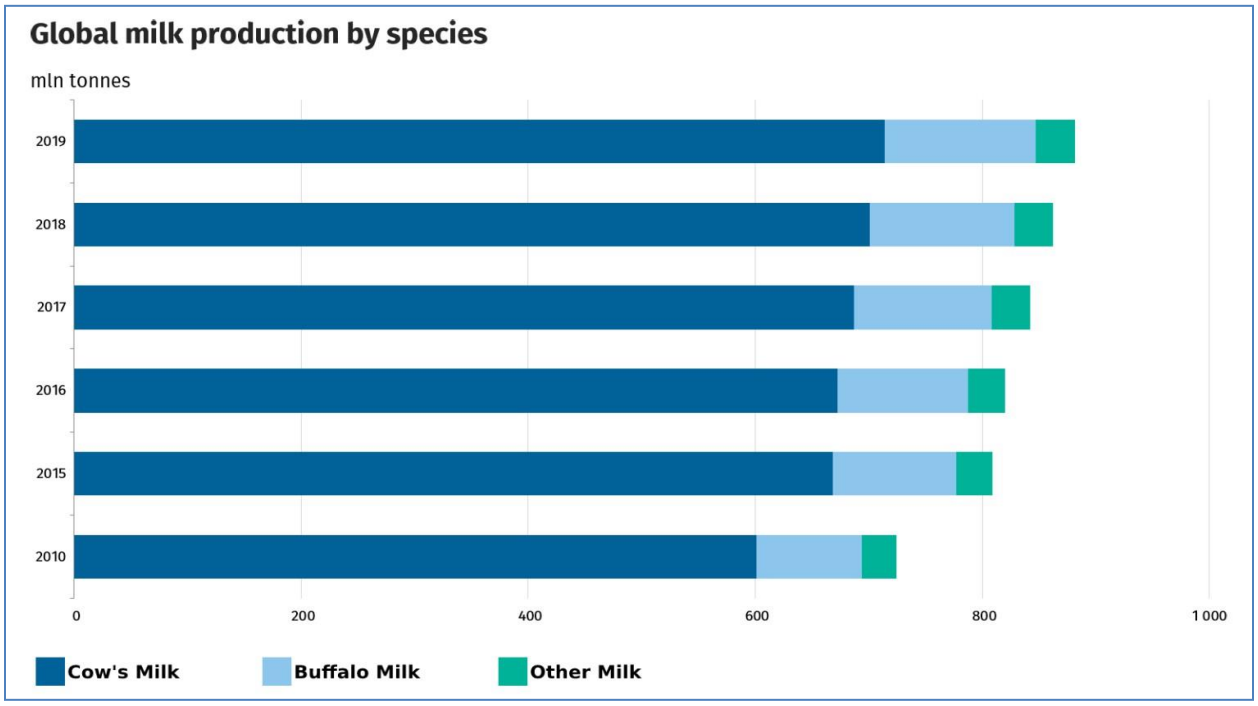
Source: International dairy federation 2021

Figure 2: Global dairy consumption per capita



Source: International dairy federation 2021

Figure 3: Global milk production by species



Source: International dairy federation 2021

And for East Africa, the dairy sector is the largest single sub-sector within Kenya ‘s agricultural sector, contributing about 14% of agricultural GDP and 3.5% of total GDP. With population growth and urbanization, dairy farming industry has been developing as well with increase in incomes. Ugandan milk production is largely dominated by small-scale farmers who own over 90 percent of the national cattle population (FAO 2004). In rural areas, where 96 percent of poor Ugandans live (Okidi et al, 2004), up to about 60 percent of the households keep mostly indigenous cattle like Ankole, (NADDS; King 2002), However, almost 50% of farmers have adopted exotic breeds of cattle to increase on milk production with a mixture of cross breeds that aim at the same purpose. By far, the majority of milk production systems in Uganda are characterized by (a) a ‘high input–low output’ approach, (b) livestock is not an important source of cash, but a source of food, store of wealth and status symbol, and (c) milk demand is increasing and driving more and more of these dairy farms to intensify and often to diversify as

to increase household returns though prices of raw milk still low which has resulted into low compliance costs by farmers in dairy farming. Due to market forces first, and to higher competition for production factors secondly, the main milk production systems in Uganda have been evolving seemingly in the same direction (towards intensification), but at different speeds. A coordinated dairy development program for the sector would require a clear understanding of;-

(a) the compliance costs

(b) access to finance and

(c) financial performance together with dairy development interventions implemented and/or proposed on the predominant production system. The dairy sector is considered to be the most organized livestock sub-sector in Uganda. Currently, the Dairy Development Authority (DDA) is charged with promoting production, competition and monitoring the markets for milk and dairy products. To achieve this, DDA collaborates closely with multiple private sector organizations operating in Uganda. However, little has been achieved hence need for thorough research in the field of dairy farming in Uganda.

Although dairy production plays a significant role in the economic development of Uganda which mainly agricultural, a survey by KPMG 2009 showed that among the top 100 small and medium sized dairy farmers in Uganda surveyed, 67% of their earnings had declined, 20% over the past two years and 61% had liquidity problems. Further evidence from the related literature reveals or shows that most dairy farmers have continued to face increasing high interest rates, declining sales, heavy indebtedness and many others which worsened during the Covid-19 pandemic. Under the current high inflation economy (IGAD report on livestock farming 2021). A lot of effort has been made to improve their financial performance. In spite of all that, financial performance of dairy producers particularly in Uganda (MAAIF report, 2020) indicates that dairy farming has continued to deteriorate despite the fact that Uganda is an agro- based country, The heavily dependence on agriculture is starting to be questionable. The factors that may explain this phenomenon have remained unexplored. Although review of literature from related studies shows that, perhaps, the persistent poor financial performance could be a result of compliance costs and access to finance; little is known about the same in Gomba, hence the need for a special investigation.

1.3 Problem Statement

Uganda's economy is still dominated by agriculture. More than 80 percent of Uganda's workforce is involved in agriculture based primarily on small holder farmers that are on average of two hectares in area (Bahiigwa 1999: RoU, 2004; FAO, 2010). The share of agriculture in the national gross domestic product (GDP) is about 14.6%. The dairy industry is estimated to have contributed more than 50% of the total output of livestock sub sector making it the second major agricultural activity contributing to the national GDP after cereal products (RoU,2004; Grimaud et al,2007: DDA 2010: Balikowa,2011). Although the contribution of the livestock sub sector to the national GDP decreased from 1.5% in 2005 to 1.3 in 2010, the share of livestock in agriculture GDP increased from 8.4 to 8.9 percent over the same period (MAAIF, 2010). Despite various campaigns, agricultural subsidies from government and policies like NAADS, Myoga, and operation wealth creation among others to empower and develop dairy farming in Uganda. Little has been achieved in comparison with the set objectives henceforth indicating need to study compliance cost, access to finance and financial performance in the sector.

1.4 Main Objective

To find out compliance cost, access to finance and financial performance in dairy production industry in Uganda using Gomba district as a case study.

1.5 Specific Objectives

i. To determine the level of financial performance of dairy farmers dairy in Gomba District.
ii. To find out the relationship between compliance cost and financial performance of dairy farmers.
iii. To find out the relationship between access to finance and financial performance of dairy farming in Uganda

1.6 Justification Of The Study

The findings of the study were expected to benefit several groups of in Gomba district:

a) DDA can find the results of this study useful as it contributes to the understanding the possible intervention to boost dairy farming in Uganda.

b) The researcher hopes this research might enable farmers in Gomba district to enlighten their knowledge on several modern financial management practices in their respective arenas.
c) Government in conjunction with other supporting the MAAIF can use the findings of the study to have a strong base for formulating better economic and agricultural policies.
d) Researchers: The researcher also hopes that the findings of this study can form the basis on which future researchers may build further studies in the arena of dairy farming in Uganda.

1.7 Scope Of The Study

The study was conducted in Uganda using Gomba district as a case study. Gomba district is one of the districts in Uganda with a genuine background in dairy farming with good literature records in existence at the district offices (District Veterinary Officer).

1.8 Research Questions

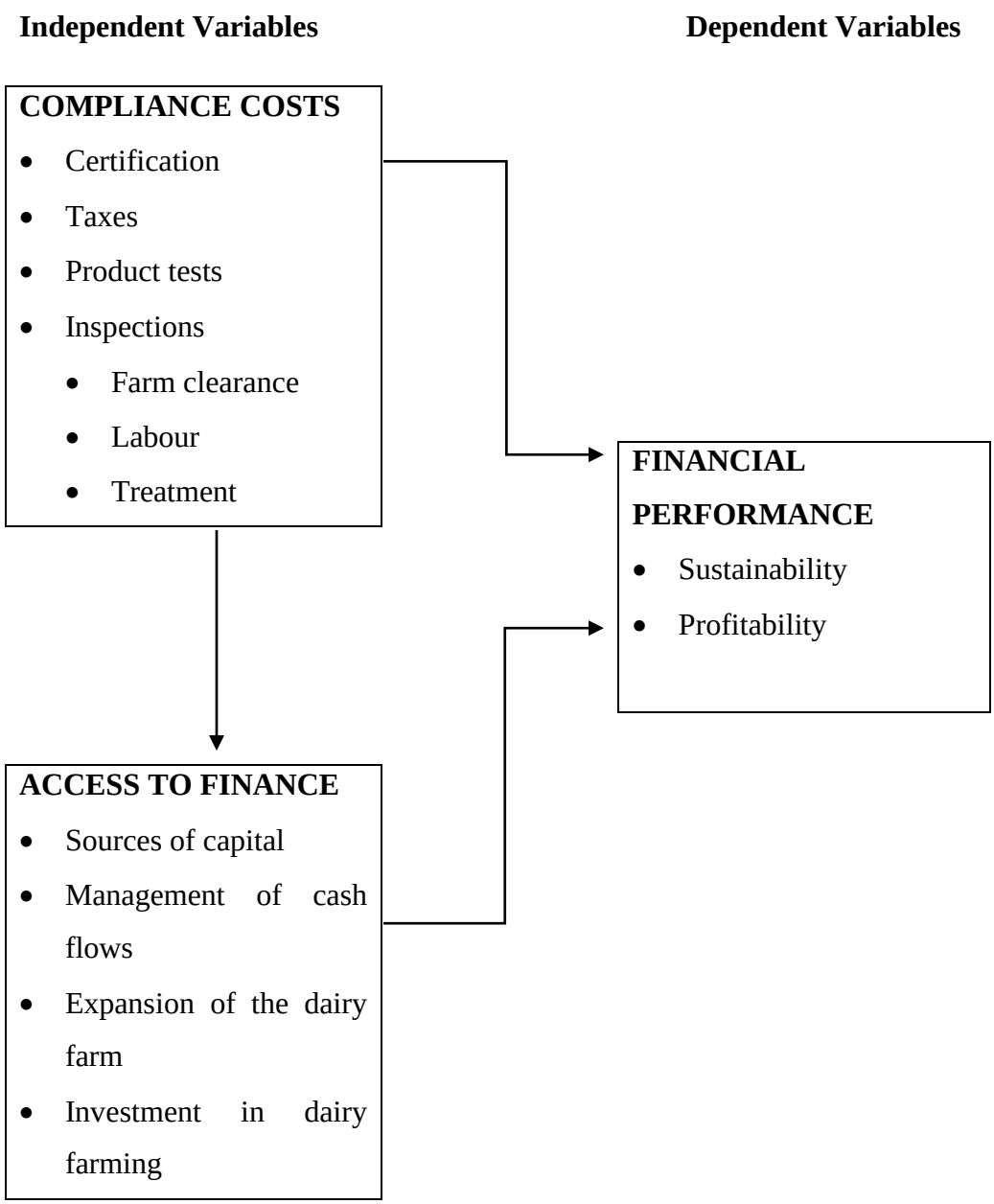
1. What are the costs of investment by farmers in dairy farming?
2. What is the relationship between compliance costs and financial performance of dairy farmers?
3. What is the relationship between access to finance and financial performance of dairy farmers in Uganda?

1.9 Limitations Of The Study

1. Limited information since most farmers are illiterate thus difficult to collect data.
2. Poor transport means since it’s too far.
3. Inaccurate information since most of them do not keep records.
4. Hostility some may be bias of giving out their information.

1.9 CONCEPTUAL FRAMEWORK

Figure 4: Conceptual framework



Source: Adapted from Swaen and Tegan, (2022)

According to Swaen and Tegan, (2022), Conceptual frameworks are often represented in a visual format and illustrate cause-and-effect relationships. conceptual framework is a structure or a set of ideas that provides a way to organize and understand complex phenomena. It is a tool used in research, often in social sciences and humanities, to explain or understand a particular concept or

phenomenon, and to guide research questions and hypotheses. It usually consists of several key components, including the key concepts and variables, the relationships between these concepts, and the assumptions that underpin the framework. The framework provides a logical structure for analyzing and interpreting data, and it helps researchers to develop a shared language and understanding of the subject they are studying.

According to the conceptual framework above, Access to finance is the independent variable, compliance costs is the cofounding variable and financial performance as the dependent variable. Access to finance comprises of investment in dairy farming, expansion of the dairy farm, management of cashflows, sources and sources of finance. compliance costs comprise of certification, taxes, product tests, inspections and farm clearance, labour and treatment while financial performance comprises of dairy farm sustainability and Profitability. However, there are minor variables that affect or influence financial performance of dairy farming for example corruption, government policies, available markets.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction.

Inspite the Long History of Uganda, The Dairy processing industry of Uganda only began its recent development trajectory since the 1990. *According to the Dairy Industry Act of 1960s*, which formed the Dairy corporation, A body for government that in charge of regulation, groth and development for dairy sector *According (Toye, 2012).* Despite all this set ups, the dairy sector went into a serious setback because of political, economic and civil wars in the future after its setup. By the 1990s, the cattle stock was reduced to 50%, that is to say from 8-3.5 million; However, controlled cooperative marketing structure under the stte collapsed and this was from two milk processing plants and these built in Mbale and Kampala in the 1960s, only the latter was operational *according to (Toye, 2012).*After conflict period, in the 1993 Dairy Sector Master Plan came up with the structure to freely allow milk marketing with out barriers, formation of a dairy board and privatizing the dairy cooperation *according to (Mbowa, Shinyekwa, & Lwanga, 2012*). By 1998, the implementation of master plan resulted into formation of Dairy Development Authority, and the Dairy Cooperation Limited (DCL), the commercial company, which was later privatized and leased to Sameer Agriculture & Livestock Ltd. (SALL) in 2006 (Toye, 2012). Nevertheless on the assets of DCL, the extension of veterinary services all is privatized and put under district level administration. However *according to FAO 2016*, Ugandan milk market has been transformed to a state controlled market hence making dairy industry more competitive in the private sector it operates, including a large number of independent local traders, has taken an increasing role in local milk collection and trade. Private investment has rapidly expanded processing capacity which has reached 1,454,480 liters per day in 2015, from just 160,000 at the time liberalization according to *Makoni et al, 2014*. By 2014, there were 14 registered dairy processors companies operating in the Uganda. The country now manufactures a diverse range of dairy products: pasteurized milk, UHT milk, yogurt, butter, cheese, and milk power for domestic and export markets (Makoni et al., 2014). These developments are, nevertheless, overshadowed by relatively underdeveloped value chain capabilities and the presence of a sizeable ‘informal’ milk market that supplies lower-priced ‘raw’ or ‘boiled’ milk directly to consumers.

2.1. Theoretical Literature Review

While milk production in Uganda has more than doubled since the early 2000s, milk productivity remains low and varies seasonally. Although low milk productivity is associated with the smallholder farming structure, the poor feeding system and animal breeds are also important contributing factors. Combined with these farming issues, limited access to markets, especially for remote areas during the rainy season, are value chain constraints that undermine investment to improve milk productivity in dairy farms and high compliance costs. Uganda's national milk production has increased approximately 7% per year, growing from 0.5 to 1.2 million ton during 2000-13 (FAOSTAT, 2015). This growth in production volume was primarily achieved by expanding the country's cattle population, restocked by the post-conflict livestock rehabilitation programs (Mbowa et al., 2012). Uganda's cattle population, estimated at 14 million head in 2014, has more than doubled since 2000 (MAAIF report, 2015). Milk productivity, however, remains low and is undermined by the smallholder dairy farming structure and low investment in farming practices, linked to the underdeveloped and poorly configured relationship between dairy farmers and 'raw' milk buyers.

2.2. Uganda Financial Sector

Uganda's financial sector has witnessed remarkable growth in recent years, and great progress has been made in its regulation. In March 2010, 28 regulated financial institutions were providing the country with financial services through 488 registered branch offices, compared with just 270 or so branches at the end of 2006. Despite the successes achieved, more than 70% of Ugandans (compared to 82% in 2007) have no access to formal financial services, with poor people and rural populations at a particular disadvantage.

The inadequate access to basic financial services, such as savings, loans and payment systems, is one of the major challenges to economic development and poverty reduction. Women and smallholder farmers in rural areas are especially hard hit. Informal microfinance institutions, particularly the savings and credit cooperatives, or SACCO's, which receive strong support from the Ugandan government, could play an important role in providing these population groups with

alternatives. However, their potential remains limited due to low levels of training and the lack of regulation and supervision of the sector.

The financial organizations are categorized into four tiers namely:

- Tier 1: Comprising of banks e.g., Stanbic, Eco-bank, Equity,
- Tier 2: Credit institutions e.g., Housing finance
- Tier 3: Micro Deposit taking Institutions (MDI's)
- Tier 4: All other financial intermediaries including SACCO's, SLA's, women groups, NGO's. Preliminary findings from census of MFI in Uganda in 2006 identified the following organizations:
- In phase I, a total of 3,360 Tier 4 MFI Outlets in Uganda were listed;
- In phase II, a total of 1,248 Tier 4 MFI outlets were mapped; and
- In phase III and part of phase IV, a total of 741 organizations and 1,064 MFI outlets have been found to be eligible MFI's and MFI outlets.

2.2.1 Financing Sources In Dairy Farming

Household income and savings are the most common sources of finance for both investments and operating expenses (Bou report, 2020). Profits from the dairy enterprise are used as a source of funding for investments by about 22% of households making those investments and by 33% of households with operating expenses. Many households also rely on non-dairy agricultural and nonagricultural income sources.

Credit is used by about 18% of households making investments and 14% of households with operating expenses (Bou report, 2020). Among households using credit for investments in cattle, cattle housing or machinery, about 50% made the investment on credit and repaid in cash, a third made the investment on credit and repaid in milk, and less than 20% made the investment with a cash loan. Similarly, for operating expenses made on credit, about 85% repaid inputs on credit using cash or milk, and cash loans were only used by about 15% of households (DDA report, 2021). Input credit was more common for veterinary services and artificial insemination, but was also used for fodder and feed, and inputs for fodder production. These results indicate that credit

from input suppliers or facilitated through dairy cooperatives' check-off systems can be an important source of financing for some dairy farmers.

2.2.2 Barriers To The Use Of Credit Finance

Overall, dairy farmers do not use credit loans from financial institutions to invest in their investments (DDA report, 2018). And the findings is consistent with the studies in rural areas about dairy farmers. Most rural households are un able to see the purpose of a loan due to fear the lossing their assets or fear of being unable to repay the loan. Between 40 and 60% of rural household applications for a loan from a formal financial institution are refused (Bou report, 2020). Males tend to have higher chances of success than females, as do households with a higher annual income and those owning land.

Mistrust in financial institutions and un realible services affect positively farmers desire to make savings most formal financial institutions. And farmers are most likey to use these financial institutions for both savings and loans, Above 50% of the households in rural areas belongings to an informal savings group (Bou report, 2016).Although the loan products issued to informal sectors are especially dairy dairy farmers and at a low rate. In modern financial institutions, most financial cooperatives coordinate with farmer's cooperatives and are the most sources of loans.

2.3 Managing Debts And Restructuring

Measures of Repayment Capacity is considered to determine the ability of farmers to pay back the borrowed money, However it is not intended to measure the performance of the business. Farmers may have inadequate capital for start and operations and/or a negative capital debt repayment capacity and thus may need to restructure a debt (DDA report, 2020). However, this raise a number of questions, will restructuring change the ability to generate earnings? Will the total debt position change? Two suggested ways on which restructuring change the financial position (Bou, report, 2019) First, it creates more liquidity and thus more working capital (current assets - current liabilities). Second, it matches principle payments with ability to repay. The question which needs to be asked, though, is if restructuring is a viable alternative or Is the business profitable? Is the debt good or bad? Will the farm and other earnings cover be living expenses? If it is determined that restructuring is a viable alternative, the ideal is to restructure so that working capital equals two times the projected living expenses plus principal payments. If

the restructuring is due to the loan being an unprofitable problem loan, then the economic reality of the situation needs to be taken into account. From the point of view of a lender, loss is a certainty with a problem loan where the debt may or may not exceed the secured assets. The lender has the choice of either foreclosing on the loan or to restructure the loan through a principal write-down, an interest rate reduction or a combination of the two. The basic decision criterion for selecting the corrective action is if the losses from restructuring are less than the losses from foreclosure, the lender will choose restructuring. Otherwise, the lender will choose foreclosure. To make this decision, though, the lender needs to gather information. First, one needs to assess a value of the net proceeds from foreclosure taking into account the net cash receipts (rents and net market value of assets), the net cash expenses (legal fees and administrative costs) and the opportunity cost of capital (cost of loanable funds and discounted cash flows). Second, one needs to assess the value of net proceeds from a restructured loan with respect to the loan payments from the borrower and again, the opportunity cost of capital.

2.4 Accessibility To Capital

The credit accessibility by rural households has increasingly been regarded as an important tool for raising the incomes to meet short-term requirements for working capital and for long -term investment in agriculture *MAAIF report, 2016*. Access to credit by smallholder dairy farmers is, considered as part of the constraints disabling their benefits from credit facilities. Smallholder dairy farming is often defined to include family farming, subsistence farming and low-income farming owning between one to three dairy cows. This sector is faced by various production constraints such as low reproductive performance, calf mortality, low growth rate and weight gain that requires working capital obtained from credit institutions. They comprise the largest group of the rural and peri-urban population, who are still poor, but actively trying to earn a significant part of their livelihood from farming activities. Thus, they are by far the most challenging potential client segment for the providers of financial services (*Boucher et al., 2014E*). However, smallholder dairy farmers of the country who do not have access to capital, encompasses the largest portion of the population. This lack of access to financial services is one of the reasons for rural households to live in the vicious circle of poverty for long period. The formal financial sector in Uganda has stringent lending conditions and therefore does not provide

their services to the rural and small medium sized farmers who comprise 80% of the dairy production.

According to Conning et al (2005), access to credit occurs when there is no non -price or credit rationing. Credit rationing is defined as a restriction of credit availability: the restriction or refusal of the availability of credit, even when an applicant is willing to pay more than existing borrowers, or when he/she cannot obtain the credit required. Access to credit can therefore be defined to include availability of finance, that is, when needed/desired, convenience, continuity and flexibility are guaranteed, and willingness to pay the price of the loan. Alternatively, access to credit can also be defined as a situation in which a borrower is able to obtain some amount of capital, either in cash or kind, regardless of his/her willingness to pay a higher price for credit, referring to an interest rate at which a loan is granted, from the particular source of capital, though he/she may choose not to borrow. Therefore, a household has access to a particular source of credit if it is able to borrow from that source. The extent of access to credit is measured by the maximum amount a household can borrow, that is, its credit limit. If this amount is positive, the household is said to have access to credit. Agricultural activities in rural areas are typically seasonal, and households need credit to smooth out seasonal fluctuations in earnings and expenditure. Agricultural dairy production is strongly conditioned by the fact that inputs are transformed into outputs with considerable time lags (Conning et al., 2005), causing the rural household to balance its budget during the season when there are high expenditures for input purchases and consumption and few revenues. Moreover, rural households need credit for other different types of consumption. These include expenditure on food, housing, health and education.

However, in most cases the access problem, especially among formal financial institutions, is one created by the institutions mainly through their lending policies. This is displayed in the form of prescribed minimum loan amounts, complicated application procedures and restrictions on credit for specific purposes (Schmidt & Kropp, 1987). For smallholder dairy farmers, reliable access to short -term and small amounts of credit is more valuable, and emphasizing it may be more appropriate in credit programs aimed at such enterprises. Credit duration, terms of payment, required security and the provision of supplementary services do not fit the needs of the smallholder dairy producers, which renders them to be credit constrained, that is, they lack

access to credit or cannot borrow as much as they want. Therefore, the budget balance within the year can become a constraint to dairy production and household income for consumption and welfare outcomes. When liquidity is a binding constraint, the amounts and combinations of inputs used by a farmer may deviate from optimal levels that in turn limit the optimum production or consumption choices. The marginal contribution of credit accessibility therefore brings input levels closer to the optimal levels, thereby increasing yield and output (Feder et al., 1990). In view of this, credit inaccessibility has significant adverse effects on farm dairy output, farm dairy investment, and farm dairy profit (Carter & Olinto, 2003). As is the case in many agricultural enterprises, smallholder dairy producers have been suffering from a lack of access to credit for capital (International Fund for Agricultural Development, 2001).

Access to credit According to a 2015 survey of financial access in Kenya, rural households utilize more of financial services in both ranges of formal and information financial institutions5. Although only about a 1/4 of rural households have a bank account, about 70% have a working mobile phone, and mobile money (e.g., M-PESA) is commonly used in financial service among rural households. The most important uses of mobile money are receiving and sending money with friends/family, and savings. More than half of rural households belong to some kind of informal institution to which they make monthly or weekly payments. The most important reported benefits of those institutions include making lumpy investments, keeping money and for help in emergencies. In terms of savings, common methods include keeping cash and saving with a rotating savings and credit association (ROSCO) (Table 4). Rural households selling milk are also more likely to save with a savings and credit cooperative (SACCO) or accumulating savings and credit association (ASCA) than rural households in general. In terms of loan products, 77% of rural households selling milk have never had a loan product from a formal institution (i.e., bank, Ishwari, SAC-CO, micro-finance or government fund), similar to the 79% of all rural households. Loans from family, friends, neighbors and credit local shops or suppliers are more common than other sources, followed by loans from ASCAs and chamas. However, average loan volumes from these informal sources are likely to be much smaller than those potentially available from formal institutions. Among formal financial institutions, SACCOs are the most commonly used source of loans. Very few rural households report having applied for a formal loan. Lack of a perceived need for a loan, fear of loss of assets, inability to repay and lack of records are the main reasons given by rural households selling milk for not applying for a loan,

while lack of a guarantor or collateral are also common reasons given by rural households6. Thus, most dairy farmers appear not to even attempt to secure loans from formal institutions. When explaining the main source of finance for their farm, 90% of rural households selling milk cite their own savings, about 5% state that they borrow from neighbors or friends, and about 2% cite the buyer as the main source of finance. Only about 2% cite formal banking institutions.

Supply of finance to dairy farmers and cooperatives 3.1 Supply of credit finance the main formal sector financial institutions include (in order of total assets): commercial banks, micro-finance institutions, SACCOs, and government funds7. Formal finance sector lending to agriculture is a very limited proportion.

According Rønningen, K., Fuglestad, E.M. & Burton, R. (2021) identified six lock-ins within the beef and dairy system that are currently leading the agricultural sector down a specific development pathway, namely one of increased production through intensification. A combination of factors is involved and in particular pressure from stakeholder businesses across the wider community appears to be encouraging intensification, with the banking sector seeking to obtain security for loans, the machinery sector seeking to sell large (and expensive) machinery, and the agricultural cooperatives seeking to obtain as many raw products as possible. This development is further reinforced by cultural factors within the farming community, which exhibits a general ethos of productivism (Wilson 2013). The farmers claimed it was against their identity as farmers to produce less, while they maintained that increasing production was a source of considerable job satisfaction. At the same time, many farmer stakeholders stressed that they were not interested in any strong increase in production, as that would means more work, more debt, and possibly the need to hire additional labour.

2.5 Compliance Costs

One of the compliance costs in dairy farming are the transaction costs, and according to Khwaja, Hayat1, Muhammad2 and Bacha, (2019), Assessment of transaction costs The two-milk marketing system shows different agency problems and transaction costs. Transaction costs in milk market indeed influence farmer’s decisions in different ways to enter or exit the market. The theory puts the main factors of Williamson (2000) transaction cost that leads to influence transaction costs and its types of institutions which are the asset specificity uncertainty and

externality. The theory put asset specificity the most important element for describing transactions. Assets are specific to a certain use, and it is making them useless in another setting (Anderson and Cobia, 2004). For example, a chilling cistern for milk will be almost useless if there is no milk. In a dairy farm many things are high in specificity, and therefore it is not easy to change the way of production. The dairy farmers are directly

Sarhad Journal of Agriculture affected by the fluctuation in the economic activities in the country. The investment made by one party in assets enables the transaction, done by another party. The exchange, in this case, is unique as this contains a value of exchange. Williamson (2000) identified the other key dimension of asset specificity as, the location or site-specific assets for example natural resource available at a certain location and movable only at a great cost. Small-scale farmers are mainly found in rural areas, and it is costly for them to transport their milk produced to large-scale dairy farms or big commercial companies. Because the infrastructure and the geographic conditions of the area, the transportation cost makes the transaction cost high. The site-specific assets create high costs of milk collection and investment for the trading partners. Site specificity, an example can be a farm, it is located on a certain place geographically, and it is very difficult to move it, it can always sell and buy a new, but that is easier said than done. This means that the farmer will incur transport costs as well as only a limited number of trading partners. Milk is a time-specific product that refers to a time limitation and because of its perishable nature, frequent deliveries need to be done to protect its quality. The case was not found as a crucial problem in the case of large commercial farmers. Dedicated assets as suggested theory are a certain dedicated investment, so that the trade can occur with a specific partner. Since it has been given the dedicated assets, so the milk quality is exposed to less frequent transactions. The cost of marketing channels and the two milk marketing channels (TC) were thoroughly investigated. The implications to be drawn from such empirical cases shows that, the increased transaction costs arise from opportunistic behavior, for instance, the lower prices offered by the monopolistic Dhodi. Williamson (2000) argued that two human factors lead to TC, which are (1) bounded rationality and (2) opportunism. Considering the problems of small-scale farmers where they are encountering to dedicated assets, like proper tools and equipment to ensure milk quality, no transportation system and no cold storage facilities to safeguard and strengthen milk production. As the amount of milk is too small to connect the formal milk supply channel, consequently they must rely on middlemen dhodhi.

However According to Khwaja, Hayat1, Muhammad2 and Bacha, (2019) suggested that the problem of opportunism as the local dhodi middlemen behavior is opportunistic as long as they supply that in an informal market. They lack any alternate channel for milk supply and trading partner. From the empirical study it is the small-scale farmers exposed to the threat of opportunism, as according to the small-scale farmers' interviews, the transaction between them is organized with informal agreements with a fixed price. Here, they have conflicting goals. Both the partners are not satisfied with each other. The local Dhodi usually charge low price complaining milk quality. The little incentives in the form of loans make the farmers vulnerable towards middle man Dhodi. The main fear is taking loans and not be able to amortize them in due time. Such scenarios bound the small farmers to behave in accordance with the will of local dhodi. If there is bounded rationality, then the planning process breaks down, and the socio-economic and political risk increases leading to a need for greater coordination. This is one of the crucial problems the farmers face, and consequently, they have no other trading partner or alternative channel to choose for their milk supply. The middlemen in his interview stated that the farmers cheat by extracting fats ingredients from milk and adds water to milk. The agreement between them is easy to be manipulated by both the trading partners. According to the theories, if opportunism self-interest prevails, then certain rules and standards must be drawn up. Trust is a key word according to transactions as it makes the transaction costs high or low. You must trust your trading partner and will not behave opportunistically. Cooperation and working towards a common united goal cannot be done having any trust in one another (Golovina and Nilsson, 2009). The threat of opportunism is subjected to a lack of trust if the farmers feel insecure with trading partners they must search for another partner. Which will increase their transaction costs, and opposite to this if farmers have a trustworthy partner the transaction between them will continue as long as necessary, all along the supply chain. The small farmers who do not trust middleman Dhodi and having this belief, that they are treated opportunistically. So, the farmers have no ability to change the present situation. According to Khwaja, Hayat1, Muhammad2 and Bacha, (2019), The Nestle and Haleeb are offered higher prices compared to small-scale farmers as they have relatively higher investments in high selective breeds, hygienic, and management practices and their respective herd size is above 100, has the increased bargaining power. Large-scale farmers hold a formal written contract with large dairy processors. However, there is also a possibility of opportunism because of the dedicated assets, as they have been given the tools and

equipment. A big concern for any farmer whether smaller or larger is the difficulty in verifying the milk test results and access to the TST (total solid test) procedure. They feel that they have been deceived and paid the low price. Here comes the key role of trust which is limited and implies transaction costs. It is also important to highlight the role of socioeconomic characteristics of the farm which affect the transaction costs. The other transaction specific costs to consider are human asset specificity. Like the right skills or education, age and experience in the relative field. Education matters a lot in terms of reducing the costs of seeking information. Knowledge about available sources and the way how to get it. The respondent was asked about their age gender, education and experience in dairy farming. The small-scale farmers are either illiterate or have a very low level of education, they have no modern skills and knowledge to develop their farms. Mostly the farmer's age ranged 30-45 and possessed the old ways of traditional farming being told by them. According to Khwaja, Hayat1, Muhammad2 and Bacha, (2019), Due to illiteracy, it gives rise to transaction costs of searching for information and negotiation. As earlier mentioned in theory, the presence of TC is monitoring and information. The higher level of education can reduce the cost of searching information and negotiations with trading partners. The more they are highly educated and technically sound the more correctly will information be processed and will enhance its implementation value. Uncertainty affects transaction costs. There is a different type of uncertainty that arises due to the unexpected changes in the environment. It is the source of disturbances to which transactions are subject to, as the transactions are prone to several disturbances like unexpected environmental changes bounded rationality and opportunistic behavior. Small-scale farmers in the rural and peri-urban areas are landless farmers they have to lend the land for feeding animals, due to climate changes in case of floods and other unexpected environmental changes the farmers buy feed for their animals from the market which is very costly for the farmers. According to Khwaja, Hayat1, Muhammad2 and Bacha, (2019), Some other behavioral uncertainty emerges due to trading partners as well. It is important to highlight the role of middlemen, where he acts opportunistically. In the absence of large companies, the farmers rely on middlemen. The middlemen provide loans to small-scale farmers and bound them. The middlemen exploit the farmers in different ways by cutting the price of milk complaining that the milk quality is not good. The average farmers have no other alternative channel to process their milk. Owners of small firms feel insecure about increasing production as still, they have no proper channel to

deliver. Which means they are not in the position to sell the increased amount of milk. What if they invest and expand their production, their limited budget and financial position make them quite vulnerable and prone to future investment. In such scenario, they are risk aversive for future investment as it will not pay off for them in the near time. According to farmer's interviews, the farmers stated that during summer the middlemen charge a very low price and it is very difficult and too costly to sell their milk in the cities. In such circumstances, farmers have not been provided with dedicated assets, like cooling tanks or refrigerators to store the milk and the middleman has a monopoly in the area to discriminate the local farmers. Regarding the contractual arrangements, small farmers hold a verbal contract with their trading partner dhodhi. The transaction between them is organized with informal contract and are subject to cancellation at any time with middlemen dhodhi. As nothing is written formally between them and milk is paid at a fixed price. The contracting costs are important, as good relations between them is to be maintained. However, trust is still the key element to be addressed. Trust is established through sustaining better social relationship which will reduce the opportunistic behavior up to some extent. In the case of large-scale farmers, they are equipped with dedicated assets, that is to say. cooling tanks and chillers. They also show their concerns regarding the opportunism where dedicated asset makes them vigilant about the expected opportunism by their trading partners regarding the issue of TST procedure, but apart from the theoretical perspective regarding opportunism, transaction cost theory is not without its critiques we have found in the empirical studies, that both the formal and informal channels

The Sarhad Journal of Agriculture 2019, potrays changes in prices offered by trading companies or partners, as farmers on large scale encounter high price enganged with commercial companies in comparation with those farmers who have dependency on local dhodhi. *According to Foss and Klein (2010),* argued that the basic assumption of opportunism ignores the relative ground of human action and outside force behavior is transaction cost economics for example monetary payment expectations. Modern studies suggest there is a failure to explain how to minimize opportunistic behavior in dairy farming by making changes in the government structure and the difference exists between psychological state of opportunism and propensity to behave opportunistically thus a hinderance to farmers while getting loans and credits. Cases observed that since self-interest opportunism is moderate and not potentially severe. Furthermore *According to Foss and Klein (2010),* milk preservation is difficult due to environmental

uncertainities for example bad weather, seasonal changes and natural calamities which push the prices for feed crops as they buy feed for their animal at a higher cost.

According to Australian Dairy Industry Council (ADIC), Dairy industry is the largest value-added food industry contributing $13 billion at whole sale to economy. Some of these value additions include, it is estimated that more than 40000people are directly employed in this industry on farms, Manufacturing, transport, distribution and research and it is done while processing some products like packed milk, cheese, butter, cream, yoghurt and range of specialty products, the estimated value-added production (ex-factory) is $13 billion. However, there key elements of the Australian dairy industry chain that influence dairy product manufacturing costs and these include;

1. **Water.** ADIC its vital for dairy manufacturing as it is used in cooling and heating, production of steam, cleaning and other operational activities during manufacturing of all dairy production and 80% of water supply for dairy farming/manufacturing. This is obtained from the main water supply.
2. **Labour**, there is a trend towards learning in manufacturing and increasing the extent of automation in dairy manufacturing in order to achieve greater efficiencies. Also challenges of attracting skilled workers to what are invariably small rural towns, this challenge becomes even more acute when there is significant competition from large corporations in the sectors such as mining.
3. **Energy,** This the most utilized in dairy industry for both electricity and thermal sources. The manufacturing of whey and milk powder are the most energy intensive processes and the number of sites producing analyzed products per state and the electricity required to produce each product and electricity required to produce each product and these include as follows;
    - For thermal energy(fuel), required weighted (MJ/ton) estimated is 11916.
    - Electricity required is estimated to be kwh/ton (1146
4. supply of raw-milk, this depends on reliable and constant supply of raw-materials and seasons of milk. This depends on the capacity of milk produced where the manufacturing sector is forced to run at low capacity especially in January and August and some are

forced to close fixed costs which are high associated with capital intensive plant, most cheese facilities (by extension whey) are run at more constant capacity levels, butter facilities require constant supply but do not require as high level of capital investment and are not required to operate at full capacity. However, Australian processors have attempted to manage this milk change to efficiency through plant design, that is by opting for smaller dryers e.g., combining at one manufacturing sites, two to six ton per hour dryer instead of one 12 tons per hour dryer. This is to enable shutdown during off peak when milk supply is too low to run such plant efficiently.

According to Dairy McBride 2014, The Challenges faced in Organic Milk Production by Organic milk producers were asked in the ARMS what they considered the most difficult aspect of organic milk production. Forty percent of producers reported that certification paperwork and compliance cost were the most challenging (fi g. 17). Sourcing organic inputs, including grains and forages, feed supplements, and replacement heifers, was the daffiest cult aspect reported by 23 percent of organic producers. High costs of production and maintaining animal health were challenging aspects reported by 17 and 13 percent of producers, respectively. In this section, the challenges of organic milk production are explored by examining how reported challenges to organic milk production varied across the sector. Producer reports were summarized by operation size, region, level of pasture use, and operator characteristics to see what factors may constrain the adoption and growth of organic milk production.

According to USDA's (2005), Factors Affecting Milk Production Costs This section of the report examines the relationship between farm and operator characteristics and three levels of production costs—operating costs, operating and capital costs, and total economic costs Measuring Milk Production Costs. Older farm operators had higher costs than younger operators. Operating, operating and capital, and total economic costs all declined as farm size increased, consistent with economies of size. Costs declined as size increased, at a decreasing rate, as fixed capital and labor costs were spread over more units of output. Significant economies of size with respect to capital and labor were expected, but operating costs also declined with size, possibly due to greater feed efficiency or lower prices paid for feed items on larger farms. Farm location influenced production costs as dairies in most other regions had lower costs than those in the Northeast. Technology use was also an important determinant of production costs. Farms using

more technology had lower per unit capital and labor costs, possibly by increasing their Figure 15 Production practices, by type of producer Organic operations used pasture-based feeding more often, while conventional operations used regular veterinary and nutritionist services more often Percent of farms Source: ERS calculations based on data from USDA's 2005 Agricultural Resource Management Survey, conducted by the National Agricultural Statistics Service and the Economic Research Service. Production practices Organic dairies Conventional dairies Pasture-based feeding Regular veterinary services Nutritionist services 0 20 40 60 80 100 30 Characteristics, Costs, and Issues for Organic Dairy Farming / ERR-82 Economic Research Service/USDA productivity. Pasture-based feeding had a negative, but insignificant, effect on operating costs. Feed costs were lower for organic dairies that substituted pasture for other feed items, but lower production from pasture-fed cows offset the cost savings. Pasture-based feeding was associated with higher total economic costs due to higher labor requirements. After accounting for factors that influence production costs, operating costs for organic production were $4.78 per cwt higher, operating and capital costs were $5.65 per cwt higher, and total economic costs were $6.79 per cwt higher than for conventional production among all U.S. dairies (table 12). Results were similar for dairies in the Northeast and Upper Midwest and among small farms (less than 150 cows). The estimated difference in production costs between pasture-based organic and pasture-based conventional farms, however, was much less than among all dairies ($2.87 per cwt for operating costs, $3.00 per cwt for operating and capital costs, and $3.57 per cwt for total economic costs). Therefore, it is not surprising that many pasture-based dairies use organic production.

2.6 Milk Management Techniques And Performance Of Dairy Farmers

According to Developed with Dairy Training Centre (2017), When farmers are asked whether they consider themselves managers, they all will confirm that indeed they feel themselves as such. When you also ask them what tasks they specifically do as a manager, what it is to be a manager and what makes them different from farm workers the answer is usually not clear. Before we define what farm management mean, it is important to first understand what is farm. A farm is an economic unit (firm) where inputs are transformed into outputs through an interaction between natural and man-made factors. A combination of inputs, also called productive resources or factors of production, are usually employed in various proportions using

the managerial expertise of the operator of the business who may be called a manager. Farm management is defined as" a decision-making process in which the available but limited production resources are allocated to selected production alternatives, so as to operate the farm business in such a way as to attain some set objectives''. The objective could be profiting maximization and/or achieving some other issues. Dairy Farm Management Functions Similar to other management responsibilities and these are Planning, Implementation and Monitoring & Evaluation Controlling. For theoretical purposes, it may be convenient to separate the function of dairy farm management but practically these functions are overlapping in nature that is to say. they are highly inseparable. Each function blends into the other, and each affects the performance of the others. According Sarnavi, Nikbakht, Hasanpour, Shahbazi, Aste, Adhikari, (2017), Estimating the hourly demand profile of electricity consumption in dairy farms was the main target as the primary step toward applying PV system in dairy farms. To achieve this objective, a typical dairy farm was selected as a reference to define the simulation framework. A methodology was presented as a computational program combining the models of artificial lighting demand, milking demand, milk cooling demand and pumping demand, which was developed in TRNSYS. Further investigation was conducted on farms with herd size of 20 to 100 cows as the most common size in Iran dairy farms. It has been demonstrated that the electrical demand has the overall shape of bimodal, that is to say. two peaks around the milking time in the morning and evening. Summing up the results, it can be concluded that the most part of electric energy is consumed in lighting and milk cooling sections. In small herd size and low LC, the lighting is dominant consumer and with increasing the LC the milk cooling would be the main consumer in smaller herd size. Moreover, the effect of ambient temperature and day length, respectively, on milk cooling demand and artificial lighting demand is quite significant and governs the total demand variation during a year, where the maximum demand is registered in August. The proposed method can be readily used in practice and the findings are of direct practical relevance. An important finding to emerge in this study is the detailed consumption share of each subsection which can be used in economical evaluation of equipment replacements through enhancement plans. This research was concerned with PV application; however, the results should be applicable also to energy efficiency intervention strategies.

According to Ventura, Lorenzi, Mazza, Clemente, Lacomino, Bertocchi, Fusi, (2021), A good quality of animal life and protection of their welfare should be ensured not only by repressive

actions, such us by official inspections, but most importantly by providing and disseminating best farming practices. Animals must be reared considering their physiological and ethological needs, and only in this way a good level of animal welfare can be guaranteed. Determining good and best practices for farmed animals is certainly a complex exercise, considering that animal welfare science is such a recent discipline, and limited information is available on how animals' minds work and process past experiences and information. Currently, it is crucial to focus on the fact that maintaining good animal welfare should be based on many different factors, such as animal living conditions, respect for their needs, and their ability to cope with the surroundings environment. When pursuing risk assessment and risk management applications in animal welfare, it is also essential to have a big database, collecting information from different sources on Animals 12 of 14 welfare conditions in the target animal population, to know the current situation and have the chance to make decisions and tackle particular issues. In this sense, the Classy Farm system represents a revolution for the veterinary sector, at least, for Italy; but maybe not only there. Indeed, the Classy Farm system does not only represent a method for risk assessment and categorization of farms, but leads to a guarantee and awareness of compliance with animal welfare criteria in a context where interest in and sensitivity to animal welfare, as well as a rising in ethical sense, are rapidly developing. Simultaneously, there is growing interest and attention among consumers to have deep information about the origin of foodstuffs. In this way, voluntary labelling of animal welfare-friendly products can represent the best way to communicate information on how farmed animals are kept. However, the message reported on these kinds of products should be guaranteed, and the labelling process should therefore be based on a scientific method, shared and approved among all stakeholders. In this scenario, the Classy Farm welfare assessment protocol, and especially the list of best practices contained therein, will be the starting point of a new voluntary food labelling initiative in Italy (called Sistema di Quality Nazionale per il Beaneses're Animale, National Quality System for Animal Welfare, SQNBA), harmonized at the national level for promoting and certifying animal-welfare-friendly food products [43]. The environmental, economic, and social sustainability of products of animal origin inevitably go through the requalification of farming techniques and the implementation of new and best practices for animal welfare and agricultural sustainability, that farmers can implement.

2.6.1 Materials And Methods

Many surveys on formal and informal credit sources in Uganda have been mainly qualitative in nature (Daniels et al., 1995). Zeller et al (1997) used a univariate prohibit model to estimate the factors that determine an individual ‘s borrowing decisions, in terms of their participation in informal credit markets. The results from several studies have always shown that among the formal and informal lenders, age, schooling, wage income, sick days and household headship are significant determinants of applications for credit. On the other hand, gender and social events are not significant. Age, the years of schooling and the ratio of outstanding loans increase the probability of being supply constrained. Higher household wealth reduces the probability of being constrained.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describe the Research methods that were used to find out the relationship between compliance costs, access to finance and financial performance of dairy farmers in Gomba District. The research is well done by the research design, sample size, data collection methods, data sources, data quality control, data analysis and presentation, ethical consideration and limitations, research instruments, sampling techniques and target group.

3.1 Research Design

Research methodology is a systematic way to solve a problem (Wangusa, 2007). It is a science and art of studying how research is to be carried out. Essentially, it is the procedures by which researchers go about their work of describing, explaining and predicting the phenomena. It can also simply be understood as the study of methods by which knowledge is gained with the aim to give the work plan of research process. This research is based on a case study approach. Yin (1984:23) clearly paints a clear picture on the case study research method "as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used."

This study seeks to investigate compliance costs, access to finance and financial performance in dairy production in Uganda using Gomba district as a case study. To achieve this, a case study path drawn from review of literature as depicted in the conceptual framework will be tested due to its capacity to accommodate different methodologies and merits such as its relevance to all parties in research, it can be done remotely, it is inexpensive, its accessible to readers, health wise due to the Covid-19,epidemic like monkey pox and other status quo and a problem solving study which involves an in depth contextual analysis inform of a problem solving study. Furthermore, apart from its ability to use more than one research method, a case study also involves a holistic and in-depth investigation (Feagin, Orum, & Sjoberg, 1991). Common methods in a case study are in-depth interviews, surveys, focus groups, and content analysis

which are appropriate during this era of the Covid-19 pandemic. Specifically, casual relationships between the study variables will be tested. A qualitative approach is therefore found suitable for this study since it is an appropriate tool in managerial decision making in regards to the case study. A cross-sectional field survey design will be used to collect data since dairy farming sector has several customers and stakeholders like bank of Uganda (BOU), DDA, MAAIF, District local governments, NGOs, Humanitarian organizations and among others.

3.2 Target Group

The target group of this study are the dairy farmers who are the loan clients of the bank especially cattle keepers and the and other stakeholders who are directly involved in credit processing and administering. This means, senior bank professionals, Department heads, Branch managers, Assistant branch managers, Loan section heads, Loan officers, Loan clerk, and Loan Committee members of the entire financial sector.

3.3 The study of Area

The research study was conducted in dairy farmers, commercial banks with some money lenders that give credit loans to farmers in Gomba district. However, there several districts in Uganda that carryout dairy farming and these include Stanbic Bank and Jesma credit finance in Kyayi sub-county. Most farmers are on subsistence sector and a few on commercial dairy farming.

The Farmers that responded are: - 49 dairy farmers, 2 beef farmers, sampled 5 dairy companies in Gomba District and only operating managers responded, 1 money lender service business in Gomba, 2 veterinary drug shops in Maddux and Kyayi only two officers responded each drug shop and the manager Stanbic bank Mpagi District.

3.4 **Sample size**

The researcher managed to obtain a sample size of 49 respondents and these include stake holders of dairy farming and dairy farmers in Gomba District. And the method used is as below.

Table 1: Showing population, sample size and sampling method

Categories Of Respondents	Population	Sample Size	Sampling Method
Dairy farmers	33	33	Snowball sampling
Veterinary doctors	2	2	Simple random sampling
Creditors	3	3	Simple random sampling
Dairy managers	5	4	Purposive sampling
Local government officials	4	3	Purposive sampling
Beef farmers	2	2	Purposive sampling
Total	49	49	

Source: Krejcie and Morgan 1970

3.4.1 Sampling techniques/Methods

3.5 Sampling method

The researcher employed purposive in addition to Snowball Sampling during the process of data collection from the study respondents. The study used simple random sampling especially in markets were most farmers meet, this was quite easy for me to identify and spot out farmers to with relevant information, Furthur more, purposive sampling techniques because it seemed to allow the researcher to select a sample with experience and knowledge about the study variables and this method was used to select professionals who are stake holders of dairy farming in Gomba for example Veterinary Doctors, Bank creditors, dairy companies and local government officials from the study area. However, Snowball Sampling was used during the selection of dairy farmers in Gomba district in Kyayi Sub- County, Buyanja, Maddu and Kigezi Sub-counties where the researcher selected one farmer who helped him in the way of getting in touch with other respondents until the total number of the respondents in the same category is obtained.

3.6 Data sources

The researcher used two sources, that is to say, the primary data and secondary data sources:

3.6.1 Primary Data Source

According to Kothari, (2000) Primary data refers to sources of data where raw facts are collected for the first time. According to Katono, (class work) It is the raw information or first-hand information obtained from the right source. The primary data was obtained by using questionnaires and interviews guide. Because they are accurate and realistic/reliable.

3.6.2 Secondary data source

According to Corti & Bishop (2005), secondary data refers to data that was collected by someone other than the user. The researcher used information from other researchers, in text books, journals, and also look at literature from Published books and organizational records and data that was originary collected from other research purposes.

3.7 Data collection instruments;

3.7.1 Questionnaires

The questionnaire tool was in forn of both open ended and closed ended in nature. And this was. self- administered where the researcher was allowed to fill the questionnaire in the study field as per respondents' responses. The tool was used to collect information from respondents other than clients of the dairy farm sector. The questionnaire method of data collection was used because of being cheap and that the method collects responses with minimum errors and high level of confidentiality.

3.7.2 interviews

Interview and guide; an interview guide was also drafted with a set of questions that the researcher asked during an interview and this was structured (close ended) in nature. The researcher personally recorded the provided responses as per the study respondents during the process of carrying out an interview. The tool was used to collect information from respondents especially the farmers.

3.8 Data management and processing

Data management and processing refers to the organization, manipulation, storage, and analysis of data to extract meaningful insights and information. It involves a series of steps to ensure that data is effectively managed throughout its lifecycle. The process usually begins with data collection, where relevant data is gathered from various sources such as databases, files, sensors, or external systems. The collected data is then stored in a structured format, such as in databases or data warehouses, to ensure easy accessibility and efficient retrieval.

Once the data is stored, it undergoes processing. This can involve transforming the data to meet specific requirements, cleaning and validating the data to remove errors or inconsistencies, and integrating data from different sources to create unified datasets.

After processing, the data is ready for analysis. This can involve applying statistical techniques, machine learning algorithms, or data mining methods to extract patterns, trends, or insights. Analysis helps in uncovering relationships between variables, making predictions, and gaining a deeper understanding of the data.

Data management also encompasses data governance, which involves defining policies, procedures, and standards for data usage, privacy, security, and compliance. It ensures that data is appropriately protected and used in a responsible and ethical manner.

Additionally, data management often involves ensuring data quality by establishing data quality measures, monitoring data for accuracy and consistency, and implementing mechanisms to improve data integrity.

Overall, data management and processing play a crucial role in leveraging data effectively for decision-making, business intelligence, research, and many other applications

3.8.1 Data analysis and preparation

Data analysis and interpretation are key steps in the data analytics process. They involve examining and making sense of the data to uncover insights, patterns, and relationships that can be used to inform decision-making and gain a deeper understanding of the data. Data analysis

typically follows data processing and involves various techniques and tools to examine the data. Here are a few common methods the researcher used:

1. Descriptive Analysis: This involved summarizing and describing the data using statistical measures such as mean, median, mode, standard deviation, and graphs or visualizations.
2. Inferential Analysis: This involves making inferences and drawing conclusions about a population based on sample data. Techniques like hypothesis testing and confidence intervals are used to make statistically significant statements about the data.
3. Exploratory Data Analysis (EDA): This approach involves visually exploring the data to identify patterns, outliers, and relationships. Techniques like scatter plots, histograms, box plots, and correlation analysis are used in EDA.
4. Predictive analysis: Utilizing statistical modeling and machine learning algorithms, predictive analysis aims to create models that can forecast future trends, make predictions, and classify data. Once the data has been analyzed, the next step is interpretation. Interpretation involves making sense of the findings and drawing meaningful conclusions from the data analysis. It involves looking beyond the numbers and understanding the implications and possible explanations behind the patterns, trends, and relationships discovered in the data.

The interpretations can provide insights, recommendations, or support decision-making processes. It is important to consider the context, domain knowledge, and limitations of the data during interpretation.

Effective data analysis and interpretation contribute to evidence-based decision-making, problem-solving, identifying opportunities, and improving performance across various fields like business, science, healthcare, social sciences, and more.

3.9 Validity and reliability of research instruments

Validity and reliability of the instruments to establish content validity of the questionnaires, the researcher specified the indicators which were relevant to the concept being measured. *According (Mugenda, 2003).* A representative sample of indicators from the domain of indicators of the concept of inventory management on performance of private organizations in Uganda; were selected referred to as sampling validity. *According (Mugenda, 2003).*

The research instruments were given to content experts to evaluate the relevance, flow, wording, and clarity of questions or items in· the instrument, after which a content validity of the questionnaires. The researcher specified the indicators which were relevant to the concept being measured.

Table 2: Showing Validity of Data Analysis

Items	**Valid items**	**Total items Validity**
Compliance costs, Access to finance	23	100%
Financial performance of dairy farmers in Gomba district	13	100%

Source: Primary data 2023

The results in table 2 indicates that 46 items were used (compliance costs) and 46 items were used on financial performance of dairy farmers in Uganda using Gomba district as a case study It is valid based on the contents of the instruments.

Content Validity Index (CVI) = the number of relevant questions

33/46 = 72 13/46= 28 Total number of questions

A representative sample of indicators from the domain of indicators of the concepts of; Compliance costs, access to finance and financial performance of dairy farmers in Uganda Gomba district as a case study. The researcher relied on the supervisor and experts in the study to measure content validity.

The supervisor assessed what concept the instrument was trying to measure and ascertained 28 that the instruments adequately measured Compliance costs, access to finance and financial performance of dairy farmers in Uganda Gomba district as a case study. Although the constructs developed in this study were measured primarily on previously validated measurement items and strongly grounded in the literature, they were modified to suit the Dairy farms to measure and necessary adjustments were made after consultation to ensure that instruments were clear, relevant, specific and logically arranged.

3.10 Study Variables

The study was guided by the following two variables, compliance costs and access to finance as an independent variable and financial performance as a dependent variable. Compliance costs and access to finance measured by the techniques used in the process of compliance costs such as annual compliance costs per regulatory entity compliance design efficiency and this is done by identifying direct financial costs, indirect compliance costs and substantive compliance costs

3.11 Data analysis and presentation

The collected data was edited as this involved sorting of the collected information in order to get information that is relevant to the study variables. At this stage all the responses were looked through by the researcher while giving codes to the answered options. Data was then entered into the computer and analyzed by the use of Statistical Package for Social Scientists (SPSS) program that was used to develop frequency tables, graphs and pie-charts. However, qualitative data was analyzed by developing themes (headings) or sub themes, which was derived from the study objectives. Both quantitative and qualitative techniques were used during data analysis.

3.12 Limitations of the study

The study was limited by illiterate respondents who required a lot of time to respond especially during interviews and traveling long distances in farms.

The study was limited by funds as it was not enough to cater for transport and secretarial services. The researcher however got financial support from the relatives to support him during the research process.

Being the first research, the researcher lacked enough experience and skills during the process of his research. However, the researcher tried hand in hand with the help of his supervisor to make the required information for the whole research process in time.

The study was also faced with a problem of not finding all respondents in the time of the study due to them being too busy with the organization work. The researcher however made appropriate time table with the top farmers in the district that suited all the respondents during the process of data collection for reliable and valid information.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND DISCUSSION OF RESULTS

4.0 Introduction

The chapter presents and explains the findings of the study. The findings serve to emphasize on the available knowledge proven about compliance cost, access to finance and financial performance in dairy production industry in Uganda using Gomba district as a case study. The chapter involves presentation, analysis, evaluation and interpretation of the research study outcome. This is done basing on the research objectives. It is presented in the form of tables and figures basing on the responses got from the study respondents that were selected during the process of data collection. The discussion of findings has been arranged in accordance with demographic characteristics of respondents' and objectives of the study as were formulated in chapter one of this report.

These objectives include;

I. To determine the level of financial performance of dairy farmers dairy in Gomba District.

ii. To find out the relationship between compliance cost and financial performance of dairy farmers.

iii. To find out the relationship between access to finance and financial performance of dairy farming in Uganda. The interpretation of the data intended to enable the researcher make appropriate conclusions. and recommendations for better understanding of the research problem.

4.1 Background information of the respondents

The background information of the research was considered by the study so as to identify, measure compliance costs, access to finance and financial performance of dairy farmers in Uganda. Regarding the background information, the following data was revealed by the study as follows.

4.1.1 Gender of the respondents

The gender of respondents was established. This aimed at knowing, how males and females in the district actively participate in dairy farming in Uganda. The study targeted both male and female which gave a variety of findings that were a bit biased making it gender imbalance and discrimination. Out of the forty-nine respondents only two respondents were female and they basically concentrated on milk products like butter and local yoghurt whereas matters concerning the farm and milk production are mainly dominated by males as illustrated in the table below;

Table 3: Showing·gender composition of respondents

GENDER	**FREQUENCY**	**PERCENTAGE (%)**
Male	**17**	**35**
Female	**32**	**65**
Total	**49**	**100**

Source: Primary Source 2023

As illustrated in table 3, the study found out that the majority of the respondents were male as compared to the female. The number of males who participated in the study was represented 32(65%) as compared to less number 17(35%) of the female respondents. The less involvement of women in dairy farming could be that, most of the work done requires more energetic people since it is mostly manual and can best be done by men. In addition, most of the covered respondents in grazing were male as at least 3 out of the 5 respondents who were selected in the same area were men and only 2 female respondents.

4.1.2 Age composition of respondents

Putting in age composition in the research study into considerations of the study respondents was a vital factor in the process of finding out the compliance costs, access to finance and financial performance of dairy farmers in Gomba district. Dairy farms in Gomba especially Matsiko Premium dairy farm, maddu generation model farm, small dairy farms at subsistence level and Gomba dairy farmers co-operative society Ltd. This was so because different age groups were

assumed to understand the study variables differently yet considered vital to the study. According to the study findings the respondents' views were as in table below.

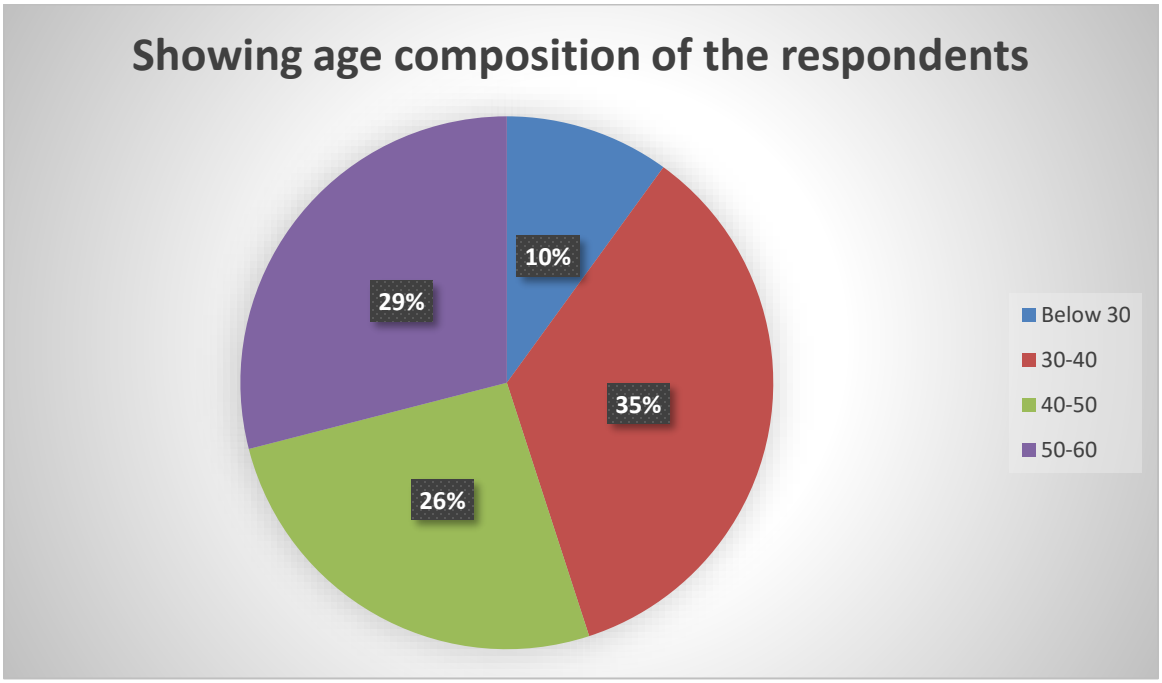
Table 3: Age composition of the respondents

Age range	frequency	Percentage (%)
Below 30	5	10
30-40	17	35
40-50	13	26
50-60	14	29
Total	49	100

Source: Primary data 2023

The table above shows that most of the respondents were between the ages of 30 – 40 accounting for 17(35%). This implied that were likely to understand better the relationship and findings on compliance costs, access to finance and financial performance of dairy farmers information as majority reported to had stayed dealing in sub-substance farming. The other category of the respondents was in the age range of50-60 as reported by 14(29%) of the study respondents and these respondents' views were very important for the study as most of them were participating in the commercial dairy farming who are experts and most dominant transformers of dairy farming from traditional grazing to subsistence farming and then commercial. More, 13(26%) of the study respondents were in the category age of 40-50. These respondents' views were so great in the process of analyzing the study variable that helped to understand the problem. Finally, 5(10%) of the respondent indicated to be of below 30 years as these were of the least in number. The age composition of the study respondents could therefore be important factor in generating valid information in relation to the issues dairy farming in Uganda especially Gomba district.

Figure 5: Age composition of respondents



Source: Primary data 2023

4.1.3 Marital status of the respondents

Table 4: Marital status of the respondents

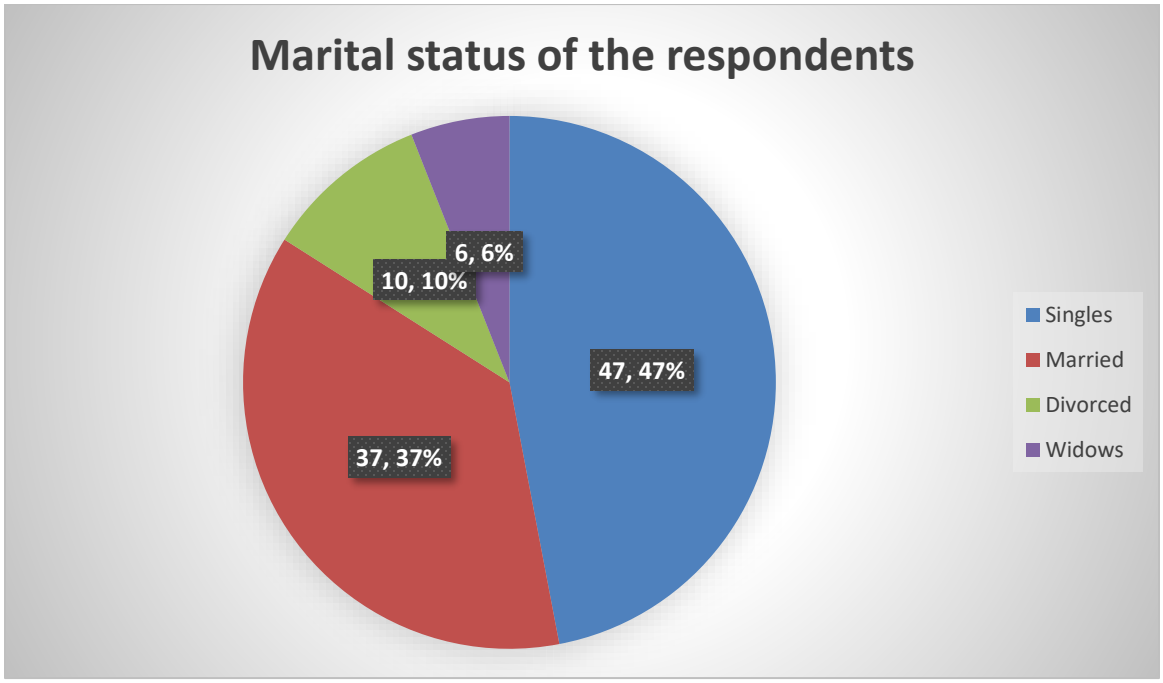
Marital Status	Frequency	Percentage (%)
Singles	23	47
Married	18	37
divorced	5	10
Widows and widowers	3	6
Total	49	100

Source: Primary data 2023

The marital status of the respondents was also covered and analyzed to internalize their ideas and opinion in relation to the study variables of compliance costs, access to finance and financial performance of dairy farmers in Uganda using Gomba district as a case study. This contained of those who were married, single, widowed, and separated/divorced.

According to the above table, majority of the study respondents constituting 23(47%) were singles and these were followed by respondents who were married as reported by 18(37%) of the respondents, 05(10%) were divorced as 3(6%) of the study respondents reported to fall under the category of widows and widowers. All these respondents of the study regardless of their status were willing to provide the information that was required by the study that helped in understanding of the study problem that was under research. The gender distribution of the respondents implied that most of the people participating in dairy farming there un stable families and also those that are stable whereas others are still single at a bigger rate thus can easily leave their areas of operation to another especially in the process of looking for pastures and water for animals.

Figure 6: Marital status of respondents



Source: Primary data 2023

4.1.4 Level of education of respondents

In order to get information from all-categories of people at different levels of education, those that have attained primary, secondary, tertiary, and university levels of education were all approached during the study process. This established the levels of education of the respondents as illustrated in the table below:

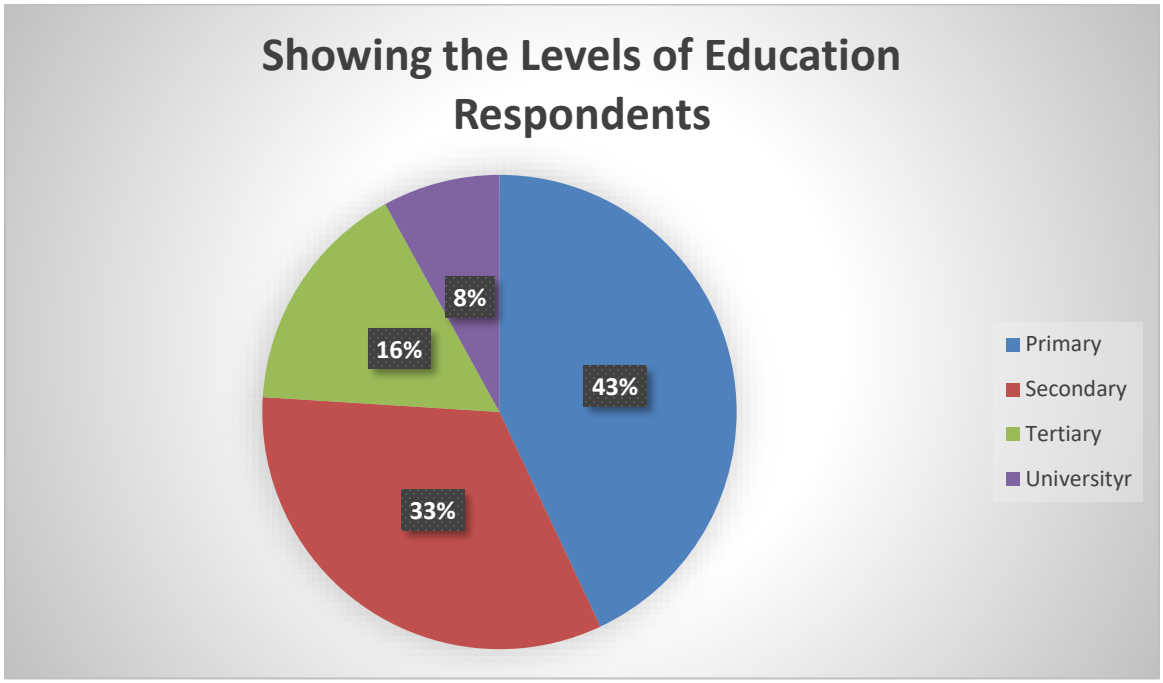
Table 5: **Showing the Levels of Education Respondents**

Level Of Education	**Frequency**	**Percentage (%)**
Primary	21	43
Secondary	16	33
Tertiary	8	16
University	4	8
Total	49	100

Source: Primary data 2023

The above table shows that most of the respondents had attained primary level of education with 21(43%), followed by 16(33%) of the study respondents who had attained secondary level of education, 8(16%) of the study had attained tertiary level then university level as was indicated by 4(8%) of the respondents as the least. The study on further understanding showed that all the study respondents who had attained secondary and primary levels of education were mostly people carrying out subsistence farming. The above findings show that primary level take a lead in participating in dairy farming as compared to other levels. This is an indication that the information was from people and who do not understand the relationship between the study variables in the study.

Figure 7: level of Education of Respondents



Source: Primary data 2023

4.2 LEVEL OF COMPLIANCE COSTS

Compliance costs in dairy farming are put into consideration by dairy farmers especially at the source of milk production to the final stage of its consumption. According to research farmers take the initiative of meeting their farming obligations at their farms. However as mentioned earlier compliance costs are adhered by dairy farmers and stake holders of dairy farming in Gomba district. This makes it possible for the researcher to classify the different categories of compliance costs on different levels of dairy farmers and stake holders as illustrated below;

Table 6: Level of compliance costs

Dairy Farmers and stake holders	**Categories of compliance costs**	**Compliance costs**
Dairy farmers	Direct compliance costs	Farm clearance, animal treatment, animal feeds/ pasture and water, transport costs at the farm
Veterinary doctors	Indirect/ overhead and direct	Transport costs, certification

	compliance costs/ operation costs	and taxes, license for operation
Creditors	No costs incurred	
Dairy managers	Indirect costs	Certification, taxes, standardization of milk products and operation costs, electricity bills and transport cost, preservation costs.
Local government officials	Indirect costs	Transport costs and supervision costs and treatment costs for animals, labour cost, trainings for farmers at all district levels, Advertisement costs.
Beef farmers	No costs	

Source: Primary data 2023

Most of the compliance costs are direct cost since it involves a lot of production processes and value addition to milk produced in Gomba district. This is because dairy farming is still growing in agricultural sector in Uganda and a lot of attention is required in order to boast the milk and milk products' quality in the local and international market by meeting the required standards by farmers and stake holders of dairy farming.

4.2.1 The Contribution Of The Above Compliance Costs To Dairy Farming

4.2.1.1 Direct compliance costs.

These are costs incurred directly on a farm. They include;

4.2.1.1(a) Labor Use by Level of Pasture Use

The biggest difference in dairy farming costs between those using the most and the least pasture for dairy forage is the unpaid labor charge. The labor charge on organic dairies feeding 75-100 percent of forage from pasture is more than UGX 10000 per cwt, compared with less than UGX 4000 per cwt on dairies feeding 0-24 percent of forage from pasture. The labor charge contributed about half the difference in total costs that were more than UGX 10000 per cwt higher for dairies using the most pasture. Furthermore, some farmers suggest that availability of pasture for animal feeds could be the best way on how to increase milk production.

4.2.1.1(b) certification of milk and its products.

This was a major concern especially dairy farmers who are still struggling with standardization especially farmers who are trying to commercialize their dairy farms. A lot of costs are incurred on implementation of standard measures for milk quality and these include as suggested by farmers as a way of reducing or preventing milk contamination; Milk tests like quantity that is measured in volume and weight, organoleptic characteristics especially appearance, taste and smell, compositional characteristic especially fats, solid and protein contents, hygienic conditions, cleanliness and quality using density meter or lactometer to measure the specific density of milk, Gerber to measure the amount of fat in the milk.

However, to the dairy companies in charge of milk collection, it's quite hectic for them as well since they have to secure a recognition and permission from Uganda National Bureau of standards ensuring milk safety and milk products are safe matching with the standards, acquiring license for operation, transportation from production units to market centers, preservation of milk from contamination for a good period of time, a lot of production variances in regards to material, labour and overheads are expensive to determine due variations in milk inputs and outputs thus making it expensive to most milk dairies in Gomba district.

4.2.1.1(c) Operation Costs.

Almost 70% of the dairy owners claimed to be more affected with operation costs especially in manufacturing of other milk products where milk is the raw-material and these costs include Labour costs, electricity bills, Preservatives and also technological machines for example milk coolers which keep milk safe and others that convert milk to other products for example Ghee, ice cream, yoghurt, and many other products.

4.2.1.1(d) Transport costs

According to most farmers in Gomba, transport is among the hindrances of dairy farming due to difficult in accessing the market thus making it a challenge to meet the all levels of compliance costs that lead to high production costs of milk especially transporting milk from the kraals to dairy units and also to bigger markets. Furthermore, Transportation of some milk products like butter during hot seasons makes difficult and the risk levels are high.

4.2.1.1(e) Fines and obligations of dairy farmers in Gomba.

Well, these costs are indirect to local farmers, however incurred directly by some stakeholders like Veterinary doctors and dairy managers (Dairy factories). These fines include late filing of tax returns and failure to meet milk standards like meeting preservative measures and also containers of milk whether match with the standards of milk during operations.

The financial obligations of most farmers are within the cooperatives of dairy farmers in Gomba district and one of them is the SUMMY dairy cooperative in Kyayi Sub County while others collapsed. Also, farmers are meant to pay money for animal movement especially to the market centers well known as Akakonge. And to dairies do pay taxes, licenses similar to veterinary doctors. All these fines are sometimes shifted to local farmers and they are paid every month and yearly.

STUDY ACCORDING TO THE OBJECTIVES

4.3 The Level Of Financial Performance Of Dairy Farmers Dairy In Gomba District

The financial performance of dairy farmers in Gomba district is not clear at all because of un realistic financial records prepared by most local farmers. Almost 80% of dairy farmers have poor book keeping and do not follow the principles of accounting like the duality and matching which exposes dairy industry to risk of making losses and errors. However, some farmers in Gomba take records of only the milk produced per weekly for only accountability during payment at the end of the week. The financial performance of most dairy farmers in Gomba is determined by the liters of milk produced either daily, weekly, monthly or yearly. According to the information got from some farmers and stakeholders is below;

4.3.1 Local Farmers

As explained above, most farmers do not have proper accounting records, most farmers take records of only milk outputs and do not put into consideration the expenditure part of the farm, they do not have clear budgets and also do not manage the production costs although to a larger extent determined by milk prices also.

There are lot of variations in milk volumes/ quantities produced per every farmer in Gomba district as illustrated below:

Table 7: Showing litres of milk produced per season for each farmer

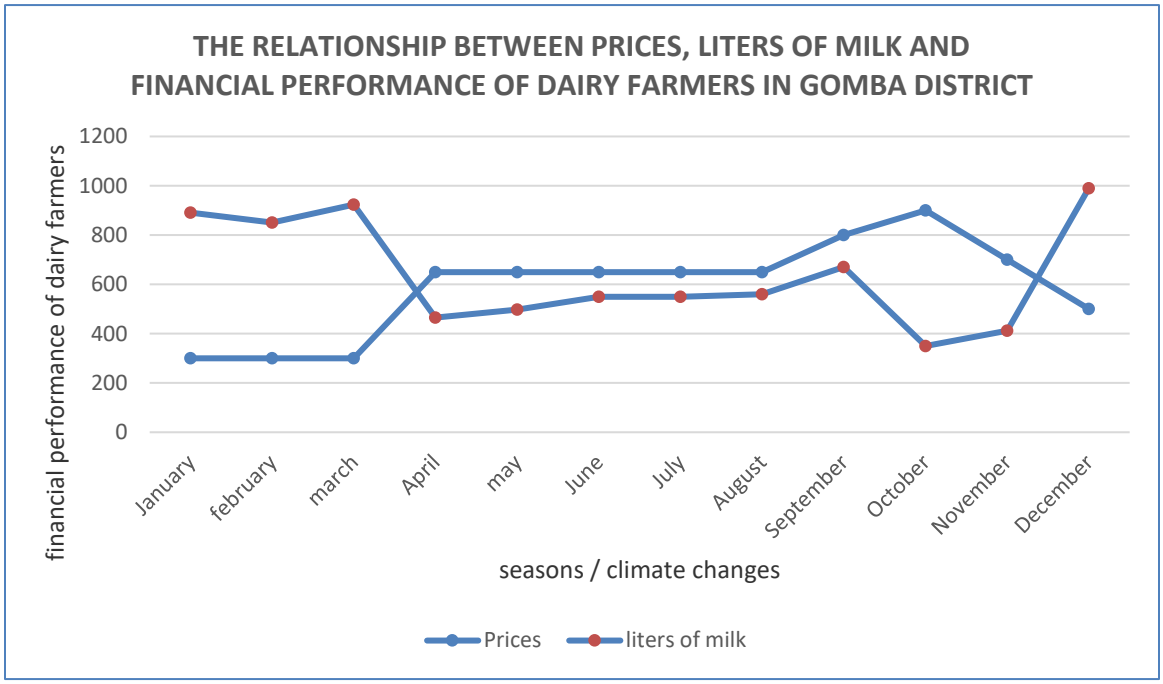
Number of farmers	**Liters produced**	**seasons**
13	20-50	All seasons
11	50-180	All seasons
25	1-20	All seasons

Source: Primary data 2023

Most farmers in Gomba basing on the table above, produce milk basing on the seasons and number of cows as well. Most farmers record only liters of milk and do not consider the other milk products like butter manufactured since the biggest portion of butter produced is mainly for home consumption.

Dairy Farmers' income depends basically on two variables and that is to say, the amount of milk produced and the market price of milk. So, if there a lot of price fluctuations/ changes for milk, always the income of dairy farmers will always change, However, prices are affected by climate changes/ seasons. During dry seasons prices will increase due to reduction in the levels of milk produced thus more income to farmers while during rainy seasons price decrease due to more volumes/ liters of milk produced as **illustrated in the graph below.**

Figure 8: The relationship between prices, litres of milk and financial performance of dairy farmers in Gomba District



Source: Primary data 2023

The above data was taken from a local dairy farmer in Kyayi sub county showing his yearly milk outputs and price changes per season. The above graph shows the trend in financial performance of farmers in all seasons both dry and rainy season. During rainy season, that is in August up to March, milk prices are low due availability of more milk in produce thus low income for dairy farmers while in dry seasons, that is April up to July prices increase and milk production decrease, here most farmers are kicked out of milk production systems. In dry seasons few farmers earn from dairy farming and earn more money compared to rainy seasons where everyone earn income but at low performance levels.

4.3.2. Factors That Determine Financial Performance Of Dairy Farmers In Gomba District

In Gomba every farmer had different view on factors that influence their performance especially in dairy sector and the most outstanding factor was the availability of access to finance. They regarded this as the determination of milk production and also as a key issue in meeting compliance costs.

According to one of the leaders in Gomba and a dairy farmer, suggested that access to finance influence some factors that seem to be inevitable evitable, especially during dry seasons, if farmers are given capital buy animal foods, plant pastures and make animal hey for preparation in dry seasons, would make most dairy farming enjoyable and profitable for many Ugandans.

Farmers' general expenses, many farmers however much disregard the element of expenditure, also determines their financial performance in the sector. Some farmers incur more losses due to high expenditure especially in compliance costs like farm clearance, buying acaricides, labour and many other costs necessary for a farm. This means that most farmers it's a luxury to them and no need to determine financial performance thus being a big gap in the dairy sector and increase in the expenditure of dairy farmers leads to decrease in farm's income. Certainly! The financial performance of dairy farming in Gomba is influenced by several factors. Here is an overview:

Milk Production and Output: Gomba is also known for its significant milk production due to favorable climatic conditions and access to grazing pastures. The financial performance of dairy farming depends on the quantity and quality of milk produced. Higher milk yields and efficient production practices can positively impact revenue generation.

Market Access and Demand: The financial performance of dairy farming in Gomba is largely influenced by market access and demand for dairy products. Proximity to urban centers, processing facilities, and transportation infrastructure can provide opportunities for farmers to access lucrative markets and secure stable prices for their milk.

Value-Added Processing: Value-added processing, such as milk processing into products like yogurts, cheese, and butter, can enhance the financial performance of dairy farming. By diversifying product offerings and targeting higher-value markets, farmers can increase their profitability and revenue streams.

Input Costs: The financial performance of dairy farming can also be influenced by input costs. These include costs associated with animal feed, veterinary services, labor, and energy. Efficient management of input costs, including sourcing feed locally and optimizing feeding practices, can help improve profitability.

Farm Management and Efficiency: Effective farm management practices, including proper record-keeping, herd management, and investment in infrastructure, play a vital role in the financial performance of dairy farming. Efficient utilization of resources, minimizing wastage, and implementing cost-effective practices can contribute to improved profitability.

Financial Management and Access to Capital: Adequate financial management, including budgeting, cash flow management, and access to capital, is crucial for the financial sustainability of dairy farming. Ensuring timely payment collection, managing debts, and exploring financing options can help farmers navigate financial challenges and invest in their businesses.

Government Support and Policies: Government support through policies, programs, and subsidies can impact the financial performance of dairy farming. Awareness and utilization of these support mechanisms, such as extension services, training programs, or access to credit, can provide financial benefits and assist farmers in improving their operations.

It's important to note that financial performance can vary between individual farms based on their specific circumstances, management practices, and market dynamics. Dairy farmers in Gomba should leverage the available resources, implement good agricultural practices, and stay informed about market trends to enhance their financial performance and achieve long-term profitability.

4.4 THE RELATIONSHIP BETWEEN COMPLIANCE COST AND FINANCIAL PERFORMANCE OF DAIRY FARMERS

It's important to consider the unique circumstances of each dairy farm and the specific compliance requirements they face. While initial compliance costs may impact financial performance, long-term benefits relating to efficiency, market access, and reputation can also arise. Balancing compliance costs with operational efficiency and market opportunities is crucial to optimize financial performance in dairy farming. Compliance costs influence financial performance of dairy farmers in Gomba district in different ways as discussed below;

Regulatory Requirements: Compliance costs in dairy farming can arise from various regulatory requirements, such as environmental regulations, food safety standards, animal welfare regulations, and labor laws. Meeting these compliance requirements often involves expenses

related to infrastructure, equipment, training, record-keeping, and monitoring. These costs can impact the financial performance of dairy farms.

Efficiency and Productivity: Implementing compliance measures may lead to increased efficiency and productivity in dairy operations. For example, adopting environmentally friendly practices can reduce waste and resource consumption, potentially lowering costs in the long run. Similarly, ensuring high standards of animal welfare and food safety can enhance product quality and reputation, which may positively impact financial performance through improved marketability and customer loyalty.

Operational Challenges: Compliance with regulations can also introduce operational challenges and costs, particularly for smaller or resource-constrained dairy farms. Compliance costs for infrastructure upgrades, staff training, or additional record-keeping and reporting can impose financial burdens on smaller operations, potentially affecting their financial performance.

Market Access and Opportunities: Compliance with regulations in dairy farming can enable access to certain markets or market segments that prioritize sustainability, animal welfare, or organic production. Meeting such compliance requirements may provide market opportunities and potential price premiums, positively affecting financial performance.

It's important to consider the unique circumstances of each dairy farm and the specific compliance requirements they face. While initial compliance costs may impact financial performance, long-term benefits relating to efficiency, market access, and reputation can also arise. Balancing compliance costs with operational efficiency and market opportunities is crucial to optimize financial performance in dairy farming.

Economies of Scale: Compliance costs may differ depending on the size of the dairy farm. Larger farms may have more resources and capabilities to absorb compliance costs across a greater production volume, potentially mitigating the impact on financial performance. Smaller farms, on the other hand, may face relatively higher compliance costs as these expenses are spread over a smaller operation.

Regulatory Changes: Regulatory requirements in the dairy farming industry can evolve over time, leading to changes in compliance costs. Monitoring and adapting to regulatory changes are

essential for maintaining compliance and managing associated costs. Failure to comply with new regulations can result in penalties or even closure of operations, significantly impacting financial performance.

Technological Innovations: Technological advancements and innovations can help reduce compliance costs in dairy farming. For example, automated monitoring systems can assist with data collection and reporting, reducing the need for manual record-keeping and streamlining compliance processes. Investing in such technologies may initially incur costs but can result in long-term savings and improved financial performance.

Risk Management: Compliance with regulations often helps mitigate certain risks in dairy farming, such as environmental liabilities or product recalls. By preventing or minimizing such risks, compliance measures can contribute to financial stability and protect the reputation and marketability of dairy products.

Government Support and Incentives: Governments may offer support programs, grants, or subsidies to promote compliance with specific regulations in the agricultural sector. Utilizing such support can help offset compliance costs and improve the financial performance of dairy farms.

It's important to note that the specific impact of compliance costs on financial performance will vary depending on factors such as farm size, location, regulatory context, and market dynamics. Dairy farm operators should carefully evaluate the costs and benefits of compliance measures to make informed decisions that align with their overall business objectives and financial sustainability.

4.5 ACCESS FINANCE FOR DAIRY FARMERS IN GOMBA DISTRICT

Access to finance is one of the most determinant of dairy farming by laying a platform for many farmers to indulge in dairy farming at an economic basis. Gomba District is one of the profound districts in Uganda leading in milk production, However, many farmers operate at subsistence level and have failed to shift to commercial farming due inability to access good finances for dairy farming development and sustainability on their farms, similarly, to the stake holders who deal in milk products like ghee, ice cream at raw state.

Most farmers in Gomba, the main sources of capital include;

- Agricultural Development Programs: Government agricultural development programs often provide financial support, grants, or loans for dairy farming activities. These programs aim to promote agricultural productivity and support small-scale farmers. According to local government agricultural offices or the Ministry of Agriculture for information on available programs include NAADS (National Agricultural Advisory Services in Uganda) with the aim of transforming subsistence agriculture into commercial agriculture.

Commercial Banks: Many commercial banks offer agricultural loans tailored for dairy farming. These loans typically have favorable interest rates and repayment terms. According to local banks in Gomba district about specific agricultural loan products they offer and the eligibility criteria are as below; Livestock Loan: This loan is designed to support dairy farmers in acquiring livestock or expanding their existing herds. It provides financing for the purchase of high-quality dairy cattle.

- Dairy Equipment Financing: This loan product assists farmers in purchasing or upgrading essential equipment and machinery required for dairy farming. It can include milking machines, cooling tanks, pasteurizers, or other equipment.
- Farm Infrastructure Loans: Stanbic Bank may offer loans to dairy farmers for the construction, renovation, or improvement of farm infrastructure. This could include dairy sheds, milking parlors, fencing, or other farm structures.
- Working Capital Loans: These loans provide funding to cover day-to-day operational expenses of a dairy farm, such as animal feed, veterinary services, labor costs, or other working capital needs.
- Agri-Asset Financing: This loan product allows dairy farmers to secure financing by using their existing farm assets, such as land, buildings, or equipment, as collateral. The funds can be used for various purposes related to dairy farming.
- Agri-Input Loans: These loans are specifically designed to finance the purchase of agricultural inputs, such as animal feed, fertilizers, vaccines, or other supplies required for dairy farming.

- Microfinance Institutions: Microfinance institutions provide financial services to individuals and small businesses that may not have access to traditional banking services. These institutions may offer microloans specifically designed for dairy farmers. For example, pride microfinance operating within Gomba district offer agricultural loan products to farmers as below:

  Seasonal Agricultural Loans: PRIDE Microfinance offers loans specifically tailored to the seasonal needs of farmers. These loans provide financial support for specific agricultural activities during key farming seasons, such as planting or harvest season.

❖ Livestock Financing: This loan product targets livestock farmers and agribusinesses. It can be used to purchase or improve livestock, construct livestock housing, or invest in livestock health management.

❖ Agricultural Machinery Loans: PRIDE Microfinance offers loans to farmers and agribusinesses seeking to acquire or upgrade agricultural machinery and equipment. These loans can be used to purchase tractors, irrigation systems, processing equipment, or other essential machinery.

❖ Value Chain Financing: PRIDE Microfinance may provide loans for activities throughout the agricultural value chain. This includes loans to support agro-processing, marketing, storage, or transportation of agricultural products.

- Farmer Cooperatives: Farmer cooperatives and dairy cooperative societies can provide access to capital through shared investments and savings schemes Dairy Inputs and some of their financial options include; Financing Livestock Purchase or Lease, Marketing and Value Addition Support for dairy products, Training and Capacity Building in dairy farming. By joining a cooperative, farmers can pool resources and secure loans or grants collectively. local dairy farmer cooperatives in Gomba district include; Butamira Dairy Farmers Cooperative Society Ltd, Kyezrima Dairy Farmers Cooperative Society Ltd, Rwensambya Dairy Farmers Cooperative Society Ltd, Rwensambya, Kasana Dairy Farmers Cooperative Society Ltd, Sumiya dairy cooperative Kyayi
- Livestock Development Agencies: Livestock development agencies, such as the Uganda Livestock and Dairy Development Board, might offer financial assistance for dairy farming projects. And their funding options or support programs include Dairy Productivity Enhancement Project this aim at increase in productivity and value addition

of dairy products, Value Chain Development Fund financial assistance through grants or loans to support the development of various livestock and dairy value chains and many others.

- Self-Financing and Savings: Depending on your financial circumstances, self-financing and savings can be an option. Consider allocating funds from personal savings or exploring partnerships or cooperative arrangements with other dairy farmers to pool resources and share costs. Inheritance of Cattle from Parents, Grants from friends, Milk for specifically working capital

4.5.1 Challenges Faced By Farmers While Accessing Finance In Gomba District

Farmers in Gomba District, like in many other regions, it was found out that face various challenges when accessing finance for their agricultural activities. Some common challenges include:

Also farmers raised a challenge limited Collateral: Financial institutions often require collateral as security for loans. Many small-scale farmers in Gomba District may not possess sufficient assets or formal land ownership to meet the collateral requirements, making it difficult for them to access formal financing.

In the study it was found out that there is lack of Financial Literacy: Many farmers in Gomba District may have limited knowledge of financial products, loan processes, and the necessary documentation required to apply for loans. This lack of financial literacy can hinder their ability to navigate the loan application process and meet the requirements of financial institutions.

In the study, farmers raise a challenge of high Interest Rates: Some farmers in Gomba District may find the interest rates offered by financial institutions to be high, making it challenging to afford loan repayments. This can discourage farmers from accessing formal finance and push them towards informal and often more expensive lending sources.

It was found out that farmers face a challenge of inadequate access to Information,Limited access to relevant and timely information about available loan products, eligibility criteria, and application procedures can be a barrier for farmers. The lack of information makes it difficult for

farmers to identify appropriate financial institutions or loan products that meet their specific needs.

It was found out that farmers face huge loan Application Processes, lengthy and cumbersome loan application procedures can deter farmers from seeking formal financing. Excessive paperwork, bureaucratic processes, and delays in loan approval can create frustration and discourage farmers from pursuing formal financial channels.

Seasonal Income and Cash Flow: Agriculture, including dairy farming, often involves seasonal income patterns, resulting in irregular cash flow for farmers. Financial institutions may be hesitant to provide loans to farmers with irregular cash flow, perceiving them as higher risk borrowers.

It was found out that face limited Extension Services: Inadequate access to extension services and technical support can impact farmers' ability to develop bankable business plans and effectively utilize financial resources.

Further more, lack of guidance and advises on financial management, investment opportunities, and market linkages can hinder farmers' chances of successfully accessing finance.

Addressing these challenges requires a multi-faceted approach involving collaboration between financial institutions, government agencies, and development organizations. Measures such as improving financial literacy programs, providing targeted agricultural credit facilities, simplifying loan application processes, and strengthening extension services can help overcome these barriers and enhance farmers' access to finance in Gomba District.

Table 8: Challenges faced dairy farmers in Gomba District.

Challenges	Frequency	Percentage
Inadequate Access to Information	3	6.1
limited Collateral	11	22.4
lack of Financial Literacy	7	14.3
Seasonal Income and Cash Flow	3	6.1
Complex Loan Application Processes	10	20.4
limited Extension Services	13	27
Lack of guidance on financial management	2	4.1
Totals	49	100

Source: Primary Source 2023

This table shows the number of respondents used in the study however, majority revealed Iimited extension Services among challenges faced by dairy farmers as was revealed by 13(27%) of the study respondents, this was followed by limited Collateral as was reported by 11(22.4%) of the respondents, then 7(14.3%) of the respondents that was reported by lack of Financial Literacy, Complex loan application processes that were indicated by10(20.4%) of the study respondents each, then others like Lack of guidance on financial management with 02(4.1%) of the covered study respondents during data collection process.

4.6 Relationship Between Access To Finance And Financial Performance Of Dairy Farming In Gomba District.

The relationship between access to finance and the financial performance of dairy farming in Gomba District, can be significant. Here are some key points to consider regarding this relationship basing on the research study and some secondary data:

Investment in Productive Assets: Access to finance allows dairy farmers to invest in productive assets such as high-quality cattle, modern milking equipment, and improved infrastructure. These

investments can lead to increased milk production, improved milk quality, and higher productivity on the farm, which can positively impact the financial performance of the dairy farming operation.

Working Capital and Operational Efficiency: Dairy farming requires continuous inputs such as animal feed, veterinary services, and labor. Adequate access to finance ensures that farmers have sufficient working capital to manage these operational expenses efficiently. This, in turn, can contribute to maintaining optimal herd health, consistent milk production, and overall financial stability.

Expansion and Diversification: Financial resources can enable dairy farmers to expand their operations or diversify their income streams. With access to finance, farmers can invest in additional land, expand their herd size, or even venture into value-added dairy products. These expansion and diversification efforts can lead to increased revenues and improved financial performance.

Risk Management: Access to finance plays a crucial role in managing risks associated with dairy farming. Farmers can use funds to invest in insurance coverage, implement risk mitigation strategies, and adopt technologies that help them respond to potential shocks such as disease outbreaks or adverse weather conditions. Effective risk management contributes to the financial resilience of dairy farming operations.

Knowledge and Skill Development: Financial institutions often provide advisory services and training programs alongside loan products. These resources can enhance farmers' financial literacy, business management skills, and technical knowledge related to dairy farming practices. Improved financial knowledge and skills can positively influence decision-making, financial planning, and overall financial performance.

It's worth noting that the impact of access to finance on financial performance can vary depending on other factors such as market conditions, policy environment, and the overall management capacity of the dairy farmers. Additionally, the terms and conditions of the loans, including interest rates and repayment schedules, can also influence the outcomes. Therefore, it is essential for farmers to carefully evaluate loan products, seek professional advice when

needed, and develop robust business plans to maximize the benefits of access to finance for their dairy farming operations.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter contains summary of the study findings, conclusions, recommendations and suggestions for further studies. The summary of the study findings, conclusions and recommendations were done in accordance to study objectives as follows.

5.1 Summary Of The Study Findings According To Objectives

The study shows the relationship between compliance costs, access to finance and financial performance of dairy farmers in Uganda Gomba District as the case study.And according. Most farmers in Gomba according to the research attained they are still under free range farming system which makes it difficult for milk production and other dairy products to be produced on a large scale hence the need to advance to commercial dairy farming that necessitates the component of keeping records and determining the compliance costs in order to identify the profitability levels for a dairy farm.

Most farmers are illiterate about accounting standards and Principles while writing their finances and records. This has made it difficult for farmers to find out their compliance costs they incur during operations.

To most farmers other dairy products are considered minor and no records for them and yet if put into recognition to a commercialized level would yield a lot of profits for farmers and can be a source capital through constant savings.

The most challenging factor among farmers are prices of milk and dairy products being at low costs. Prices of dairy products always contribute a lot on meeting the farm costs and are the main sources of income for farmers.

Dairy farming has several stakeholders and these also dairy managers, veterinary doctors and the government its self. However, dairy managers are the most most important because they gather milk for almost all farmers aiming at commercial farming. These also help in identifying their level of cost compliance in order to meet the quality standards of milk production in Uganda and

research showed to one of the dairies that each dairy can gather more than 2300 litres a day and in just Kyayi are only four (4) dairies that collect milk every day.

Acccording to some dairy managers meeting the compliance costs some times its difficult because of limited relationship with government especially in standardizing milk and its products, promotions through market reserch and advertising. Inadquate market market has kept prices of milk low and compliance costs are expensive forexample payment of fines, taxes and fees forUganda National Bureau of standards likecertifications, inspection costs and product tests which are not paid by farmers.

In regards to finance most farmers in Gomba district their main source of capital are loans from Banks and also Microfinances with and low interest rates. However, these loans are got specifically for the entire agricultural process not for dairy farming alone which makes it difficult for farmers to improve dairy farming in Uganda because of the different farm portfolios.

The several government programs that at commercilalising farming and improving the standards of farmers forexample NAADS, Parish Development model and many others. These provide loans with little or without any interest on them and also Dairy cows thus the beginning point for most dairy farmers.

Most Farmers and dairy managers in Gomba district aim at only milk production whereas other milk outputs are not considered to be under dairy products forexample Ghee, Bongo only for home consumption thus limiting the financial performance.

Low Milk prices in all seasons demotivates farmers to dwell in milk production as a source of income thus diversification in investments at the farm, some farmers have taken up the idea of Beef farming/ ranch farming which has high demend in Uganda thus making Milk production financial performance low.

Dairy farming is mainly on cattle grazing, Milk in Gomba is produced from only cows no other animals like Carmels, Goats or Sheep.

Individual Farmers do not have farm recordes that indicate incomes and expenditure of the farm, determination of milk costs and to a few who have records do not follow accounting standards thus being difficult to determine their household income.

Financial sectors look at cows and land as the collateral without reviewing financial records of farmers, so factors considered by banks and other financial institutions dairy farming payments/ incomes to a larger extent are not considered as collateral.

Milk prices are determined by the buyers of milk/Bidders not farmers themselves which has limited the expansion and better financial performance of dairy farming sector.

5.2 Conclusions

It was concluded that the compliance costs meant by dairy farmers in Gomba district are mainly not standardizing or improving milk quality on the farm but to maximize milk production since the more quantity you produce the more money you earn hence foregoing the element of quality improvement in milk for high market demand and milk supply both domestic and in external market hence limiting the financial performance of dairy sector in Uganda. Some of the compliance costs that were spotted out by most farmers and these aim at quantifying milk production include Labour costs on farm, Environment costs, Food(Pasture and water) for cattle hence low profit yield whereas quality compliance costs include Milk testing, certification costs from Uganda national bureau of standards that tests quality and health of the product, market maintainance costs and also specification costs. When farmers match quality and quantity together market penetration both domestic and external will be easy hence demand for milk and its products thus increase in savings and profit maximization hence more investments in dairy farming.

It was also concluded that, in regards to prices of milk and other milk products are determined by market and therefore farmers are volunerable in market, increase in milk production and its products like ghee and their raw state lead to decrease in prices of milk and its prodducts . this happens during rainy season and milk dairies most cases in Gomba are full thus leading to flooding and wastage of milk hence a challenge to farmers while meeting compliance costs on the farm.Whereas during dry seasons prices are high due to inadequency of milk in a farm that affect some farmers with low milk production. This makes consumers or middle men(dairy agents) most beneficiaries since they are the controllers of the market. This affect farm’s financial performance and difficult in determining the right milk prices.

It was also concluded that dairy farming is a new investment venture for local farmers and have limited information on how to improve dairy farming sector, forexample most milk products like ghee, the production rate is low yet the demand is high which si still subsistence and also innovation and advancement levels are still low for production of more milk products like icecream, cakes thus making it difficult forfarmers to maximise profits and working capital.

It was also concluded that availability of capital for dairy farming is necessary for farmers to improve in their operations especially in buying food and dairy breeds of cattle that produce more milk for farmers. That is to the banking sectors and other financials institutions provide loans at low interest rates, Government program like NAADS and PDM (Parish Development model) and other units like Farmers cooperative unions in Gomba, this builds confidence among farmers to make rational decisions in investment while expecting high returns.

In addition, it is concluded that the kind of relationship between compliance costs, access to finance and financial performance of dairy farmers in Uganda can either be positive or negative depending on how farmers gain their capital and meet their farming costs, how are used and applied

Lastly, the study concludes that there are no specific accounting procedures followed by farmers in determing their levels of financial performance and even no accounting records kept to determine future costs to be incurred, there is no specific accounting soft ware for farmers to use while taking records and the available standards are followed by a few farmers and dairy managers.

5.3 Recommendations

In light with the above study findings and conclusions, the following recommendations are made as under;

Since access to finance do not normally lead to immediate efficiency of the Dairy sector for improved financial performance, the study recommends farmers and dairy managers to always make rational decisions and proper planning in order for available finances to yield more returns. Encouraged to spot milk breeds of cattle forexample fresians and jessy cows, which produce

large volumes of milk hence more milk produced in all seasons generate more income for dairy farming hence improving in financial performance of dairy sector.

The study encourages farmers to always get loans for financing their dairy sectors from financial institutions with low interest rates in order to meet the repayment capacity, this help most farmers to avoid fines and confiscation of their collateral which would be of high value hence being cost effective to dairy farmers.

Farmers should not only look at producing milk in quantity but also improving on the milk standards through carrying out product tests right from the farm uupto the market, adopting preservation measures that protect it from contamination and bad smell that would limit demand for milk in Uganda. large quantities and Quality milk increase profitability due to high demand hence improving financial performance.

The study encourages farmers to separate dairy farming from home businesses and adopt commercial dairy farming in order to improve on the financial performance. Most farmers use capital to solve their home challenges which limits expansion of dairy farming sector.

The study encourages farmers to adopt capital and labour intensive techniques of production forexample mechanization that help farmers grow pasture and construction of valley dams in farms which help in maximization of milk due to good feeding thus more milk produced which generate profits that are usedto meet compliance costs in the sector and also increases the profits.

The study encourages farmers always to keep records of their dairy farms, this help in determining the profitability of the farm, sources of capital and the farm expenditure.

Dairy farmers and processors should have a strong track record, working to be economically viable while improving the health of the environment, workforce and the broader community. They should understand the interdependencies between sustainability and industry prosperity

5.4 Suggested Areas For Further Researcher

The study was set to find out the compliance costs, access to finance and financial performance of dairy faming in Uganda using Gomba district as a case study as under;

1. The structural accounting techniques on dairy farmer’s efficiency in the dairy sector

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"COMPLIANCE COSTS, ACCESS TO FINANCE AND FINANCIAL PERFORMANCE OF DAIRY FARMING IN UGANDA CASE STUDY GOMBA DISTRICT"

We shall be grateful if you could render assistance to him/her in collecting the necessary data for his/her dissertation

The Uganda Christian University School of Business thanks you in advance

.....

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