UGANDA MANAGEMENT INSTITUTE

FACTORS AFFECTING THE PERFORMANCE OF MILK PROCESSING PLANTS IN KAMPALA DISTRICT, UGANDA

BY

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DECLARATION

I *Musa Kubula* hereby declare that, this is my original work and has not been presented to any university or institutions of higher learning for any academic award.

Date: _____

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Signed

APPROVAL

This dissertation has been written under our supervision and has been submitted for the award of a Master's Degree in Business Administration with our approval as Uganda Management Institute supervisors.

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DR STELLA   KYOHAIRWE

Date: …………………………………………....

Signature: …………………………………………………

DR GERALD KARYEIJJA

Date: …………………………………………....

DEDICATION

This dissertation is dedicated to my family more especially my wife, and children.

ACKNOWLEDGEMENT

Table of Contents

LIST OF TABLES

LIST OF FIGURES:

LIST OF ACRONYMS

CVI	Content Validity Index
DANIDA:	Danish International Development Agency.
DCL:	Dairy Corporation Limited.
DDA	Uganda Milk Development Authority
DIA:	Dairy Industry Act.
FAO:	Food Agricultural Organization
GDP:	Gross Domestic Product.
IDF:	International Milk Federation
SPSS	Statistical Package for Social Scientists
UBOS	Uganda Bureau of Statistics
UDPA	Uganda Milk processor Association
UNBS:	Uganda National Bureau of Standards.

ABSTRACT

The study examined the factors affecting the performance of milk processing plants in Kampala district, Uganda. The study specifically focused on: assessing the effect of credit access on the performance of milk processing plants; examine the effect of entrepreneurial behavior of processors on the performance of milk processing plants in Kampala district and establish the effect of market demands for processed milk on the performance of milk processing plants in Kampala district. This study was descriptive in design. It worked with two approaches that is; quantitative and qualitative approaches. The study worked with a sampling framework of 255 participants with a sample size of 144 respondents. This was obtained through purposive and systematic random sampling techniques. Findings revealed that there is a significant effect of credit access on performance of milk processing plants in Kampala district. The second finding indicates that there is a significant effect of entrepreneurial behavior of processors on performance of milk processing plants in Kampala district. It was found out that there is a significant effect of market demands for processed milk on performance of milk processing plants in Kampala district. It was concluded that credit access, entrepreneurial behavior of processors and market demands for processed milk have a positive effect on performance of milk processing plants in Kampala district. Thus, it was recommended that to achieve optimum performance in milk processing plants in Kampala district, there is a need to empower the owner of processing plants especially in the field of financial literacy and financial management.

CHAPTER ONE:

INTRODUCTION

1.1 Introduction

This study examined the factors affecting the performance of dairy processing plants in Uganda. The Dairy sub sector within the Agricultural sector has a fundamental contribution in improving the livelihood of Ugandans. For instance, it is assumed that about 1.8million Ugandans on household level who keep cattle obtain sustainable income, food supply and employment opportunities (DDA Annual report, 2011). About 1,000,000 people have had their poverty levels reduce and have improved standard of living more than those in subsistence crop farming (UBOS UNHS, 2006). Dairy value-chain activities therefore have a great potential to alleviate poverty, improve on the standard of living of actors.

This chapter thus entails the genesis of the study, the problem which this study was grounded on, general objective, specific objectives as derived from conceptual framework, the research questions and hypotheses as developed from research objectives, conceptual framework, scope of the study, the significance of the study, the justification of the study and definitions of terms and concepts.

1.2 Background to the Study

1.2.1 Historical Background

Worldwide, the milk production is indicated to have started in developing countries during the period of 6000-7000BC and particularly in Mesopotamia. The practice of milk production then was spread in other parts of Europe, North and South America, Northern and Southern Africa as well as Asia (Kuratko, Ireland, Covin, & Hornsby, 2005). There are both traditional and non-

traditional milk producing countries. Traditional countries are those which are located in the Mediterranean Sea and those around the Middle East. Further, other traditional milk producers were in idea, tropics of West and East Africa and Central Part of America. Milk production in developing countries mainly emerged from Nomads role especially in areas where they were spread like Asian countries and African countries. The non-traditional areas were mostly those in humid regions, those that located in South East Asia, areas of China and Korea as well as Japan. The performance and growth of milk production in most of these regions worldwide highly depended on increased demand of milk. However, according to Justine et al (2005), there was no need to have access to credit and the behaviors of processors would not count for a dairy production and processing to perform better.

Particularly in Africa, milk production and processing has been essentially limited and practiced in small-scale manner where farms practice production with not more than five cows and a bull. Traditionally, animals are grazed on grasses and others agricultural residues or waste in an arable fashion (Leo and Denison, 2011).Value addition is less given attention since most of the farmers eye to have milk for consumption and processors only use milk to make ice-cream, bongo, packed milk and other byproducts. In Africa today, the South African Milk Marketing Board is one of the association that manages the production and processing of milk and it has been periodically indicating that the performance of milk production has been highly relied on access to credit and market of by-products from milk (International Dairy Federation, 2010).In the East African region, It is evident from the table that Uganda has a higher idle processing capacity standing at 36 million liters as compared to Kenya (25) and Tanzania (29) million liters (ASERECA/ECAPAPA Country Report, 2012).However, no specific study has been done to examine the effect of other factors

such as entrepreneurial behavior, market access and credit access on performance of dairy processing plants in Uganda (Kiziba Investments, 2012).

Today, milk processing in Uganda has posted unprecedented growth figures over the last decade. Until Government liberalized the economy and therefore the dairy sub-sector, only the state owned Dairy Corporation was involved in processing of milk and dairy products (Dairy Development Authority (DDA, 2013). The DDA (2013) reports that since liberalization, there has been exponential growth in the both the number and processing capacity of milk processing plants in Uganda. Growth in the milk processing capacity has been as result of increase in both the number of processing plants but also increase in processing capacity of existing plants (DDA, 2013). The Dairy sub sector within the Agricultural sector has a fundamental contribution in improving the livelihood of Ugandans. For instance, it is assumed that about 1.8million Ugandans on household level who keep cattle obtain sustainable income, food supply and employment opportunities (DDA Annual report, 2011). About 1,000,000 people have had their poverty levels reduce and have improved standard of living more than those in subsistence crop farming (UBOS UNHS, 2006).Dairy value-chain activities therefore have a great potential to alleviate poverty, improve on the standard of living of actors. Dairy value chain activities have a great potential to alleviate poverty, improve on the standard of living of actors The study thus investigated the factors affecting the performance of milk processing plants in Uganda using a case study of Kampala district.

1.2.2 Theoretical background

Profit Maximizing Theory gave a basis of undertaking this study. The theory was proposed by Lipsey (1975).This theory majorly is based on the main tenet that small scale enterprises live to maximize profits and this is the reason as to why they always work towards being efficient.

According to theory proponents, maximizing profits in processing firms calls for having enough capital, the behavior of owners needs to be proper and the market demand for products being produced needs to be automatic (Hunt &Lautzenheiser, 2011).Mumba (2012) and Snyder& Nicholson (2008) argues that since small scale enterprises are operating in a volatile environment with a lot of risks, it is important that they have required finances, marketability, and appropriate behaviors to manage all risks as they occur. In courtesy of business sustainability, many performance end up not making even a profit but rather they keep increasing their level of security.

Masuku and Belete (2014) ascertained that most of the processing companies and particularly in milk processing, their aim sometimes goes above profit making or making the best performances but rather it goes to ensuring that they live above their competitors and at the end of the day, they end up sustainable and profitable. Secondly, most of these organizations, since they are aware that profits is based on enough capital, they look out for reliable credit offerings, put the behavior of the proprietor in order and the ensure that the market for their products is widened to meet all those potential buyers (Chukwuji et al., 2006).

1.2.3 Conceptual background

Factors were limited to credit access, entrepreneurial behavior and market demand for processed milk. In this study, Justine et al (2005) defined credit as an exchange of goods and services for the promise of future payment. It further states that credit is essential fin a vibrant economy to bridge the gap between production, sale and consumption. According to a World Bank (2014) definition, access to credit is access to financial institutions. Several indicators of access by World Bank (2014) include: having bank account, using banks as primary financial institutions (public & private), the use of mainly non-bank financial institutions and being able to reach the financial institution they use by foot. In the current study, credit access is conceptualized into Debt

Acquisition period, cost of funds, credit security. The period and requirements needed in the process of acquiring credit is indeed cumbersome and a bottle neck to many borrowers. The cost of getting credit in terms of interest rate is scaring and it is argued that it is one of the limitations of capital acquisition in milkbusiness Security guarantee is a must before credit accessibility. For Entrepreneurial behavior, was defined as Innovativeness, Coordinating ability, Planning ability, Information seeking behavior, Decision making ability and Risk orientation. It is hypothesized that once these behaviors are favorable, there is likely to be performance of milk processing plants in Uganda (Krohwinkel et al. 2008)

On the other hand, performance was defined as the outcomes or outputs derived from strategic plans in place (Bourne, Neely, Mills & Platts, 2003). The current study defined it in terms of: increased output of milk processed, Profitability, Sales/revenue maximization, business sustainability, and increase in asset base. The dimensions in the IV were fully operationalized and this was assumed that they led to better performance of milk processing plants in Uganda (Schmidt &Rynes 2003). In this study, performance was conceptualized as the firms' growth in terms of sales volume, market share and profitability.

1.2.4 Contextual Background(5)

The Dairy Industry in Uganda has undergone a number of changes since 1967 when organized dairy marketing was recognized. The sector then operated under the Dairy Industry Act enacted in 1967 which led to the creation of Dairy Corporation. This Act enabled Government to develop and regulate the dairy sector in addition to having a commercial role. In 1993, the Government came up with the liberalization policy. This policy required that Government withdraw from direct participation in milk production and commercial activities and instead concentrate on strategic issues such as facilitating development and regulation, including promotion of free market within

the dairy industry. The private sector was expected to play a major role in development. As a result of the policy reforms, Dairy Development Authority (DDA) was formed to provide proper coordination and efficient implementation of all Government policies intended to achieve and sustain self-sufficiency in milk production and promoting competition in the dairy industry through regulations. DDA in conjunction with Uganda National Dairy Traders' Association (UNDATA) has for a long time tried to ensure that milk processing firms put in place mechanisms to ensure that milk produced reach observed quality for both local and international market, harmonize economic conditions of work for processing plants as well as ensuring that strategic reforms are enriched within plants. Government through its agencies (UIA, DDA, UNBS, , and other Development partners (EADD, TNS, SNV,HPI) interventions to promote milk processing/ packaging, quality assurance, branding, milk consumption and market access (UNDATA, 2006). These are all done in the name of improving sales volumes, expanding market share of milk as well as profitability. However, despite efforts done, the performance of milk processing plants has been queried. For instance, over the last 12 years, about six processing plants which had been established, operationalized, collapsed shortly, leading to continued consumption of bigger volumes of raw/unprocessed milk. About 98% of the milk processing plants in the Country are surprisingly operating far below their installed capacities leaving bigger volumes of milk (80% of the total production) to be purchased and marketed unprocessed by the (UNDATA) members hence suffocating milk exportation that would provide foreign exchange to the country (DDA annual report, 2012). Many dairy plants for instance, Country taste in Mbarara, Kaisa Dairy in Kamuli, Sokadido in Soroti, On-farm dairy in Kawempe, Amagra dairy in Bwaise), started milk processing, operated shortly and   inevitably collapsed. The problem of under-utilization of available capacities by 98% of milk processing plants is a business cost. This translates into financial loss and business stagnation. This study therefore was conducted to investigate the extent

to which credit access, entrepreneurial behavior and market demand for processed milk affect the performance of milk process plants in Kampala district, Uganda.

1.3 Statement of the Problem

It was assumed that performance of processing plants is based on a number of factors and these includes; access to credit, entrepreneurial behavior of processes and market demand of milk (Nkwasibwe, Mugisha, Elepu & Kaneene, 2015). Processing practices of dairy processing plants also show no or little evidence of innovations, the smallholder processing plants continue to use old techniques leading to low production. This means poor returns and thus performance, this explains that such processing plants are not getting adequate and relevant extension information or the information is not packaged appropriately. Evidence thus shows that the existing milk plants in the country are operating far below their installed capacities. The problem of under-utilization of available capacities by 68% of milk processing plants is a business cost. This translates into financial loss and business stagnation. This problem has also affected the rapid transformation of the dairy sub-sector. Once this problem is not addressed through empirical research, there is likely to be a reduced increasing rate in the dairy sub sector in Uganda and hence effects on the Ugandan economy. It is from this background that this study was conducted to investigate the extent to which credit access, entrepreneurial behavior and market demand for processed milkon the performance of milk processing plants in Kampala district, Uganda.

1.4 Purpose of the Study

The purpose of this study was to examine the factors affecting the performance of milk processing plants in Uganda

1.5 Research Objectives

The following objectives guided the study:

To establish the influence of credit access on the performance ofmilk processing plants

To examine the influence of entrepreneurial behavior on the performance of milk processing plants in Kampala District.

To establish the influence of market demand for processed milk on the performance of milk processing plants in Kampala district.

1.6 Research Questions

What is the influence of credit access on the performance of milk processing plants in Kampala district

How does entrepreneurial behavior influence performance of milk processing plants in Kampala district

What is the influence of market demand for processed milk on the performance of milk processing plants in Kampala district

1.7 Research Hypotheses
Credit access influences performance ofmilk processing plants

Entrepreneurial behavior has a strong influence on performance ofmilk processing plants

There is a significant relationship between market demand for processed milk and performance of milk processing plants in Kampala district.

1.8 Conceptual framework

Figure 1. A Conceptual Framework for the understanding the factors affecting performance of milk processing plants
INDEPENDENT VARIABLE (IV) DEPENDENT VARIABLE (DV)

| Factors | → | Performance of milk processing plants |

Access to credit by processors
- ➤ Access to credit facilities
- ➤ Terms & conditions
- ➤ Lending process
- ➤ Loan duration

Entrepreneurial behavior of processors
- ➤ Innovativeness
- ➤ Planning ability
- ➤ Information seeking behavior
- ➤ Decision making ability

- Profitability
- Sales volume
- Market share
- Business growth
- Business sustainability

8
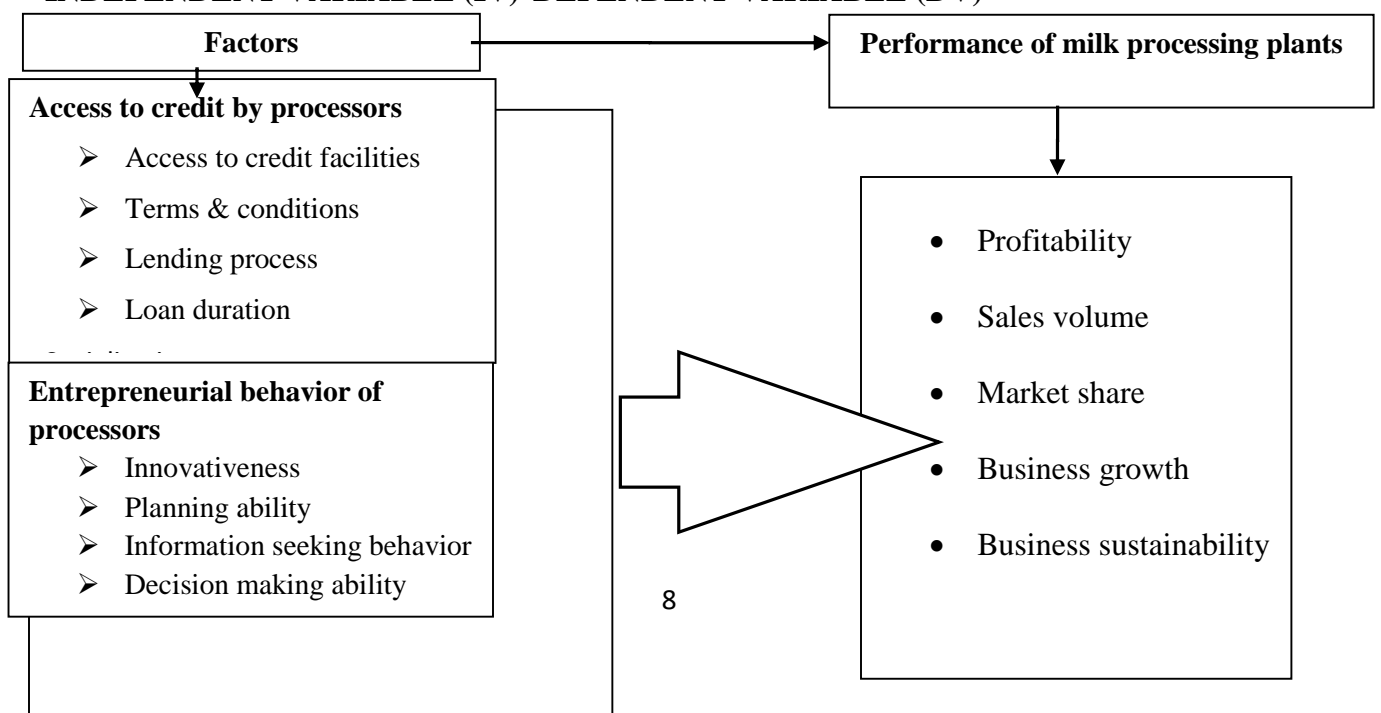
+---+
| **Market demand for processed milk** |
| |
| ➤ Price |
| ➤ Market actors |
| ➤ Formal and informal markets |
| ➤ Milk marketing channels and |
| chains |
| ➤ Purchasing power |
| |
+---+

Source: Adopted from the project Excellent Model (Westerveld, 2003) with the modification by the researcher; Baindha et al (2014). Modified to fit the current study requirements

The conceptual framework shows a hypothesized relationship on the factors that affect the performance of milk processing plants. The independent variables (IV) constituted dimensions of: credit access, Entrepreneurial behaviors and market demand. Credit access is conceptualized into Debt Acquisition period, cost of funds, credit security. The period and requirements needed in the process of acquiring credit is indeed cumbersome and a bottle neck to many borrowers. The cost of getting credit in terms of interest rate is scaring and it is argued that it is one of the limitations of capital acquisition in milk businesses. Security guarantee is a must before credit accessibility. Entrepreneurial behaviors will be measured using elements such as Innovativeness, Coordinating ability, Planning ability, Information seeking behavior, Decision making ability and Risk orientation. It is hypothesized that once these behaviors are favorable, there is likely to be performance of milk processing plants in Kampala district.

Finally, the last independent variable is market demand, which is conceptualized into Quality, Price, awareness and Purchasing power. The better the quality of any processed milk product, the

more demand it commands thus the more is consumed on the market. Price is one of the major determinants of demand; there must also be considerable awareness about the product in addition to the consumers having a higher purchasing power. Processor demographics (age, gender, education level, economic status), Availability of Extension Services, favorable government polity and climate change may act as intervening variables. Their availability may have a conditional effect on the influence of the above-mentioned factors on performance of milk processing plants.

Performance was considered as the dependent variable (DV) measured in the dimensions of increased output of milk processed, Profitability, Sales/revenue maximization, business sustainability, increase in asset base. If the dimensions in the IV are fully operationalized, it was assumed that they can lead to better performance. The conceptual framework shows a hypothesized relationship on the factors that affect the performance of milk processing plants. The independent variables (IV) constituted dimensions of: credit access, Entrepreneurial behaviors and market demand. Credit access is conceptualized into Debt Acquisition period, cost of funds, credit security. The period and requirements needed in the process of acquiring credit is indeed cumbersome and a bottle neck to many borrowers. The cost of getting credit in terms of interest rate is scaring and it is argued that it is one of the limitations of capital acquisition in milk business as Security guarantee is a must before credit accessibility. Entrepreneurial behaviors was measured using elements such as Innovativeness, coordinating ability, planning ability, information seeking behavior, decision making ability and risk orientation. Itwas hypothesized that once these behaviors are favorable, there is likely to be performance of milk processing plants in Kampala district.. Finally, the last independent variable was market demand, which was conceptualized into Quality, Price, awareness and Purchasing power. The better the quality of any processed milk product, the more demand it will command thus the more is consumed on the market. Price is one

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Significance of the Study

The research findings may be useful to the actors in milk value chain because it provides information to Government / private development partners and regulators of the sector on milk processing.

The study can also be used to improve milk production and marketing in Uganda and address challenges faced by milk processors and enable the groups to improve their services and income.

The findings of this research may facilitate Agricultural sector planners, political and nonpolitical policy makers, strategy directors to make informed decisions based on researched information made available by this research.

The study findings may be a fundamental basis for actors in milk processing to identify gaps, challenges and opportunities to accelerate in milk processing and hence improve performance.

The research is expected to lead to possible strategic interventions that may boost milk value addition, quality and safety assurance, reduced postharvest loses and increased milk marketing.

1.10 Justification of the Study

There had been various reforms in the dairy sub sector legally, policy and institutional. Besides that, a number of studies had been done while investigating factors which hinder the performance of milk processing plants and such factors have been indicated to include; credit access, entrepreneurial behaviors and market demand. However, no study had been done using milk processing plants in Uganda and particularly in Kampala district. It was therefore essential that a study be conducted while assessing the factors contributing to improved performance of milk processing plants while using those milk plants in Kampala district. This might help to open a new field of debate about this matter in terms of research.

1.11   Scope of the Study

1.11.1 Geographical scope

The study was carried out among milk processors in Kampala district. The district was preferred due to a big number of milk processors, distributors and market for milk products such as pasteurized and UHT milk as well as yoghurt, ice-cream, butter and cheese. The district has the majority of the small, medium and large scale processors such as Brookside (U) limited, numerous Ice cream and yoghurt processors among others who are all over the city. Key informants from Dairy Development Authority officials, Kampala field veterinarians, partners in dairy sub sector development such as SNV, East African Dairy Development project, UNDATA, Heifer project international and Uganda Veterinary Association officials are based in Kampala business area.

1.11.2 Content Scope

The independent factor variable was the performance of the milk processing plants in Kampala and constituted the dimensions of increased output, Profitability, Sales/revenue maximization, business sustainability and increase in asset base. The independent variable factors were characterized by: Market demand for processed milk, with such dimensions of quality, price, awareness and purchasing power. Technical human resource with dimensions of: Qualification in

general milk processing, Skills, Experience, Credit access characterized by Debt Acquisition period, Cost of funds (Interest rate), and Credit security. The above factors had been identified by authors as the most important determinants of performance. The researcher felt that they could be better indicators of performance among small scale milk processors in Kampala district.

1.11.3 Time scope
The research covered the period from 2010 to 2016. During this period, processors experienced both a flash and scarcity milk supply situations.

1.12   Operational Definitions
Gross Margin-: this meant the total amount of output in monetary terms after the direct variable costs have been deducted

Market: this referred to a set of buyers and sellers who interact and influence price. In pastoral area milk production is seasonal while consumption is throughout the season

Milk Marketing; this referred to the process of communicating the value of a product or service to customers.

Milk Production: this referred to secretion of milk by the mammary epithelium.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is about literature available in relevant published and unpublished sources by authors on sub themes under performance of milk processing plants. The literature explains the theoretical framework and the factors affecting the performance of milk processing plants. The literature has been obtained from journals, magazines, unpolished dissertations and internet.

2.2 Theoretical framework

Profit Maximizing Theory made the theoretical grounds for this study. Profit Maximizing Theory gave a basis of undertaking this study. This theory majorly is based on the main tenet that small scale enterprises live to maximize profits and this is the reason as to why they always work towards being efficient. According to theory proponents, maximizing profits in processing firms calls for having enough capital, the behavior of owners needs to be proper and the market demand for products being produced needs to be automatic (Hunt &Lautzenheiser, 2011). Mumba (2012) and Snyder& Nicholson (2008) argues that since small scale enterprises are operating in a volatile environment with a lot of risks, it is important that they have required finances, marketability, and appropriate behaviors to manage all risks as they occur. In courtesy of business sustainability, many performance end up not making even a profit but rather they keep increasing their level of security.

Masuku and Belete (2014) ascertained that most of the processing companies and particularly in milk processing, their aim sometimes goes above profit making or making the best performances but rather it goes to ensuring that they live above their competitors and at the end of the day, they

end up sustainable and profitable. Secondly, most of these organizations, since they are aware that profits is based on enough capital, they look out for reliable credit offerings, put the behavior of the proprietor in order and the ensure that the market for their products is widened to meet all those potential buyers (Chukwuji et al., 2006).

2.3 Credit Access and Performance of Milk Processing Plants

Wooldridge (2012) ascertained that it is a general belief and finding that the performance of agricultural firms and SMEs is highly based on their level of accessing credit. There is thus a need to have enough investments made in milk production if the performance of milk processing plants is to improve. The plant needs to seek credit to invest in most of the most important resources including human capital, technical capital, social capital and other forms of capital if the performance is to skyrocket. Hassan et al., (2009) argues that animals need to be invested in especially when it comes to buying different varieties, buying good and productive animal varieties, training human resource and machinery. These can all contribute to improved performance of milk processing plants.

Wooldridge, (2012) adds that the underlying challenge inhibiting improvement in performance of milk processing plants is inability of their entrepreneurs to access resources which are scarce like assets which can attract other financial players to work with the firm to improve its performance. It was thus recommended by the scholars that there is a major role played by a farmer himself if he can ably seek for credit and uplift the performance of an organization. Thorne, Dillon and Donnellan (2015) gave an example of Irish dairy farms and processors, where they found out that the performance of these dairy farms kept rising since they had had clear credit partners who would trust them with small loans.

According to a study done by Fasoranti, (2008) in Nigeria, they found out that beneficiaries of the loan facilities were young (about 44 years old) with at least the primary level education and well experienced in subsistence arable cropping. The loan sum disbursed was small; consequently, the resultant gross margin from cropping activities was low (only N34, 924.9), though this was higher than the gross margin for non-beneficiaries. The ESACA loan beneficiaries undertook diversified cropping practices involving a mix of food and cash crop production which enhanced their gross margins compared with non-beneficiaries. Purchased inputs and farmer's accessibility to ESACA loan facility were major determinants of farmers (beneficiaries and non-beneficiaries) crop output. Non-beneficiaries of the scheme attributed their situation to heavy bureaucracy in loan processing; even the beneficiaries complained that late disbursement of loans negatively affected their cropping schedule. They conclude that the ESACA initiative was well intentioned and should be better funded. However, considering the large sum already committed to the program me , there is need to ensure better fund management and prompt disbursement to farmers. Undue and unnecessary hurdles like collaterals and complex loan application processes should be minimized so that the loan can readily get to the targeted small-scale farmers for increased production. Farmers may also be encouraged to venture intothe more cash cropping.

According to a study by (Mugweru, 2011) conducted in Kenya on the determinants of coffee production showed the relationship between coffee output and credit advanced is negative but statistically significant. However, results also indicate that coffee output has a positive and statistically significant relationship with hectares planted. Therefore, an increase in hectare leads to an increase in coffee output (Tonage).However, deviation from this fact was from a study by, Mamo (2013) citing Diagne and Zeller (2001) confirmed that landholding size has no effect on access to both formal and informal credit.

Wambugu, Kirimi,andOpiyo (2011) argued increased milk production has been highly constrained in Kenya because of lack of adequate access to credit which can help them access artificial insemination (AI) services. The literature review has highlighted different dairy production systems in varying countries, which consists of improved and local dairy farming practices which should beconsidered when researching on dairy processing plants in Kampala district, Uganda. The review has provided empirical approaches to measuring credit access (Wooldridge, 2012; Thorne et al, 2015; Akinseinde, 2006; Nkwasibwe et al, 2015) among others in their varying analyses of this issue. Similarly, approaches to measuring efficiency and studies that have applied the stochastic profit frontier in measuring efficiency have been reviewed. The review has also showed that socioeconomic factors affecting inefficiency among farmers including age, gender, level of education, experience among others. This current study aimed at establishing relationship between credit access the affect performance among dairy processing plants in Kampala district, Uganda. The study drew broad lessons from the above literature to help analyze the gaps in credit access the affect performance among dairy processing plants in Kampala district, Uganda.

2.4 Entrepreneurial Behavior of Processors and Performance

In terms of innovativeness, Baindha, Sankhala, Singh, Singh, Shivaji& Singh (2014) found out that in his study, majority of respondents had medium to high level of innovativeness might be due to presence of NDRI in karnal. Also majority of them were middle aged and had middle level of formal schooling. Similar findings were reported by Reddy (1997) and Bhagyalaxmi*et al.* (2003). Coordinating ability was noted as factors under behavior of milk processors by Baindha et al (2014). They further noted that the likely interpretation of results were that large number of milk processors had high co-ordination in planning, organizing, leading and controlling the efforts of

members employed in milk processing. The results of Coordinating ability are less compared to earlier observations of Chaudhari (2006).

Bulatao (2011) argued that the behavior ofmost of the owners or the entrepreneurs of small processing plants constrain the performance of small processing. The behavior of entrepreneurs rotates around the skills, knowledge and attitudes towards development. In Philippines, the performance of milk processing producers had been going high because they were good in identifying markets, persistence and very honest in undertaking their work. In most of the retail milk outlet and processors, entrepreneurs had acquired a number of skills in preserving of milk, in packaging milk and in marketing milk. According to Baindha et al (2014), the performance of such milk producers had been going high because of their knowledge equipment and honest.

Baindha et al (2014)'s study showed that the moderate level of planning ability attribute was possessed by 39.02 per cent of the respondents followed by 34.14 per cent of the respondents had good and 26.82 percent had poor planning ability. This might be due to majority of them were middle aged, low social participation and not undergone any kind of training related to dairying. The results of planning ability are less compared to earlier observations of Chaudhari, 2006.

The results from Baindha et al (2014)'s study revealed that respondents belonged to medium information seeking behavior followed by 19.51 per cent and 9.76 per cent of the respondents had low and high information seeking behavior, respectively. Almost similar findings were reported by Suresh 2004. This might be due to majority of them were middle aged, low social participation, medium experience in milk processing and not undergone any kind of training related to dairying. The present findings of information seeking behavior are less compared to earlier observations of

Vijaykumar (2001), Chandrapaul (1998) and Chaudhari (2006). This might be due to majority of them were middle aged, middle educational level, medium level of mass media exposure, low social participation and not undergone any kind of training related to dairying. Almost similar findings were reported by Patel *et al.* (2003).

Baindha et al (2014) found out that in India, majority (46.34%) of respondents had moderate level of decision making ability followed by good (29.26%) and poor (24.29%) level of decision making ability. This might be due to majority of them were middle aged, low social participation and not undergone any kind of training related to dairying. These findings are in line with the findings of Chandrapaul (1998) and Vijaykumar (2001).

Risk orientation could be inferred that majority (78.04%) of the respondents were found medium risk takers followed by 12.19 per cent had highly risk oriented and very less percentage (9.75%) of the respondents were found to had low risk orientated. This might be due to majority of them were having medium level of innovativeness, middle aged, low social participation and not undergone any kind of training related to dairying. The result is clear indication of the fact that milk processors are calculative while considering a decision concerning new activity. The results of the present study are almost similar with the findings of Bhagyalaxmi*et al.* (2003) and Suresh (2004). The present findings of risk orientation are less as compared to earlier observation of Vijaykumar (2001). The findings of self-confidence are less compared to earlier observations Chaudhari (2006).Baindha et al (2014) also noted that few respondents had high level of achievement motivation might be due to majority of them were middle aged and low social participation. These findings are in line with the findings of Chandrapaul (1998), Vijaykumar (2001), Suresh (2004) and encouraging than Chaudhari (2006).

The analysis of overall entrepreneurial behaviour reveals the situation where large majority of milk processors were moderate in their entrepreneurial ability. The individuals rich in entrepreneurial attributes can be role models for isolated group of milk processing who are still to venture out in milk processing. The small section of entrepreneurs were found poorly in entrepreneurial behaviour might be underprivileged group of society who didn't have access to necessary infrastructure, support facilities and most important socio-psychological milieu.Given the fact that there are numerous studies done, there remains a big gap.The present study showed 5 key variables (innovativeness, planning ability, information seeking behavior, decision making ability and risk orientation). The purpose of the study was to investigate factors that affect performance with reference to entrepreneurial behavior as one of the factors.

2.5 Market Demand for Processed Milk and Performance

Kuma (2012) ascertained that the demand for processed milk has been having a high trend and this has been improving the performance of small milk farms. In India, the performance of milk processing plants was indicated as increasing because most of the people had perceived fresh milk as entangled with a number of diseases which hindered most of the people to consume them and resort to processed milk. It is this mentality that most of the scholars including Henry et al., (2006) and Josh (2009) argued that the preference of processed milk has been increasing and this is the reason as to why the performance of milk processing plants is improving.

Staal *et al.* (2006) further established that processed milk bring processing firms together which enables them to check the quality of milk sold out to the public. This at the end of the day improves the performance of milk processing firms. In developing countries especially in Africa and Uganda, this was being done in form of cooperatives initially and this had improved on milk

quality and quantity. Milk producers used to take all their milk to nearest offices and this milk would be taken directly to the main supply points up to a processing plant and this improved on the performance of milk processing plants (Josh, 2009). This was because the supply of good milk was easy and could easily pay back to producers as easy as possible. This means that milk had exact market to milk and consumption. This improved the performance of milk processing plants. This study thus wanted to establish whether this kind of arrangement is still in place or not and its impact on performance of milk processing plants while using Kampala district.At the end of the study, it was established that such arrangement is not still being practiced and this had partly affected the performance of milk processing plants.

Further, Kuma, (2012) indicated that the demand of processed milk remains high because of less market risks involved with processed milk. This is because processed milk has no market risks like fresh milk which has timelines. Hamza (2010) ascertained that the performance of firms used to always go down because such milk had a very immediate timeline. However, the emergency of processing plants increased on the timeline of milk produced, increased on quality, and increased on the purity. This generally improved on the performance of processed milk plants. This study particularly aimed at finding out the situation in Uganda using processing plants operating in Kampala district. At the end of the study, it was established that the demand of processed milk has been increasing and this had the performance of milk processing plants improving rapidly.

Staal *et al.* (2006) more also indicated that the demand of processed milk has been highly improved by milk cooperatives. This is because cooperatives improve on marketing efficiency and supply. Since cooperatives are communally agreed on, they usually have a lot of market linkage locally and overseas. This makes them to find a better market place than when it is being done

individually. Staal *et al.* (2006) do not lose sight of the fact that there is also direct marketing by dairy farmers to private milk traders, associations, and consumers on household level. This is because it is sometimes easy to transport this kind of milk easily to last consumers, however, the performance of such milk processing plants tend to remain below levels since they do not sell with abnormal profits. From the literature,there is a likely suggestion that there is marketing gap between processing plants and performance of these plants especially in developing countries. This study endeavored to close this gap by finding out that the demand for milk has been going high and this had improved on the performance of processed milk firms. Another limitation of studies done on marketing is its small coverage of research done in Kenya, Ethiopia, Nigeria, New Zealand, Ireland, and South Africa among others.This studyanalyzed relationship between market demand and performance among dairy processors in Kampala.

2.6 Summary of Literature Review

With regard to emerging processors, studies have indicated that they usually face reducing profits and entrepreneurial behaviors, working capital and lack of required skills. It is important to consider adopting a long-term planning horizon in order to effectively research the factors affecting the performance of milk processing plants in Kampala District. Investigating this research phenomenon is an area which warrants further research. From the literature, there is a likely suggestion that there is marketing gap between processing plants and performance of these plants especially in developing countries. This study endeavored to close this gap by finding out that the demand for milk has been going high and this had improved on the performance of processed milk firms. Another limitation of studies done on marketing is its small coverage of research done in Kenya, Ethiopia, Nigeria, New Zealand, Ireland, and South Africa among others. This study analyzed relationship between market demand and performance among milk processors in Kampala district.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section explains the step by step process that was used in undertaking this study which included; the approach of study, the sampling framework, the method of determining samples, the design of sampling techniques, the methods and instruments of collecting data, the quality control measures, and analysis criteria.

3.2 Research Design

A descriptive survey design was used in undertaking this study. This design refers to deeply explaining or describing the sample out of the population used in the study to understand what is happening in the environment. This was used because the sample required needed more explanation. This design preferred to use qualitative and quantitative research approaches. This kind of triangulation helped in obtaining a deeper understanding of the study variables (Mugenda & Mugenda, 2003).

3.3 Study Population

The target population of the study was 21 dairy processing plants in Kampala (See Appendix E). It is estimated that there about 255 key stakeholders in these firms who are eligible respondents for this study. Thus the study respondents comprised of active dairy processors, key informants at Kampala District Production Department. Other key informants will include officials from DDA, small, medium and large scale processors such as Brookside (U) limited, numerous Ice cream and yoghurt processors among others are located in Kampala district.. Key informants from Dairy Development Authority officials, Kampala field veterinarians, partners in dairy sub sector development such as SNV, East African Dairy Development project, UNDATA, Heifer project international and Uganda Veterinary Association officials are based in Kampala business area.

All processors in the five divisions of Kampala were included in the study with the aid of district production and veterinary officers, and the chairperson of dairy processors association. Dairy processing plants were systematically randomly selected from with the aid of lists obtained from the Dairy Development Authority.

3.4 Sample Size and Selection

In Kampala district, a total of 255 milk processors were systematically randomly selected from 16 parishes in Kampala. This was done with the aid of sampling framework obtained from the Dairy Development Authority and Morgan and Krejcie table (1970) was used in determining the sample (Appendix III). Of these, 130 primary respondents were selected while 35key informants were interviewed.

Table.1: Sample selection

Category of Respondent	Estimated Pop'n	Sample Size	Sampling Technique
Heads of Uganda Dairy Processors Association, DDA officials, partners in dairy sub sector development such as SNV, East African Dairy Development project, Uganda Dairy processors Association, Heifer project international and Uganda Veterinary Association members.	42	14	Purposive
Milk processing plant owners and customers	213	130	Purposive & systematic random
Total	**255**	**144**	

Source: DDA, 2016/Primary Data, 2017

3.5 Sampling Techniques and Procedures

This study used purposive and systematic random sampling and all members of the milk processing plants and their customers in Kampala district. First a purposive sampling was used to select 35key informants for the study due to the characteristic of the groups. Key informants included DDA officials and partners in dairy sub sector development such as SNV, East African Dairy Development project, UNDATA, Heifer project international and Uganda Veterinary Association officials.

On the other hand, systematic random sampling was done using questionnaires to collect data from small, medium and large scale milk processing plants. The key respondents included owners (managers) and employees at these milk processing plants. A total sample of 144 respondents was

used in the study (Table 1 above). In the field, a purposive sampling design was used to select milk processing plants in all the five divisions of Kampala District. In addition, officials and employees at selected milk processing plants within the area were randomly selected and interviewed using a structured questionnaire. Thus, randomly selected milk processing plants respondents was selected using Morgan and Krejcie (1970) table of sampling for guidance.

3.6 Data Collection Methods
Data was collected from both primary and secondary sources. Structured interviews, key informant interviews and document review were the key data collection tools.

3.6.1 Questionnaire Survey Method

Surveying was used among milk processing plant owners. It has an advantage of covering large number of respondents and it was less expensive. This method provided good quantitative data. Milne (1999) argues that surveys can be useful in some cases when the questions asked are specific and if the questions asked affect them.

3.6.2   Interview Method
Key informants were visited individually at their premises after making appointment with the researcher. Before carrying out the interview, the first session were used by the researcher to build confidence with KIs so that they could participate fully and without reservation. Data was collected by interviewing to ensure qualitative data is gathered. Interviewing was used among the key informants for collection of qualitative data collection.

3.6.3   Documentary Review Method
Documentary review guide was used to help back up the Primary Data from questionnaire and interview guide. More so, existing literature on factors affecting performance of milk processing plants was sought for and obtained. They included reports from Ministry of Agriculture, Animal

Industry and Fisheries, journals, books, internet browsing, national policies on milk production in

Uganda (DDA), District Agricultural (milk production) reports, among others.

3.7 Data Collection Instruments

3.7.1 Self-administered Questionnaire
Primary data was collected through a structured questionnaire. The questionnaire was pre-tested

to remove ambiguities. Self-administered questionnaire was used among milk processing plant

owners. It has an advantage of covering large number of respondents and it was less expensive.

This method provided good quantitative data. Milne (1999) argues that surveys can be useful in

some cases when the questions asked are specific and if the questions asked affect them.

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3.7.3 Documentary Review Checklist
Documentary review guide was used to help back up the Primary Data from questionnaire and

interview guide. More so, existing literature on factors affecting performance ofmilk processing

plants was sought for and obtained. They included reports of Ministry of Agriculture, Animal

Industry and Fisheries, journals, books, internet browsing, national policies on Dairy production

in Uganda (DDA), District Agricultural (milk production) reports, among others.

3.8 Validity and Reliability

3.8.1 Validity
This was ensured while using expert judgments, where experts were chosen from both UMI and milk processing plants in Kampala district. Three experts were chosen who rated the questionnaires and the content validity index was established as indicated for different items in Table 2 below. Since all of them had a CVI of 0.7 and above, they were recommended to be used in the study according to Amin (2005).

Table 2: Content Validity Indices for the Questions

Variable	Description	No. of Questions	Content validity index
Independent	Credit access	9	.888
	Entrepreneur behavior	9	.861
	Market demand	7	.776
Dependent	Performance	8	.845

Source: Primary data (2017)

3.8.2 Reliability
The formula of Cronbach's Alpha Coefficient (α) is:

$$\alpha = \frac{K \cdot \Sigma\, SD^2 i}{K - 1\ SD^2 t}$$

α = Alpha coefficient; K = Number of items in the instrument; Σ = Sum; $SD^2 i$ = Individual item variance; $SD^2 t$ = Variance of total score and α of the study instrument if found to be valid in this study should be at 0 .7 and above. Moreover, the internal reliability of the instrument is "estimated using Cronbach alpha" (Bryman& Cramer, 2009). The reliability of the instrument (41 items) was

computed using SPSS and Cronbach Alpha was 0.789 higher than conventional or recommended reliability which is Cronbach Alpha 0.7.

Table 3: Reliability indices for the Questions

Variable	Description	No. of Questions	Cronbach alpha
Independent	Credit access	9	.898
	Entrepreneur behavior	9	.846
	Market demand	7	.907
Dependent	Performance	8	.822

3.9   Procedure for Data Collection

After the research proposal was approved and passed together with the research data collection tools, the researcher sought permission from the head of department higher degrees, Uganda Management Institute addressed to Kampala District where the study were conducted. The letter sought to introduce the researcher as a student. It explained what the research was about and the purpose of the study and request for any necessary assistance to be offered to the student. A data collection work plan was shared with officials at Kampala District to enable the researcher to easily interface with the respondents at the scheduled times.

3.10   Data Analysis

The data was compiled, analyzed and coded to get the required quality, accuracy and completeness. Codes and themes were developed from the data collected to make the work of analysis easier. It was entered into the computer for analysis using Statistical Package for Social Scientists (SPSS 19). The data was analyzed descriptively; frequency tables were generated including percentages, variable means and these results were presented in tables which have been explained in Chapter four.

Table 3: Reliability indices for the Questions

3.11 Measurement of Variables

In measuring variables, the researcher opted to use a Likert scale in measuring both independent and dependent variables. This was thus used in measuring factors and performance using scales from strongly agreed to strongly agreed using 5-scales. This was opted since it easily captures people's perceptions about the subject under investigation (Bill, 2011).

3.12 Ethical Considerations

The researcher first identified himself to the respondents then introduced to the respondent what they require from them. The researcher then had to seek consent from the respondent before getting any information from them. The researcher allowed the respondents to answer their questionnaires or interview voluntarily. The researcher also had to ensure confidentiality of respondent's information. The researcher was responsible to "maintain confidentiality that goes beyond ordinary loyalty". The researcher also ensured the privacy of the respondents by not asking very personal questions directly for example someone's age, religion among others (Barifaijo, Basheka, and Oonyu, 2010). To avoid plagiarism, works of different authors will be acknowledged whenever they are cited.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

Findings are presented in this chapter and these were done on findings on credit access facilities, entrepreneurial behaviors of milk processors, market demand for processed milk and performance of milk processing plants).

4.2 Response rate

Table 4: showing the response rate

Respondents	Sample size	Frequency	Percentage
Dairy Development Authority officials	14	8	57%
Milk processing plant owners	130	124	95.4%
Total	**144**	**132**	**91.7%**

The study managed to reach out to 91.7%. Out of the 144 respondents which had been intended to participant in the study, 132 managed to attend. However, according to Mugenda & Mugenda (2003), it is essential that beyond 70% of the response rate, the analysis is ideal to proceed.

4.3 Background of the Respondents

4.3.1 Gender of the respondents

To understand the gender of the respondents, the researcher recorded their gender. Figure 2 has details.

Figure 2: Gender of the respondents

Gender of the Respondents

■ Male ■ Female

20%

80%
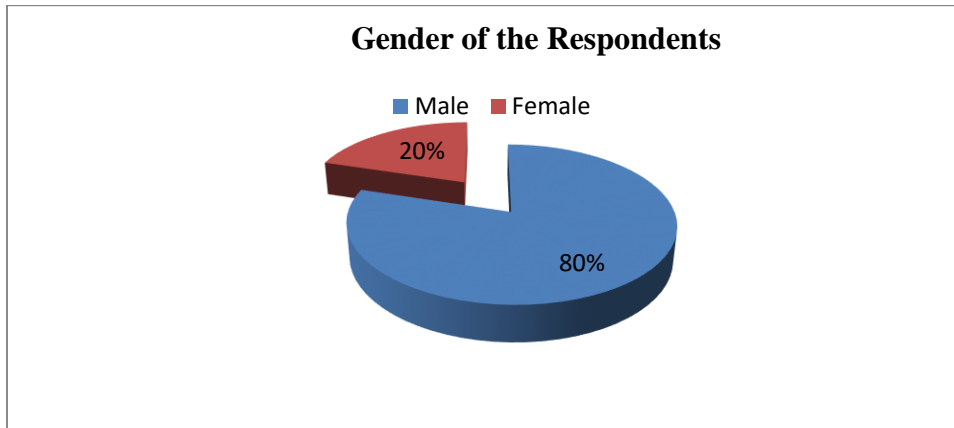
From figure 2, it is indicated that the study among milk processing owners was conducted mainly from the male respondents who constituted 60%. Females on the other hand, were represented by 40% of the respondents. This directly tells us that no matter the percentage of males and females who attended the study, given the fact that males and females attended to the study, the study was gender sensitive. Therefore, this implies that males are employed more than females in milk processing plants.

4.2.2 Age of the Respondents

Figure 3: age of the respondents

Age of Respondents

■ Frequency ■ Percentage

21	35	51	17	
16.9	28.2	41.1	13.7	
20-30years	31-40years	40-50years	51years++	
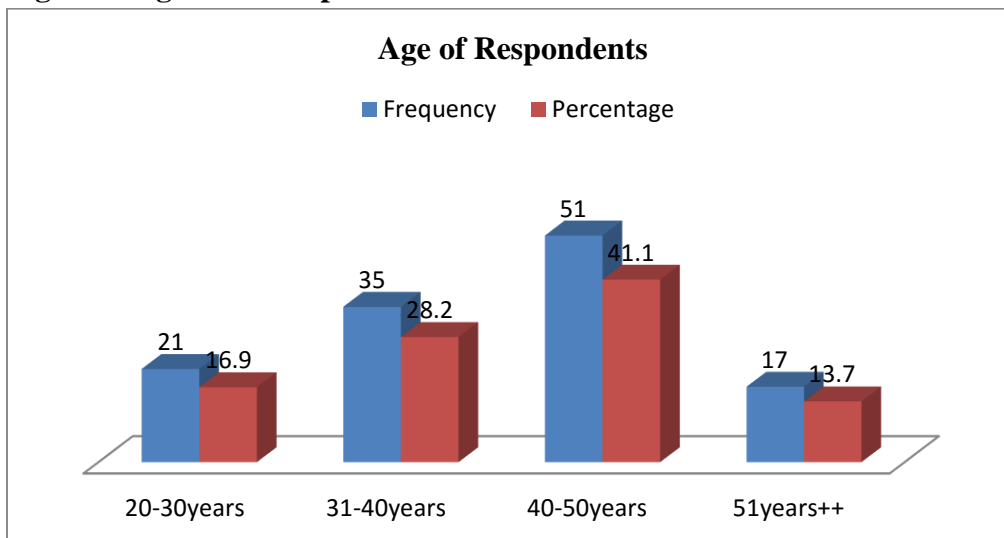
From figure 3, it was found out that most of the milk processors that responded to the study had 40-50years (41.1%). The category of 31-40 had 28.2% representation, 51years and above had a

representation of 18.7% and those who were between 20-30years were represented by 16.9% each. Since majority is above 30 years, these were anticipated to have the required knowledge being investigated.

4.2.3 Level of Education of the Respondents

Figure 4: Level of education of the respondents
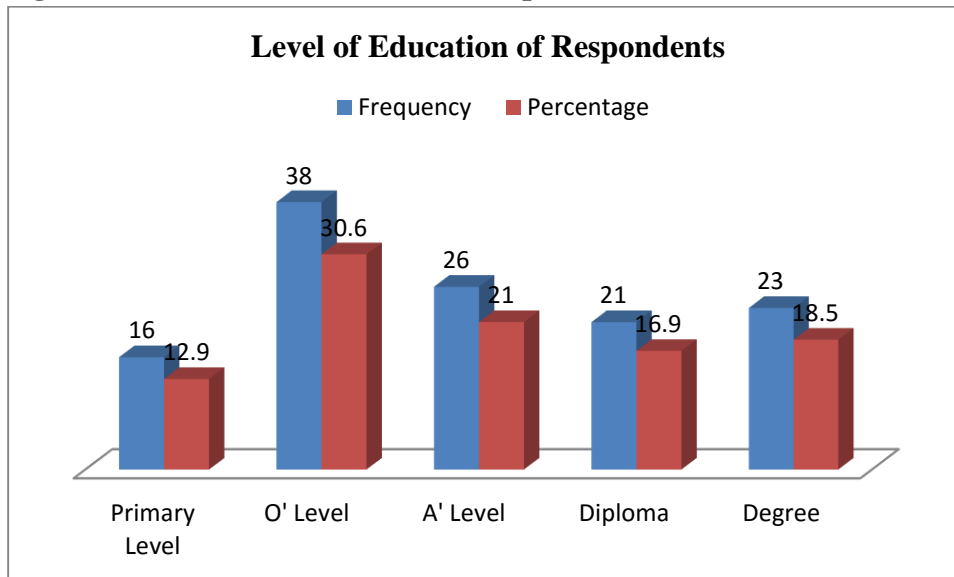
Figure 3 indicates that most of the respondents had studied up to 'O' level of education and these constituted 30.6%. Those who had studied up to 'A' level had 21%. 18.5% had a degree level of education. Diploma was represented by 16.9% and primary level of education had 12.9% representation. Basing on the above findings, the study was conducted in people who had average level of education and this is because many milk processors had the required cognitive capacity to reply to the questions as they were put forward to them.

4.3.4 Time spent in milk processing in Kampala

Figure 5: Time spent in milk processing
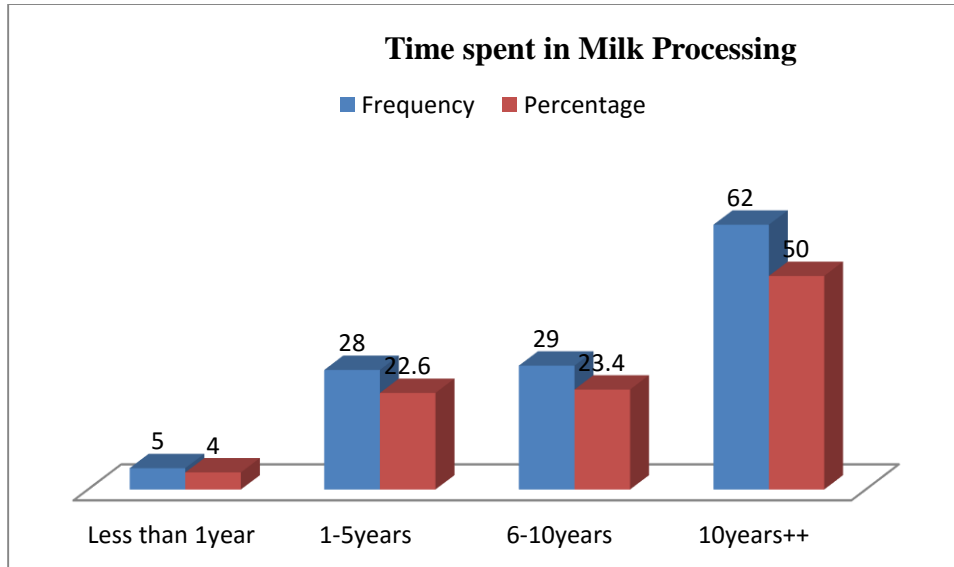
Figure 4 above indicates that most of the respondents had been in milk processing business for over 10years and these took 67.3% of the respondents. 17.8% of the respondents had spent 6-10years. Those who had spent 6-10years had 11.2% of representation. The study used people who had the experience required as far as factors affecting the performance of milk processing plants in Kampala district are concerned.

4.4. Empirical findings on factors affecting the performance of milk processing plants in Kampala district

In this section, the research findings are presented as per the dependent and independent variables used by the study. These findings were thus obtained on credit access facilities, entrepreneurial behaviors of milk processors, market demand for processed milk and performance of milk processing plants. In this case therefore, to establish the factors affecting the performance of milk processing plants in Kampala district, respondents were introduced to different pre-conceived

statements as per each variable to listen to their views and below are the findings that were found on each dimension.

4.4.1 Findings on performance of milk processing plants in Kampala district

To establish the performance of milk processing plants, respondents were given items to have their say.

Table 5: Descriptive Statistics on performance of milk processing plants in Kampala district

Items	1	2	3	4	5	Mean
I have been in this same business for over 10years	37.3%	12.6%	50%	0%	0%	3.69
The financial position of my business has improved over the last 3 years	6.5%	34.2%	53.9%	3.9%	2.6%	3.81
Over the last 3 years the profit margin of my business has increased	11.8%	5.2%	35.5%	42%	5.2%	3.88
The revenue of my business has increased over the last 3 years	1.3%	1.3%	3.9%	71.8%	21.5%	3.98
My sales return has been increasing for the last 3years	0%	0%	7.8%	50%	42.2%	4.05
My customers have been increasing for the last three years	3.9%	3.9%	7.8%	39.4%	44.7%	4.10
I have managed to venture into other markets for the last three years	11.8%	25%	0%	48.6%	15.7%	4.12
My capital base has increased for the last three years	17.8%	19%	0%	43.6%	20%	4.40
My business has expanded for the last three years	3.9%	6.5%	23.6%	30.2%	36.8%	4.59

The results in table 5 revealed that the performance of milk processing plants visited was very much convincing on every statement presented to them. This is exemplified in the following

assertions; My business has expanded for the last three years (4.46); My capital base has increased for the last three years (4.22); I have managed to venture into other markets for the last three (4.12); My customers have been increasing for the last three years (4.10); My Sales return has been increasing for the last 3years (4.05); The revenue of my business has increased over the last 3 years (3.98); Over the last 3 years the profit margins of my business have increased (3.88); The financial position of my firm has improved over the last 3 years (3.81); I have been in this same business for over 10years without fail (3.69).

The above findings suggests that the performance of milk processing plants in Kampala district is very good since they are profitable, have increasing sales, market expansions and sustainable. There only weaker points are at the profits they make and financial position. However, the performance of milk plants in Kampala district was highly doubted by key informants used in the study. For instance, they opined that a number of these milk processors have had their business closed by revenue authorities because of evading taxes. Some of the processing plants close every year because of failure to sustain the market milk demands and the quality required by UNBS and the clients. One of them was quoted saying:

"We still have a big challenge as far as running milk processing plants is concerned because many of the owners of these businesses cannot differentiate profits from incomes…they report a lot of money received but after few years, you find the business closed…in fact so many of these plants are forced to close or close because of their own factors may be because the competition is too high…I think performance of most of these processing plants is not adequate enough and that is what we are looking forward to fix"

The above interview suggests that the performance of milk processing plants is still in shambles especially when it comes to affording taxes, low profitability, and low sales.This finding was in

relation with the documents reviewed. For instance, according to Dairy Development Authority Annual Report (2014), they indicated that about 5% of processing plants managed to close all over Uganda, where some of them closed on factors that are internal, others were forced to close by DDA and UNBS. This was attributed to a number of factors including lack of the milk quality required in the market.

The next themes will analyze factors affecting the performance of milk processing plants.

Research Question 1

4.4.2 Findings on credit access facilities for Milk processors in Kampala district
To understand whether milk processors can access credit, the respondents were introduced different items to have their say.

Table 6: Descriptive Statistics on availability of credit access facilities for milk processors in Kampala district

	1	2	3	4	5	Mean
The loans are accessible in milk processing business	1.3%	1.3%	3.9%	61.8%	31.5%	3.56
The repayment period is affordable	1.3%	1.3%	3.9%	71.8%	21.5%	3.74
The terms and conditions of loans acquired are considerate	0%	0%	7.8%	50%	42.2%	3.83
The lending process is quick	3.9%	3.9%	7.8%	39.4%	44.7%	4.12
The loan duration is enough to allow business growth	0%	0%	21.5%	37%	41.3%	4.23
Collaterals limit borrowing among milk processors	0%	0%	0%	50%	50%	4.46
The loan department is a good listener in case of failure to comply with loan duration	9%	6%	10.5%	28.5%	45%	4.42
The loan disbursed is always enough to meet my business needs and growth	0%	10.5%	25.5%	27%	36%	4.49

The results in table statistically revealed that milk processors have access to credit required to build or run their business. Among the items that had means above 3.5 included; The loan disbursed is always enough to meet my business needs and growth (4.49); The loan department is a good listener in case of failure to comply with loan duration (4.42); Collaterals limit borrowing among milk processors (4.46); The loan duration is enough to allow business growth (4.23); The lending

process is quick (4.12); The terms and conditions of loans acquired are considerate (3.83); The repayment period is affordable (3.74); The loans accessible in milk processing business (3.56).

The reportages above do imply that milk processors in Kampala district have access to credit facilities. This is because they can have the required amount or size of loans; the lending companies are flexible in their terms and conditions, the loan duration is enough to allow business growth; the lending process is quick to meet market target; the terms and conditions of loans acquired are considerate and the affordability of repayment period. These are presumed to have a significant influence on performance of milk processing plants.

The position of key informants seemed to be in line with what was obtained from questionnaires. Majority of interviewees indicated that milk processing is a profitable venture and has a high market in Kampala. This is the basis as to why the lending institutions find it affordable and easy to borrow these business owners even on no collateral because they are sure they will pay back the loans obtained. They further opinioned that loans provided to milk processors are processed in time because milk businesses are delicate venture and this has enabled milk processing plants to expand and meet market targets. The only thing which some key informants were worried about that may affect their performance in long run was with the terms and conditions of some loans obtained. It was quoted from one of them saying:

"We need a regulation when it comes to these local microfinance institutions because they really chop the profits our processing plants entrepreneurs would be making because they seem to give money to milk processors at such a high interest rate and this in itself affects the performance…"

From the above key informants views, it is quite clear that credit access is easy and affordable to milk processing plants operating in Kampala district which is presumed to have positive effect on

the performance of these plants. The above findings seemed contrary as per the documents reviewed. According to UBOS (2014), the performance of SMEs in Uganda is highly affected by access to credit and even those which access credit, it affects their savings since they seem to work for money lenders.

4.4.1.1 Correlation results for credit access and performance of milk processing plants

The first hypothesis stated, *"Credit access positively affect the performance of milk processing plants."* Pearson correlation coefficient (r) was used to test the hypothesis. Table 7 presents the test results.

Table 7: Correlation results

		Credit access	Performance
Credit access	Pearson Correlation	1	.718[*]
	Sig. (2-tailed)		.013
	N	124	124
Performance	Pearson Correlation	.718[*]	1
	Sig. (2-tailed)	.013	
	N	124	124

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Primary data

Findings show that there was a positive correlation ($r= .718*$) between credit access and performance of milk processing plants. These findings were subjected to a test of significance (p) and it is shown that the significance of the correlation (p = .013) is less than the recommended critical significance at 0.05. Thus, the relationship was significant. Because of this, the hypothesis *"Credit access positively affects the performance of milk processing plants"* was accepted. The

implication of these findings is that credit access positively affects performance of different milk processing plants in Kampala district. This means that the higher the credit access to credit facilities, the higher the performance of these milk processing plants.

4.4.1.2 Regression results for credit access and performance of milk processing plants
A further analysis was conducted using a regression to determine the influence of credit access on performance. Findings are presented in Table 8, accompanied by analysis and interpretation.

Table 8: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.406[a]	.387	.268	1.230

a. Predictors: (Constant), credit access

Findings in Table 8 show a moderate linear relationship (Multiple R = .406) between credit access and performance. The adjusted R Square shows that credit access accounts for 26.8% change performance of milk processing plants. Hence, the findings were accepted. The findings further imply that there is a need to ensure that there is required credit access, if performance of milk processing plants is to be improved in Kampala district, Uganda.

Research Question 2

4.4.3 Findings on entrepreneurial behaviors of milk processors in Kampala district
To understand the entrepreneurial behaviors of milk processors in Kampala district, below are the findings in Table 9.

Table 9: Descriptive Statistics on entrepreneurial behaviors of milk processors

	1	2	3	4	5	Mean
The company has a business plan for the next three years	19%	31.5%	20.7%	23.7%	19%	2.35
I have knowledge of various sources of funds for my business	4.8%	19%	28.5%	33.3%	28.5%	3.56
I endeavor to plan ahead of risks	4.8%	19%	28.5%	33.3%	28.5%	3.60
I like to respond to opportunities before other people	9.5%	4.8%	23.7%	42.9%	33.3%	3.78
I rely on my own experience to take decisions in my business	0%	19%	19%	38.1%	19%	3.83
I endeavour to seek for new knowledge every year	4.8%	4.8%	19%	57.3%	28.5%	4.03
Bookkeeping is given a first priority in this company	0%	0%	19%	66.9%	28.5%	4.18

The results in table 9statistically mean that the milk process had good entrepreneurial behaviors that may positively contribute their performance. Among the items that confirm this statistical claim include; Bookkeeping is given a first priority in this company (4.18); I endeavour to seek for new knowledge every year (4.03); I rely on my own experience to take decisions in my business(3.83); I like to respond to opportunities before other people (3.78); I endeavor to plan ahead of risks (3.60); I have knowledge of various sources of funds for my business(3.56). These implied that attributes to do milk processing were well behaved entrepreneur wise especially when

it comes to strategic planning, creativity, risk taking, decision making, looking for knowledge and seeking capital. These are true definitions or qualities of good entrepreneurial behavior required in business to perform well.

However, only 1-item showed that their companies had no business plan for the next three years. This is very dangerous and has the capacity to affect the performance of milk processing plants because a business plan is a mirror for future goals and activities.

The above position was not in line with what most of the key informants indicated in an interview. It was established that the entrepreneurial ability and behavior is too low and lacking. They opined that there are a number of processing plants that operate with no clear bookkeeping arrangement, they only stop on recordings. They further noted that a number of milk processors lack financial literacy and financial management skills to run a business and this has affected a number of them to perform. Further, it was reported by a number of key informants that most of the milk processors fail because they have no business plan and clear strategies. It was quoted from one of the key informants:

"The reason why we have high number of processing plants failing or doing bad is because these processors have a poor financial background...some of them have never even heard of a business plan…others fear to take risks and all rotate in one market segment…"

The above findings were interpreted to mean that milk processors have inadequate entrepreneurial ability and discipline required in business management and innovations. This is likely to affect their performance. The next section assesses the extent to which entrepreneurial behaviors of milk processors affect their performance.

4.4.3.1 Correlation results for entrepreneurial behaviors of processors and performance of milk processing plants

To test if there was a relationship between entrepreneurial behaviors of processors and performance of milk processing plants, a Pearson correlation coefficient was done by the study and the results are shown in Table 10 below.

Table 10: Correlation results

		Entrepreneurial behaviors of processors	Performance
Entrepreneurial behaviors of processors	Pearson Correlation	1	.444[**]
	Sig. (2-tailed)		.008
	N	124	124
Performance	Pearson Correlation	.444[**]	1
	Sig. (2-tailed)	.008	
	N	124	124

**. Correlation is significant at the 0.05 level (2-tailed).

Findings show that there was a positive correlation ($r = .444$) between entrepreneurial behaviors of processors and performance. These findings were subjected to a test of significance (p) and it is shown that the significance of the correlation (p = .008) is less than the recommended critical significance at 0.05. Thus, the relationship was significant. Because of this, the hypothesis *"Entrepreneurial behavior of processors has a significant positive effect on performance"* was accepted. The implication of these findings is that there is a significant relationship between entrepreneurial behaviors of processors and performance among milk processors in Kampala

district. This means that the higher entrepreneurial behaviors of processors, the higher the performance will be enhanced.

4.4.3.2 Regression results for entrepreneurial behaviors of processors and performance of milk processing plants

Further analysis was conducted using a regression to determine the extent to which entrepreneurial behaviors of processors predict performance. Findings are presented in Table 11, accompanied with an analysis and interpretation.

Table 11: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664[a]	.576	.432	1.066

a. Predictors: (Constant), entrepreneurial behaviors of processors

Findings in Table 11 show a strong linear relationship (Multiple R = .664) between entrepreneurial behaviors of processors and performance. Going by the adjusted R Square, it is shown that entrepreneurial behaviors of processors account for 43.2% change in performance. Hence, the findings were accepted. The findings further imply thatmilk processors had adequate entrepreneurial behaviors which have been a key factor in improving their performance.

Research Question 3

4.4.4 Findings on market demand for processed milk among milk processing plants in Kampala district

To find out whether there was market demand for processed milk among milk processing plants in Kampala district, table 12 has more details.

Table 12: Descriptive Statistics on market demand for processed milk among milk processing plants

	1	2	3	4	5	Mean
All our target customers are aware about our business	0%	0%	0%	26.3 %	73.6 %	3.98
The price of our milk is predictable	3.9 %	11.8 %	26.3 %	31.5 %	27.6 %	4.14
Our customers have ability to purchase the milk we process	0%	0%	7.8%	69.7 %	22.3 %	4.20
The quality of our milk is highly needed in market	0%	0%	0%	63.1 %	36.8 %	4.37
I have heard no complaint about the quality of the milk we process	3.9 %	3.9%	7.8%	39.4 %	44.7 %	4.50
Our market size is big enough	0%	0%	7.8%	32.2 %	60%	4.51
The size of our market keeps expanding every year	0%	0%	14.6 %	29.3 %	54.8 %	4.67

The results in table 12 statistically means that processed milk has a high market demand in Kampala district. For instance; The size of our market keeps expanding every year (4.6.7); Our market size is big enough (4.51); I have heard no complaint about the quality of the milk we process (4.50); The quality of our milk is highly needed in market (4.37); Our customers have ability to purchase the milk we process (4.20); The price of our milk is predictable (4.14);All our target customers are aware about our business (3.98).

The above findings means that there is a high market demand for milk in Kampala district since majority of the responses suggested that the size of our market keeps expanding every year; the market size is big enough; the quality of the milk processed is up to standard; the quality of milk is highly needed in market; the customers have ability to purchase the milk processed; the price of milk is predictable and the target customers are aware about the processed milk quality and location. This is presumed to have an effect on improved performance of milk processing plants in Kampala district.

From the key informants, it looked almost congruent with what the biggest part the questionnaire indicated. For instance, the majority of the key informant reported that the quality of milk is not determined merely by processors but it is already set by UNBS and regulated by the Dairy Development Authority. They reported that many processors have had their licenses revoked. This was reported as the basis for increased market demand of processed milk. One of them was quoted saying:

"This field cannot be left open that is why we have this Authority in place to assess the milk quality processed by all milk processing plants…this is the reason why processed milk has now captured a very big market size in Uganda…"

The above quotation means that there is congruence between what the key informants said and what was reported from the questionnaire. This thus confirms that there is a high market demand for processed milk which is presumed to have a significant effect on improved performance of milk processing plants in Kampala district.

4.4.3.1 Correlation results for market demand for processed milk and performance of milk processing plants

To test if there was a relationship between market demand for processed milk and performance at milk processing plants, a Pearson correlation coefficient was done by the study and the results are shown in Table 12 below.

Table 13: Correlation results

		Market demand	Performance
Market demand	Pearson Correlation	1	.709**
	Sig. (2-tailed)		.007
	N	124	124
Performance	Pearson Correlation	.709**	1
	Sig. (2-tailed)	.007	
	N	124	124

**. Correlation is significant at the 0.05 level (2-tailed).

Findings show that there was a positive correlation ($r = .709$) between market demand for processed milk and performance. These findings were subjected to a test of significance (p) and it is shown that the significance of the correlation (p = .007) is less than the recommended critical significance at 0.05. Thus, the effect was significant. Because of this, the hypothesis "Market demand for processed milk has a significant positive effect on performance of milk processing in Kampala" was accepted. The implication of these findings is that there is a significant relationship between market demand for processed milk and performance. This means that the higher the market demand for processed milk, the higher the performance of milk processing plants.

4.4.3.2 Regression results for market demand for processed milk and performance
Further analysis was conducted using a regression to determine the influence of market

demand for processed milk on performance of milk processing plants in Kampala district.

Findings are presented in Table 14, accompanied with an analysis and interpretation.

Table 14: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.860[a]	.725	.688	1.157

a. Predictors: (Constant), Market demand for processed milk

Findings in Table 14 show a strong linear relationship (Multiple R = .860) between market demand for processed milk and performance. Going by the adjusted R Square, it is shown that market demand for processed milk account for 68.8% change in performance. Hence, the findings were accepted. The findings further imply that market demand for processed milk has been achieved by milk processing plants in Kampala district which is a key factor in improving their performance.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the study conclusions made in form of summary, discussions and recommendations made for future studies on the subject of factors affecting the performance of milk processing plants in Kampala district.

5.2 Summary

5.2.1 The influence of credit access on performance of Milk processing plants
There is a positive significant influence of credit access on performance at milk processing plants. In particular, the positive relationship implied that a change in credit access contributed to a positive change in performance. This thus meant that improvement in credit access caused improvement in performance of the processing plants. Credit access accounted for 26.8% variation in performance at credit access. In addition, there was a strong linear influence of credit access and performance at milk processing plants.

5.2.2 The influence of entrepreneurial behaviors of processors on performance at Milk processing plants
There is a positive significant influence of entrepreneurial behaviors of processors and performance at milk processing plants. In particular, the positive moderate influence implied that a change in entrepreneurial behaviors of milk processors contributed to a significant change in performance at milk processing plants whereby improvement in entrepreneurial behaviors of processors caused improvement in performance at milk processing plants and vice versa. Entrepreneurial behaviors of processors accounted for 43.2% variation in performance at Milk processing plants.

5.2.3 The influence of market demand for processed milk on performance at milk processing plants

There is a positive influence of market demand for processed milk and performance at milk processing plants. In particular, the positive influence implied that a change in market demand for processed milk contributed to a positive change in performance at milk processing plants whereby improvement in market demand for processed milk caused improvement in performance at milk processing plants and vice versa. Market demand for processed milk accounted for 68.8% variation in performance at milk processing plants.

5.3 Discussion of findings

5.3.1 The influence of credit access on performance at milk processing plants

The study findings indicated that there is a significant influence of credit access on performance of milk processing plants. The findings are supported by the work done by Cohen (2008) argues that it is a general belief and finding that the performance of agricultural firms and SMEs is highly based on their level of accessing credit. There is thus a need to have enough investments made in milk production if the performance of processing plants is to improve. The plant needs to seek credit to invest in most of the most important resources including human capital, technical capital, social capital and other forms of capital if the performance is to skyrocket. Hassan et al., (2009) argues that animals need to be invested in especially when it comes to buying different varieties, buying good and productive animal varieties, training human resource and machinery. These can all contribute to improved performance of milk processing plants.

Wooldridge, (2012) adds that the underlying challenge inhibiting improvement in performance of milk processing plants is inability of their entrepreneurs to access resources which are scarce like assets which can attract other financial players to work with the firm to improve its performance. It was thus recommended by the scholars that there is a major role played by a farmer himself if

he can ably seek for credit and uplift the performance of an organization. Thorne, Dillon and Donnellan (2015) gave an example of Irish dairy farms and processors, where they found out that the performance of these milk firms kept rising since they had had clear credit partners who would trust them with small loans.

According to a study done by Fasoranti, (2008) in Nigeria, they found out that beneficiaries of the loan facilities were young (about 44 years old) with at least the primary level education and well experienced in subsistence arable cropping. The loan sum disbursed was small; consequently, the resultant gross margin from cropping activities was low (only N34, 924.9), though this was higher than the gross margin for non-beneficiaries. Wambugu, Kirimi,andOpiyo (2011) argued increased milk production has been highly constrained in Kenya because of lack of adequate access to credit which can help them access artificial insemination (AI) services. The literature review has highlighted different dairy production systems in varying countries, which consists of improved and local dairy farming practices which should be considered when researching on dairy processing plants in Kampala district, Uganda. The review has provided empirical approaches to measuring credit access (Wooldridge, 2012; Thorne et al, 2015; Akinseinde, 2006; Nkwasibwe et al, 2015) among others in their varying analyses of this issue. Similarly, approaches to measuring efficiency and studies that have applied the stochastic profit frontier in measuring efficiency have been reviewed. The review has also showed that socioeconomic factors affecting inefficiency among farmers including age, gender, level of education, experience among others.

5.3.2 The influence of entrepreneurial behaviors of processors on performance at Milk processing plants
The study findings indicated that there is an influence of entrepreneurial behaviors of processors on performance at milk processing plant. Findings of this research support other studies, which also established that without required entrepreneurial behaviors of processors, it is not easy to have

business accomplished. For instance, According to Islam *et al.* (2001), marketing chains are important in understanding which firms/dealers are involved in performance. It can be used to illustrate and clarify the movement of commodities, financial, credit and information flows, and the strategic location of storage and processing facilities in the system. The patterns revealed through such illustration may shed light on opportunities and constraints faced by traders, consumer and/or producers.

According to Njombe, *et al.* (2011) milk processing in the country is mainly undertaken by small and medium scale plants of capacities ranging between 500 and 30000litres per day. The current national milk processing capacity is 410 500litres per day, but, the capacity utilization is about 30%. Fussi (2010) reports the low capacity utilization which is partly due to inadequate raw milk production as a result of seasonality in milk production which is attributed to inadequate feeding and low milk production.

Bulatao (2011) argued that the behavior of most of the owners or the entrepreneurs of small processing plants constrain the performance of small processing. The behavior of entrepreneurs rotates around the skills, knowledge and attitudes towards development. In Philippines, the performance of milk processing producers had been going high because they were good in indentifying markets, persistence and very honest in undertaking their work. In most of the retail milk outlet and processors, entrepreneurs had acquired a number of skills in preserving of milk, in packaging milk and in marketing milk. According to Baindha et al (2014), the performance of such milk producers had been going high because of their knowledge equipment and honest.

Baindha et al (2014)'s study showed that the moderate level of planning ability attribute was possessed by 39.02 per cent of the respondents followed by 34.14 per cent of the respondents had

good and 26.82 percent had poor planning ability. This might be due to majority of them were middle aged, low social participation and not undergone any kind of training related to dairying. The results of planning ability are less compared to earlier observations of Chaudhari, 2006. The results from Baindha et al (2014)'s study revealed that respondents belonged to medium information seeking behavior followed by 19.51 per cent and 9.76 per cent of the respondents had low and high information seeking behavior, respectively. Almost similar findings were reported by Suresh 2004. This might be due to majority of them were middle aged, low social participation, medium experience in milk processing and not undergone any kind of training related to dairying. The present findings of information seeking behavior are less compared to earlier observations of Vijaykumar (2001), Chandrapaul (1998) and Chaudhari (2006). This might be due to majority of them were middle aged, middle educational level, medium level of mass media exposure, low social participation and not undergone any kind of training related to dairying. Almost similar findings were reported by Patel *et al.* (2003).

5.3.3 The influence of market demand for processed milk on performance at milk processing plants

On the last objective, it was established that there is a significant influence of market demand for processed milk on performance at milk processing plants. The study findings are congruent with what had earlier been established by different researchers who had indicated that performance of milk processing plants is positively influenced by market demand for processed milk. For instance, according to Kuma (2012) ascertained that the demand for processed milk has been having a high trend and this has been improving the performance of small milk farms. In India, the performance of milk processing plants was indicated as increasing because most of the people had perceived fresh milk as entangled with a number of diseases which hindered most of the people to consume them and resort to processed milk. It is this mentality that most of the scholars including Henry et

al., (2006) and Josh (2009) argued that the preference of processed milk has been increasing and this is the reason as to why the performance of milk processing plants is improving.

Staal *et al.* (2006) further established that processed milk bring processing firms together which enables them to check the quality of milk sold out to the public. This at the end of the day improves the performance of milk processing firms. In developing countries especially in Africa and Uganda, this was being done in form of cooperatives initially and this had improved on milk quality and quantity. Milk producers used to take all their milk to nearest offices and this milk would be taken directly to the main supply points up to a processing plant and this improved on the performance of milk processing plants (Josh, 2009). This was because the supply of good milk was easy and could easily pay back to producers as easy as possible. This means that milk had exact market to milk and consumption. This improved the performance of milk processing plants. This study thus wanted to establish whether this kind of arrangement is still in place or not and its impact on performance of milk processing plants while using Kampala district. at the end of the study, it was established that such arrangement is not still being practiced and this had partly affected the performance of milk processing plants.

Further, Kuma, (2012) indicated that the demand of processed milk remains high because of less market risks involved with processed milk. This is because processed milk has no market risks like fresh milk which has timelines. Hamza (2010) ascertained that the performance of firms used to always go down because such milk had a very immediate timeline. However, the emergency of processing plants increased on the timeline of milk produced, increased on quality, and increased on the purity. This generally improved on the performance of processed milk plants. This study particularly aimed at finding out the situation in Uganda using processing plants operating in

Kampala district. At the end of the study, it was established that the demand of processed milk has been increasing and this had the performance of milk processing plants improving rapidly.

Staal *et al.* (2006) more also indicated that the demand of processed milk has been highly improved by milk cooperatives. This is because cooperatives improve on marketing efficiency and supply. Since cooperatives are communally agreed on, they usually have a lot of market linkage locally and overseas. This makes them to find a better market place than when it is being done individually. Staal *et al.* (2006) do not lose sight of the fact that there is also direct marketing by dairy farmers to private milk traders, associations, and consumers on household level. This is because it is sometimes easy to transport this kind of milk easily to last consumers, however, the performance of such milk processing plants tend to remain below levels since they do not sell with abnormal profits.

5.4 Conclusions

5.4.1 The influence of credit access on performance at milk processing plants
The findings of this study showed that there is a positive influence of credit access on performance. Centered on the empirical results of this study, it is concluded that it is important that there are enough avenues of accessing credit if performance of milk processing plants is to improve.

5.4.2 The influence of entrepreneurial behaviors of processors on performance at milk processing plants
The findings of this study showed that there is a positive influence of entrepreneurial behaviors of processors on performance of milk processing plants. Centered on the empirical results of this study, it is concluded that milk processing plants needs to ensure that the owner's entrepreneurial capability and skills are improved, if performance is to improve. There is a need for milk processors to seek for new knowledge continuously, if the performance of milk process plants is to progress well.

5.4.3 The influence of market demand for processed milk on performance at milk processing plants

The findings of this study showed that there is a positive influence of market demand for processed milk on performance of milk processing plants. Centered on the empirical results of this study, it is concluded that milk processing plants needs to ensure that the quality of milk is ensured if performance is to improve

5.5 Recommendations

5.5.1 The influence of credit access on performance at milk processing plants

Basing on the study findings, it can be recommended that collateral free loans need to be put in place and be given the milk processing plants because it appears that credit access bars a number of processing plants owners to access credit which affect the performance of milk processing plants. This can be done by creating a SACCO to lend collateral free loans to milk processing plants to avoid the barriers that besiege the obtaining of credit from general microfinance institutions and other financial institutions.

5.5.3 The influence of entrepreneurial behaviors of processors on performance at milk processing plants

Basing on study findings, it is essential that the entrepreneurial behaviors of milk processors are enhanced. This needs to begin with ensuring that financial literacy of processors is improved. This can be stimulated by ensuring that free extension services and training to the milk processors especially in the areas of marketing, planning, financial management, innovation and management of performance. This can be done by DDA and other development partners.

5.5.2 The influence of market demand for processed milk on performance at milk processing plants

There is a need to offer a reasonable price per liter can inspire processors to sell milk through the formal channel (plants) in the best quality possible. In the reports reviewed, producers were observed preferring selling milk to the informal channel because their milk fetches a better price

than the price offered by dairy plants. Price is the key factor for producers to opt for the supplying outlet and this in one way or the other affect the quality of milk processed and hence affecting the performance of milk processing plants.

5.6 Limitations of the study
The study was successful, though some limitations were encountered.

Some potential respondents who were considered to hold key policy information could not be reached for interview despite several reschedules. While some respondents considered it a waste of time as they had participated in such research previously, with no financial rewards. Time was lost as the researcher offered explanations that the study was purely for academic purposes. Some respondents failed to return the questionnaires issued to them, which was a limitation on the researcher's progress as timelines, had to be revised and in some cases extra costs were incurred in availing extra questionnaires.

5.8 Areas for Further Research
The study was limited to factors affecting performance of milk processing plants. A further study is required to take into consideration of considering more than one variable that may be affecting performance in milk processing plants because it may not only credit access, entrepreneurial behaviors and market quality of milk but also others

This study was limited to milk processing plants in Kampala district. This makes the study limited to milk processing plants in Kampala district and not in other parts of Uganda. A study covering other parts is required.

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QUESTIONNAIRE FORMILKPROCESSING PLANTS AND CUSTOMERS

My name is *Musa Kubula*, a student at Uganda Management Institute. I am carrying out a research about factors affecting the performance of milk processing plants in Kampala district, Uganda. I am requesting you to fill in this questionnaire and your honest opinion will be highly appreciated. Thank you for your participation.

Section A: Back ground information of the respondent

Please tick the most appropriate answer in the corresponding box

Gender **:** a)Maleb)Female ☐   ☐

Age**:**   a) 20-30 years   ☐   b) 31-40 years   ☐   c) 41+ years and above   ☐

What is your highest level of education?

Primary Level   b) "O" level   ☐   c) Certificate   ☐   d) Dip ☐ Level   ☐

    e)   Degree Level   ☐   f) Master's Degree   ☐   ) Post Graduate Diploma ☐

How long have you been in milk processing?

    a) Less than 1 year ☐   b) 1-2 years ☐   c) 3-5 years ☐ d) 6+ years ☐

Section B: Independent Variable: Factors

Please, use the scale below to answer the questions that follows by ticking the number that corresponds to your opinion.

Credit Access

5	4	3	2	1					
Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly disagree (SD)					
	Statement				**5**	**4**	**3**	**2**	**1**
1	The loans accessible in milk processing business								
2	The repayment period is affordable								
3	The terms and conditions of loans acquired are considerate								
4	The lending process is quick								
5	The loan duration is enough to allow business growth								
6	Collaterals limit borrowing among milk processors								
7	The loan department is a good listener in case of failure to comply with loan duration								
8	The loan disbursed is always enough to meet my business needs and growth								

Entrepreneurial behavior of processors

5	4	3	2	1					
Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly disagree (SD)					
	Statement				**5**	**4**	**3**	**2**	**1**
1	The company has a business plan for the next three years								
2	I endeavor to plan ahead of risks								
3	I endeavour to seek for new knowledge every year								
4	I like to respond to opportunities before other people								
5	Bookkeeping is given a first priority in this company								
6	I rely on my own experience to take decisions in my business								
7	I have knowledge of various sources of funds for my business								

Market demand for processed milk

5	4	3	2	1					
Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly disagree (SD)					
	Statement				5	4	3	2	1
1	Our market size is big enough								
2	The quality of our milk is highly needed in market								
3	The price of our milk is predictable								
4	Our customers have ability to purchase the milk we process								
5	All our target customers are aware about our business								
6	The size of our market keeps expanding every year								
7	I have heard no complaint about the quality of the milk we process								

SECTION B:DEPENDENT VARIABLE: PERFORMANCE

Please, use the scale below to answer the questions that follows by ticking the number that corresponds to your opinion.

5	4	3	2	1
Strongly Agree (SA)	Agree (A)	Neutral (N)	Disagree (D)	Strongly disagree (SD)

	Statement	**5**	**4**	**3**	**2**	**1**
	PROFITABILITY					
	The financial position of my business has improved over the last 3 years					
	Over the last 3 years the profit margins of my business have increased					
	The revenue of my business has increased over the last 3 years					
	SALES INCREASE					
	My Sales return has been increasing for the last 3years					
	My customers have been increasing for the last three years					
	I have managed to venture into other markets for the last three					
	PERFORMANCE EXPANSION AND SURVIVAL					
	I have been in this same business for over 10years without fail					
	My capital base has increased for the last three years					
	My business has expanded for the last three years					

INTERVIEW GUIDE FOR KEY INFORMANTS

What is the influence of credit access on the performance of milk processing plants in Kampala district?

What is the influence of entrepreneurial behavior on performance of milk processing plants in Kampala district?

What is the influence of market demand for processed milk on the performance of milk processing plants in Kampala district?

In cases of milk scarcity, how much milk are you normally able to receive from each of my suppliers on average?

In cases of excess milk production, what happens to the extra milk product of processors in Kampala?

What other arrangements would you prefer for processors to have in place to improve performance?

How useful are each of the following as sources of market price information for my milk?

Which best captures my knowledge of milk prices in the market?

In your view what is the level of performance ofmilk processors in Kampala? If poor, what are the reasons for this poor performance?

Suggest recommendations to improve performance of dairy processors in Kampala and Uganda as a whole

THANK YOU

DOCUMENTARY CHECKLIST

Market Performance
My market-share growth
My sales turnover
Process Performance
Work in process (WIP)* inventory
Order-fulfillment lead time**
Product-quality development
People Performance
Performance performance-appraisal results is
Skill level of employees is
Departmental communication is
Customer-Relationship Performance
Resolution of customer complaints is
Customer loyalty/retention is
Quality reputation and award achievement
Product returns rate is
The speed of order handling and processing

APPENDIX IV:

TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Source: Krejcie & Morgan (1970, as cited by Amin, 2005)

Note.—*N* is population size.

S is sample size.