MICROFINANCE SERVICES AND PERFORMANCE OF SMALLHOLDER COFFEE ENTREPRENEURS IN CENTRAL REGION OF UGANDA

BY

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DECLARATION

This thesis is my original work and to the best of my knowledge, it has not been presented for a degree in any other university. No part of this thesis should be reproduced without the authority of the author or/ and Kenyatta University.

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DEDICATION

This thesis is dedicated to my Father Mr. Basiibye James and my grandparents Nankanja Norah and Ddandiira Chrispino who have supported my entire education and committed to helping me succeed in all my endeavors. Their relentless efforts, hard work and, devotion set a path for me to aim at achieving a masters' degree.

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OPERATIONAL DEFINITION OF TERMS

Farm inputs	Are production items like fertilizers, quality seeds, and tarpaulins provided to coffee entrepreneurs on credit.
Financial training	Is training that aims at improving the knowledge and skills of coffee entrepreneurs regarding basic skills and knowledge in terms of financial management, credit management, and access and training in financial negotiations.
Government regulations	Refer to rules put in place by the government to control, guide, and restrict business operations for example taxes and license
Microcredit	Small loans provided to smallholder coffee entrepreneurs on credit without collateral security.
Microfinance institutions	These institutions that offer microfinance services to smallholder coffee entrepreneurs for example SACCOs, coffee cooperatives, government, companies and NGO programs, and formal microfinance banks
Microfinance services	Refer to services provided to the poor ones excluded by commercial banks such services include financial training, microcredit, saving mobilization, and farm inputs in favor of uplifting their performance.
Performance	Performance describes how well entrepreneurs attain stated and predefined objectives characterized by financial, customer, internal processes and learning dimensions.

Saving mobilization	These are small deposits made by smallholder coffee entrepreneurs after a given period to accumulate their finances
Smallholder coffee entrepreneurs	coffee farmers actively dealing in the coffee farming business and have at most 20 acres of land
Tarpaulins	It's a waterproof sheet of material that smallholder coffee entrepreneurs use when drying their coffee under the sunshine

ABBREVIATIONS AND ACRONYMS

ACDP	Agriculture Cluster Development Project
BSC	Balance Score Card
CB	Credit Beneficiaries
CEOs	Chief Executive Officers
CGAP	Consultative Group to Assist the Poor
CMA	Capital Markets Authority
DC	Dynamic Capability
DSIP	Development Strategy and Investment Plan
DW	Durbin Watson
FSU	Farmer Servicing Unit
GDP	Gross Domestic Product
ICO	International Coffee Organization
IUCEA	Inter-University Council of East Africa
KFW	Kreditanstalt Fur Wiederaufbau
KMO	Kaise Meyer Olkin
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MFB	Microfinance Bank
MFIs	Microfinance institutions
MFS	Microfinance services
MIVARF	Marketing Infrastructure Value Addition and Rural Finance
MSMEs	Micro Small and Medium Enterprises
NAADS	National Agricultural Advisory Services
NCB	Non Credit Beneficiaries
NDP	National Development Plan

NGOs	Non-Government Organizations
NPK	Nitrogen Phosphorus and Potassium
NSE	Nairobi Stock Exchange
OECD	Organisation for Economic Co-operation and Development
PEAP	Poverty Eradication and Action Programme
PMA	Plan for Modernization of Agriculture
RBV	Resource Based View
ROSCAs	Rotating Savings and Credit Associations
SACCOS	Savings, Credit and Cooperative Societies
SMEs	Small and Medium Enterprises
UBOS	Uganda Bureau of Statistics
UCDA	Uganda Coffee Development Authority
VIF	Variance Inflation Factor
VRIN	Valuable Rare Inimitable Non-Subsitutable
VSLAs	Village Savings and Loan Association
YLP	Youth Livelihood Programme

ABSTRACT

Coffee is the main export of Uganda and its contribution to attaining the country's vision 2040 cannot be overlooked. Coffee is mainly produced by smallholder entrepreneurs who have several resource constraints that limit coffee production. Accordingly, different stakeholders have implemented various programs to promote a solid microfinance industry as a key funding source for smallholders coffee entrepreneurs. However, coffee productivity in terms of yields has remained low which limits smallholder coffee entrepreneurs' business earnings and hence their performance. As a consequence, this research investigated the effect of microfinance services, in particular, financial training, microcredit, saving mobilization, and farm inputs on the performance of smallholder coffee entrepreneurs in the central region of Uganda. It also sought to examine government regulations as a moderating variable for the association amidst microfinance and the performance of smallholder coffee entrepreneurs in the central region of Uganda. The study was guided by the resource-based view supported by dynamic capability, and contingency theories. A semi-structured questionnaire was adopted and piloted with 20 respondents who did not form part of the final survey in the Mayuge district. The explanatory research design was adopted to elicit data from a study population of 611,782 with a sample of 400 smallholder coffee entrepreneurs who were singled out by the use of a multi-stage random sampling strategy. Content analysis, descriptive and inferential statistics were utilized in analyzing data. A multiple linear regression model was employed and showed the effect of microfinance services on the performance of smallholder coffee entrepreneurs. Findings were presented in form of percentages, frequencies, means, and standard deviations and were displayed using tables, pie charts, and graphs. Study findings noted that financial training, microcredit, saving mobilization, and farm inputs were statistically significant and positively influence the performance of smallholder coffee entrepreneurs. Furthermore, the findings also established that government regulations negatively moderate the association between microfinance services and the performance of smallholder coffee entrepreneurs. The study recommends that microfinance institutions should increase the frequency of financial training, make microcredit more available, relax restrictions regarding irregular saving and also reduce the interest rates on fertilizers provided to smallholder coffee entrepreneurs. This will allow smallholder coffee entrepreneurs to appreciate and use various microfinance services that will subsequently increase their business performance.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Entrepreneurship is the bedrock of a country's industrialization process, job creation, and poverty reduction. Globally, small-scale entrepreneurs are crucial to the economic progress of countries since they engage in a variety of innovative activities (Amin *et al.*,2003). Despite their contribution to economic development, small-scale entrepreneurs' performance is still unsatisfactory (TechnoServe, 2018). They encounter a variety of obstacles spanning from production to marketing, such as a lack of funds, unreliable supply, and expensive manufacturing inputs, all of which impair their production rates and prevent them from making required long-term investments in their businesses (Omer *et al.*,2016).

Promoting entrepreneurial activity in the United States enhanced the performance of entrepreneurial ventures, paving the way for economic growth in the country (Bernard, 2015). This means that if entrepreneurial ventures are supported within the country, their performance improves, and facilitating entrepreneurship necessitates a healthy microfinance sector, as microfinance institutions provide a variety of low-cost services to entrepreneurs when appropriately supported (Bruton *et al.,* 2008). In general, the microfinance industry is viewed as a tool for poverty reduction that aims at boosting entrepreneurship among small-scale entrepreneurs.

Microfinance services in Nigeria stimulated the entrepreneurial spirits of small-scale entrepreneurs. As such, microfinance can expand micro-enterprises and encourage good and beneficial practices among small and medium-sized entrepreneurs (Bruton *et al.*,2011). However, entrepreneurs in the agricultural sector where coffee entrepreneurs fall face

impediments in accessing finance because this sector is faced with different risks, natural disasters that scares away the banking sectors from extending proper finance to these entrepreneurs. (Bruton *et al.,* 2015). As such, different African governments have launched various programs to offer financial support and boost the performance of agribusiness entrepreneurs including smallholder coffee entrepreneurs to promote economic development.

According to the Initiative for Smallholder Finance (2015), improving the earnings of East African coffee entrepreneurs from the peasant to the commercial line necessitates developing their entrepreneurial and organizational competency, which has been recognized as vital in improving output. Smallholder coffee entrepreneurs require assistance, such as training and capacity building, to develop their competence. The importance of microfinance services to smallholder coffee entrepreneurs pushed the Ugandan government, private sector, and non-governmental organizations to build and strengthen various SACCOs, financing programs, and policies to serve as the primary source of finance for entrepreneurship. These institutions provide numerous products to the underprivileged, such as microloans, farm inputs, saving mobilization, and financial education, on an individual or group basis, to help them improve their performance, which is often overlooked by large financial institutions (Wilfred *et al.,* 2013)

1.1.1 Organisational Performance

Entrepreneurs are in existence to achieve particular goals in a set time interval, and hence, performance is vital since it shows them where they stand within that period (Yusuf *et al.,* 2007). The performance also signalizes the success of the firm from the objectives set in an efficacious and systematic manner (Muchemi *et al.,* 2017). Certainly, a variety of efforts have been made to describe the performance of entrepreneurs and why it differs for different ventures (Kinyua *et al.,*

2015; Mohamud & Mohamud, 2015; Echwa & Murigi, 2019). Intriguingly, regardless of the different studies on entrepreneurial performance, discussions still prevail on how performance should be operationalized (Ongeti, 2014; Njoroge *et al.,* 2016).

Most of the researchers focus on evaluating performance based on the firm's financial attributes, such as profits, return on assets, revenues, turnover, total assets, returns on investment (ROI), returns on sales, and returns on equity, among other indicators (Muchemi, 2014). Financial performance is objective, simple to comprehend and compute, but it is too narrow in scope, historical, unavailable, inaccurate, profits may be easily manipulated and misinterpreted, and it is extremely suited to the private sector (Ongeti, 2014; Kimiti & Kilika, 2018).

Contrarily, non-financial indicators are too subjective yet provide a broader view of resource utilization, competitive position, and an enterprise's readiness to operate in a dynamic business climate (Chong, 2008). To conquer the impediment of relying on one measure of performance, Chong (2008) noted that entrepreneurs should embrace a hybrid strategy that incorporates both metrics to produce outcomes that can be used to guide future activities. Kimiti and Kilika (2018) commended that performance should be based on the firm's overall concept. Different tools, such as Kaplan and Norton's (1992) Balance Scorecard (BSC) and Tripple Bottom Line, can be utilized to address the issue of financial indicators' limitations (Elkington, 1997).

Because it includes internal business, financial, customer, and growth metrics, the Balanced Scorecard (BSC) has been frequently utilized by businesses to Tripple Bottom Line. Profitability, share growth, return on capital, return on assets, sales revenue, and total assets, among other financial features, are more assigned to shareholder contentment (Niven, 2011). Customer indicators accent on how a firm should appear to the customer and center on fulfilling exigencies

of the customers concerning proficiency of delivery, quality products, and services. Contrarily, internal business indicators accent the processes where a venture should succeed in line with both the demands of the shareholder and customers (Booyse, 2018). Therefore, these measures underline vital skills and processes that a venture needs to obtain greater performance.

Growth indicators combine all the aforesaid dimensions, but the major aim is on future performance. Furthermore, the dimension is more concerned with the capacity of a firm to have better performance and change (Kaplan & Norton, 1996). This current study utilized the BSC strategy to examine the performance of smallholder coffee entrepreneurs. This enhanced the integration of financial and non-financial features by utilizing customer, financial, growth, and internal business dimensions, which solved the limitations of using one measure (Chong, 2008; Kimiti & Kilika, 2018; Echwa & Murigi, 2019).

Numerous researchers employed various metrics to quantify performance. For example, Mwefyeni (2014) employed yield per hectare as a non-financial measure, while Ojok *et al.* (2015) employed increased productivity, profitability, and incomes to measure performance. Smallholder coffee entrepreneurs' performance was captured in this study utilizing net profit to show their enterprises' current performance which was calculated from sales and operating expenses. For non-financial performance, the study will use number of employees in order to show the enterprise's long-term existence and survival too.

1.1.2 Microfinance Services

Microfinance services are designed to accommodate small-scale entrepreneurs who are typically from lower socioeconomic groups and can not get formal banking services, to uplift and enable them to become self-sufficient (Carmela, 2018; Nakabugo *et al*., 2022). According to Sawant

(2017). Microfinance is perceived as an invention gadget that extends suitable financial services to households that suit their demands, and these include smaller loans, saving mobilization, micro insurance, and leasing, among others, to uplift business operations.

Microloan services are an important part of microfinance and are the basis for Microfinance Institutions (MFIs) (Alhassan *et al.*,2016). They are monetary perks granted to small-scale entrepreneurs for a fixed length of time in advance. A microloan is regarded as a subcomponent of microfinance and is often used interchangeably with microcredit by different researchers and MFIs. Such loans are granted via microfinance intercessions, but entrepreneurs have to meet some basic requirements before such loans become advanced to reduce their risk and to develop economic welfare in households. This will improve business performance concerning net profit, sales volume, and other variables in performance.

Saving mobilization is a portion of business income, but entrepreneurs keep it with MFIs on a preferred basis, which can be weekly, daily, or monthly, and it accumulates in the entrepreneur's account. As cited by Gyimah & Boachie (2018), it is important for saving services to be accessible by entrepreneurs in growing communities to empower them for subsequent investments. The presence of formal banks in growing communities cannot give assurance that entrepreneurs from the underprivileged communities are catered for due to the high costs of maintaining an account with these banks. Therefore, MFIs should handle the micro-saving needs of such entrepreneurs to guarantee their access to money at all times.

MFIs also offer financial educational training to small-scale entrepreneurs for efficient usage of resources, business management, and basic accounting techniques. Depending on the nature, and how businesses perform, the MFIs organize financial training on a case-by-case basis. During

these training, MFIs bring out different recommendations, or solutions to the challenges that entrepreneurs face that would limit business expansion (Gyimah & Boachie, 2018). The training provided will never exceed 30 minutes and helps entrepreneurs to make sound and objective financial choices and negotiations that promote business growth in the long run (Sarpong-Danquah *et al.,* 2018; Nakabugo *et al*., 2022). Additionally, the training assists recipients in the effective use of microcredit, thus boosting their working capital.

Microfinance services have been critical in uplifting the performance of several entrepreneurs, this is also the case for Uganda, where the government launched a National Agricultural Advisory Service in 2001 to enhance entrepreneur performance by expanding agricultural output and effectiveness. Findings by Benin *et al.*(2007) indicate that this program has beneficial consequences on entrepreneurs' lives regarding embracing and employing contemporary agricultural production technology, fertilizers, and disease and pest control techniques in areas where it is implemented. Bastin and Matteucci (2007) noted that entrepreneurs who got financial services registered an increase in their production rates.

Different researchers who have carried out studies on the effects of microfinance have used different variables. For example, Girabi and Mwakaje (2013) used farm input use, agricultural market accessibility, and development. Mwangi (2015) considered access to credit, provision of financial literacy, and access to the market. Nonetheless, microfinance was assessed by using financial training, farm inputs, microcredit, and saving mobilization as the variables of this study and government regulations as a moderating variable since the provision of microfinance services by MFIs directly reflects on the performance of smallholder coffee entrepreneurs.

1.1.3 Government Regulations

Providing a good and enabling business environment to promote the different sectors of an economy is a significant condition, and in all countries, government policies and regulations are important in molding the nature of businesses (Dethier & Effenberg, 2012). According to Obaji and Olugu (2014), government policies are viable, especially in promoting entrepreneurial undertakings and determining the success of entrepreneurial ventures nationwide. For example, the proper policies passed by the Government of China have enabled it to experience expeditious development in technology businesses (Cullen *et al.*,2014).

According to the World Bank (2003), governments worldwide actively participate in the growth of different sectors, like the microfinance sector, by setting up policies or regulations that govern or control them. It also offers different grants to NGOs, microfinance institutions, or borrowing directly to different groups of people within the economy. Government regulations include taxes, employee wages, workplace safety, environmental protection, business regulations and licenses for food establishments, professional licensing, trade associations, and intellectual property, among others.

Today's current tax policy keeps on changing, which is hard for smallholder coffee entrepreneurs. Therefore, to create a good climate for proper business performance, a simplified tax system and administrative procedures should be put in place. Tax regulation of SMEs through the patent system should be amended to distinguish the revenue considering the location of the business, reasons for late payment of tax, and other types of tax obligations (DolgihI *et al.*, 2014). They continued to assert that taxation is part of the important reason for the limited

development of the business sector and that without careful attention, taxation can crush and destruct the small businesses operating within the economy.

Miller (2018) noted that the complexity of taxation policy is a major bottleneck for small businesses in France and Brazil. Complexity is measured regarding the total of taxes and their requirements, which are non-sustainable. Tee *et al.*(2016) established that taxes levied on small enterprises affect their business growth in terms of profits. They continue to assert that tax rates affect the prices of products and services in that they increase the production costs, thus hiking prices, which affects consumers' buying behavior.

In the same view, Semikolenova (1999) noted that venture development is inhibited by the taxation policy of an economy, its superintendence, and conformity. When the tax rates and efforts to fulfill taxation requirements are high, the performance of business operations is low and the enterprises are comparatively small. Small scale entrepreneurs are vital in transitional economies since they run businesses that are flexible, innovative, and competitive, and therefore, creating a good tax system is a crucial factor in the process of developing such entrepreneurial ventures.

Countries that have fewer regulations for accessing licenses grow at a higher rate, thus enjoying increased output compared to those with more regulations. Complicated as well as costly business registration requirements have caused entrepreneurs to run their ventures outside the law of a country, have no legal identity, capital which limits their prosperity (Djankov *et al.*,2002). Bruhn (2011) concludes that promoting simple procedures for obtaining a license enhances more entry points for new businesses, thus promoting entrepreneurial ventures which later increase employment opportunities in the economy.

Klapper *et al.* (2006) assert that countries with lower barriers to paying license fees have higher entry benefits compared to others where barriers are high. Heavy barriers increase the cost of registration, which hinders individuals, especially small-scale entrepreneurs, from operating their business formally. They continue to assert that the number of procedures involved in accessing the license depends on the country, where some countries have heavy and others have lower barriers.

Different researchers have used different measures when measuring government regulations. For example, Orwa (2015) used the ease of licensing and tax incentives to SMEs. Specifically, for this study, the researcher considered taxes and license fees because when entrepreneurs fail to fulfill these conditions they can't operate within the country, and taxes, as well as license fees, affect the performance of smallholder coffee entrepreneurs.

1.1.4 Smallholder Coffee Entrepreneurs in Central Region of Uganda

According to the report of the International Coffee Council (2019), the central region of Uganda is made up of 25 districts with 611,782 smallholder coffee entrepreneurs who make up 38% of the total population of entrepreneurs producing coffee in the five regions of Uganda. The type of coffee produced is Robusta, which does well in low-altitude areas of Uganda, ranging between 800 and 1400 meters above sea level. Coffee is the major cash crop and a crucial source of income for many coffee entrepreneurs. These entrepreneurs encounter a lot of challenges during the production process. An estimate of three million rural coffee entrepreneurs in different economies still lack effective access to loan and deposit services and this is particularly common in Sub-Saharan Africa (Maddison, 2009).For example, they have limited access to financial services, which affects their production rates.

In light of this, the Ugandan government initiated different interventions aimed at uplifting rural entrepreneurs' performance. These include the Farmer Servicing Unit (FSU), Agriculture Cluster Development Project (ACDP), Youth Livelihood Programme (YLP), and Poverty Eradication and Action Programme (PEAP) (Guloba *et al.,* 2017). Despite these interventions, the performance of smallholder coffee entrepreneurs has not improved (Bunn *et al.,* 2019). Statistics from Uganda Coffee Development Authority (UCDA) depict low yields for coffee at an average of 10 bags of coffee per ha, in comparison with 25 bags per ha in Brazil and 45 bags per ha in Vietnam (UCDA, 2015). The low yields of coffee produced by coffee entrepreneurs in Uganda limit their earnings and this affects their net profit as well as their business performance.

Furthermore, coffee brings in more national earnings and it is a significant revenue source in Uganda. However, the coffee sector's productivity has been fluctuating in the last five years. In 2013, the total volume of coffee produced was 236,000 tons, which was later reduced to 210,000 tons in 2014. In 2015, the volume increased to 236,000 tons, then to 244,000 tons in 2016. In 2018, there was a reduction in the volume of coffee from 302,000 tons to 284,000 tons (UBOS 2018: UBOS 2019). These trends illustrate the increasing and declining patterns in Uganda's coffee sector, reflecting smallholder coffee entrepreneurs' uncertain and poor performance.

Smallholder entrepreneurs are the major coffee producers in Uganda and such entrepreneurs need production inputs like better quality seeds, agrochemicals, fertilizers, and capital at large. This has attracted many formal MFIs, SACCOs, cooperatives, NGOs, donors, and governments to roll out schemes aimed at assisting these entrepreneurs. This study therefore aimed at bringing out the link between microfinance services and the performance of smallholder coffee entrepreneurs in Uganda. The choice of this region as the research target population was due to

the dominance of coffee production by smallholder coffee entrepreneurs, high levels of poverty, and the existence of different microfinance institutions.

1.2 Statement of the Problem

Smallholder coffee entrepreneurs are imperative to the economic activity of Uganda and their contribution is significant as a vehicle for growth (Kagame, 2014). Transforming smallholder agricultural enterprises into functional and viable ventures has become a central focus in Uganda for the realization of middle-income status by 2040 (MAAIF, 2013). Coffee is Uganda's leading export, and its contribution to Uganda achieving its Vision 2040 cannot be ignored.

The Ugandan government, private firms, institutions, and non-governmental organizations (NGOs) have initiated a variety of programs to help smallholder coffee entrepreneurs improve their performance. Rotating Savings and Credit Associations (ROSCAs), Farmer Servicing Units (FSUs), Agriculture Cluster Development Projects (ACDPs), Youth Livelihood Programmes (YLPs), Poverty Eradication and Action Programmes (PEAPs), and National Agricultural Advisory Services (NAADS) are some of these programs (Guloba *et al.*, 2017).

Despite these interventions, the performance of smallholder coffee entrepreneurs has not improved (Bunn *et al*., 2019). Statistics from Uganda's Coffee Development Authority (UCDA) depict low yields for coffee at an average of 10 bags of coffee per ha, in comparison with 25 bags per ha in Brazil and 45 bags per ha in Vietnam (UCDA, 2015). The poor yields of coffee produced by Ugandan smallholder coffee entrepreneurs limit their earnings, which affects their net profit and business performance.

The total amount of coffee produced in 2013 was 236,000 tons, which fell to 210,000 tons in 2014. In 2015, the amount grew to 236,000 tons, then to 244,000 tons in 2016. The volume of coffee produced in 2018 decreased from 303,000 tons to 285,000 tons (UBOS, 2018; UBOS, 2019). These trends illustrate the increasing and declining patterns in Uganda's coffee sector,

reflecting smallholder coffee entrepreneurs' uncertain and poor performance. In light of this, different studies have been conducted to discover the relevance of microfinance services, especially for SMEs, youth, and women's enterprises (Irene *et al.*, 2015; Amran & Mwasiaji, 2019). Given these studies, a positive relationship between microfinance services and the performance of youth and women-owned ventures was established. However, besides presenting the contextual gap, these studies adopted a descriptive design, thus presenting a methodological gap, and this design only explains the behavior and trends of the variables. To bridge this gap, the researcher utilized an explanatory design, which reveals how one variable in the study affects the other.

A study by Usama and Yusoff (2019) revealed a favorable effect of microfinance on entrepreneurial ventures. The study further established that 65.6% of the changes in business performance were explained by changes in financial literacy. The study concentrated solely on financial literacy as a service of microfinance, whereas this current study focused on financial literacy alongside other services of microfinance like microcredit, saving mobilization, and farm inputs, which are offered to smallholder coffee entrepreneurs, hence filling the conceptual gap. Moreover, the study was carried out in Bauchi metropolis, Nigeria, and incorporated all SMEs, yet this contemporary study was conducted in Uganda and concentrated on smallholder coffee entrepreneurs, which therefore filled the contextual gap.

In the Ugandan context, Pålsson (2019) disclosed that the saving and credit cooperative (SACCO) presented a secure option for coffee producers to save money out of their homes, where it could be easily misappropriated. The study further revealed that coffee entrepreneurs were not extravagant as before since they had saving schedules with the SACCO. The study based its findings on the risk management theory and was only limited to one SACCO in the

Buikwe district, where only interviews were applied in gathering data. This presented both theoretical and methodological gaps.

As a result, this study aimed at bridging the gap by responding to the key research question as to whether microfinance services influence the performance of smallholder coffee entrepreneurs while examining the moderating role of government regulations on the direct relationship in the Central region of Uganda?

1.3 Research Objective

1.3.1 General Objective

The general objective of this study was to investigate the effect of microfinance services on the performance of smallholder coffee entrepreneurs in the central region of Uganda

1.3.2 Specific Objectives of the Study

The specific objectives of this study were;

i) To analyze the effect of financial training on the performance of smallholder coffee entrepreneurs in the central region of Uganda.
ii) To determine the effect of microcredit on the performance of smallholder coffee entrepreneurs in the central region of Uganda.
iii) To analyze the effect of saving mobilization on the performance of smallholder coffee entrepreneurs in the central region of Uganda.
iv) To examine the effect of farm inputs on the performance of smallholder coffee entrepreneurs in the central region of Uganda.

v) To analyze the moderating effect of government regulations on the relationship between microfinance services and the Performance of Smallholder coffee entrepreneurs in the central region of Uganda.

1.4 Research Hypotheses

The research hypotheses of this study were;

H_{01}: Financial training has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda.

H_{02}: Microcredit has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda.

H_{03}: Saving mobilization has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda.

H_{04}: Farm Inputs have no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda.

H_{05}: Government regulations have no significant moderating effect on the relationship between microfinance services and the Performance of Smallholder coffee entrepreneurs in the central region of Uganda.

1.5 Significance of the Study

This research laid the groundwork for demonstrating a link between microfinance services and the performance of coffee entrepreneurs in the Central region of Uganda. Moreover, it also gave a foundation of understanding of the effect of government regulations on the association between

the study variables. The findings of the study would consequently provide vital facts that could be used to inform microfinance institutions on the degree to which financial means extended to smallholder coffee entrepreneurs influence performance. This would ultimately facilitate microfinance institutions to model suitable services and products appropriate to the business environment of smallholder coffee entrepreneurs to continue to boost their performance.

The Government of the Republic of Uganda would benefit since the result gives in detail the contribution of microfinance services in improving the performance of smallholder coffee entrepreneurs. If this knowledge is well harnessed, it may aid the government in formulating important policies and regulations that can help microfinance institutions in extending cheap credit and deposit facilities, improving their accessibility as well as usage by rural smallholder coffee entrepreneurs to uplift their performance.

Different entrepreneurs may get more understanding related to improvement in the income generated by the use of microfinance services. Knowledge from this study can also help many entrepreneurs select wisely and appropriately different microfinance services to employ in their ventures and boost their performance. That's to say, financial literacy, microcredit, savings, and farm inputs. In addition, researchers would also gain since the findings amplify the literature relating to microfinance services and smallholder coffee entrepreneurs. The study identified areas where more research should indeed be conducted.

1.6 Scope of the Study

Only 400 smallholder coffee entrepreneurs were included in this study, which was conducted in the Central region of Uganda. Smallholder coffee entrepreneurs were chosen because they are

the major producers of coffee, Uganda's main export, and they encounter numerous challenges during the process of coffee production.

According to the report of the International Coffee Council (2019), the central region of Uganda is made up of 25 districts with 611,782 smallholder coffee entrepreneurs who make up 38% of the total population of entrepreneurs producing coffee in the five regions of Uganda. The type of coffee produced in central region is Robusta, which does well in low-altitude areas of Uganda, ranging between 800 and 1400 meters above sea level.

1.7 Limitations of the Study

The second wave of the Covid 19 pandemic began in May 2021, and it was so devastating that the Ugandan government was compelled to put the entire country under lockdown to prevent Covid 19 disease from spreading. Because all modes of mobility were forbidden for 42 days, this had an impact on the physical meeting of respondents and the entire data collection procedure. In this scenario, the researcher had no choice but to contact the respondents who could not be reached physically by telephone.

The researcher faced a challenge of getting information from the selected coffee entrepreneurs since some never wanted to disclose information they considered important and confidential for example information related to their seasonal earnings. The study solved this challenge by permit from the Uganda Investment Authority and an introduction letter from the University to assure respondents that information given out was mainly for academic purposes only.

Moreover, the researcher encountered difficulties in reviewing empirical literature since the area of focus was inadequately researched in Uganda and more studies maily considered SMEs in the

manufacturing sector, Maize, Sunflower entrepreneurs. However, this barrier was solved through the review of related empirical in other countries and sectors. Another challenge was related to getting random sample since of the respondents were mobile. In this scenario, the researcher put in enough time so as to obtain the sample and where necessary, well trained enumerators were also employed by the researcher.

1.8 Organization of the Study

This thesis comprises preliminary pages and five sections. The research background, problem statement, research objectives, hypothesis, significance, and scope are the primary components of the first chapter. The second chapter introduces the theories that this study is based on, as well as a comparison of other similar studies and their gaps, and concludes with the conceptual framework.

The research methodology is discussed in the third chapter, which is organized by a research philosophy, research design, target population, sampling procedure and size, data collection methods and instruments, data collection procedure, data analysis, and ethical considerations. The research findings and discussion are presented in Chapter four. The summary, contribution of the study to knowledge, conclusion, policy and practice suggestions, and recommendations for further research are all included in Chapter five.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter concentrated on scrutinizing different literature related to the features of microfinance services and the performance of smallholder entrepreneurs, their critiques, and research gaps which are shown in the table, and a conceptual framework that described the correlation amidst research variables. Additionally, it addresses four theories on which this study is anchored.

2.2 Theoretical Review

Resource-Based View (RBV), Dynamic Capability and Contingency Theory were the three theories used in this research. The Resource-Based approach highlights the importance of microfinance services like resources, as well as the performance of smallholder coffee entrepreneurs and how to leverage internal business resources to gain a competitive edge.

The dynamic capability supports the Resource-Based Theory and extends beyond the notion of sustained competitive edge, which is based on VRIN (Valuable Rare Inimitable Non-substitutable) resources. Contingency theory explains the effects of the moderating variable of government regulations as an environmental factor.

2.2.1 Resource-Based Theory

Penrose (1959) propounded the aforesaid theory and suggests that the critical elements of a business or a firm are its resources and capabilities. Capabilities simply refer to skills used in organizing the resources of the firm and placing them to productive use. Examples include a firm’s structure, operations, and arrangements that show how decisions are made. A venture can

be perceived as a collection of resources that can be transformed into strengths or weaknesses of an enterprise by the responsible authority. For example, Barney, Lippman, Rumelt, Wernerfelt, and Grunert, among others, have made significant developments in this theory. Grunert and Hildebrandt (2004) explained that firms obtain their sustainable competitive advantages through utilizing important resources and capabilities which are inflexible in supply.

This theory is based on four important resource assumptions, which include heterogeneity, immobility, valuable, and non-substitutable. Heterogeneity is concerned with different skills, capabilities, and resources that firms possess, and such resources differ from one company to another. Therefore, RVB assumes a competitive advantage is obtained by firms due to the use of different bundles of resources. Immobility emphasizes that resources do not move from one firm to another in the short run.

Because of this condition, firms are incapable of copying resources such as skills and strategies employed by their competitors as they are intangible and immobile. Resources should be valuable, difficult to obtain, impossible to duplicate, and irreplaceable. These features allow businesses to get a competitive advantage by leveraging strategic resources, which is a solid strategy for surviving. Resources and capabilities are seen as drivers when attaining the competitive advantage by firms (Bowman & Ambrosini, 2003).

According to Barney (1991), resources are divided into financial, physical, technological, organizational capital, and intellectual and human resources, which allow enterprises to establish special values for their customers. According to Jones and Hill (2009), resources are either tangible or intangible. Tangible resources are those that can't be touched or aren't physical, such as a brand, staff knowledge, or reputation. Because it is difficult to reproduce a company's

intangible resources, these resources tend to perform better than tangible resources, which are more easily imitated by competitors (Jones & Hill, 2009). Tangible resources, such as land, money, are physical, and they are the source of intangible resources. A company can have unique and important resources, but if it lacks the necessary talents to put them to good use, it may struggle to boost performance (Jones & Hill, 2009).

Valuable resources are significant since they generate benefits to the venture but are prevalent in all forms, making it difficult for such resources to provide a lasting competitive advantage (Makhija, 2003). Microcredit is an example of a financial resource, and financial resources are valuable because smallholder coffee entrepreneurs require them to obtain other business physical assets such as land and motorcycles in favor of uplifting their business performance, and no firm can function without them. Saving mobilization is a rare capability that is valuable and gives a company a unique strategy over its competitors. Entrepreneurs rarely save and have no plans to save, but for those who do, savings improve their business capital, assist them in dealing with risks, and help them accumulate business assets.

Improved financial competencies such as budgeting and making formal financial decisions are equivalent to the intellectual and human resources that smallholder coffee entrepreneurs benefit from financial training, which is prized, unusual, utterly unique, and non-substitutable resources that will help a company perform better. Physical and internal organizational assets are complementary since, at any time, managerial services can be limited by the need to operate the business at its contemporary size as well as the capability to utilize the growing chances regarding the latest products and markets (Kor & Mahoney, 2004).

Eisenhardt and Martin (2000) point out some of the RBV theory's flaws, such as the fact that it doesn't explain how firms will gain a competitive edge in a dynamic market. Moreover, the theory overlooked external factors that contribute to the venture's success, such as clients, because no business can operate without them. RBV is entirely focused on internal causes (Amit & Shoemaker, 1993). Barney *et al.*, (2001); McKelvie and Davidsson (2009) concluded that managers and entrepreneurs must be able to organize and place resources into actual mass production for any business to prosper and outperform competitors.

According to Crook *et al*. (2008), RBV is the best theory for describing how resources influence enterprise performance. The resource-based view is appropriate for this study because it suggests that strategies such as microcredit and farm inputs used by entrepreneurs can build, create new resources and capabilities, thereby enhancing the venture's available resources and capabilities and promoting higher firm performance. The theory continues to suggest that intangible resources, such as financial training, provide knowledge assets and capacities to smallholder coffee businesses, and this is an origin of higher performance. The RBV was utilized in this study to anchor financial training, microcredit, saving mobilization capabilities, and farm input because these are all resources that affect smallholder coffee entrepreneurs' success.

2.2.2 Dynamic Capability Theory

RBV theory is very vital in addressing the use of resources like microfinance services to attain competitive advantage, but it overlooked elements that foster sustainability and acquisition of the resources. Teece *et al*. (1997) propounded the DC theory, with of intent of making up, merging, and reconfiguring resources for absolute utilization. DC theory was extracted from RBV theory to cover up the limitations of RBV theory, especially in describing sustainable competitive

advantage and higher performance in the changing environment.

Helfat *et al*. (2007) described DC theory as the capability of a firm to design, broaden and remodel its resource center using conscious decision. Teece (2007) noted that in a rapidly changing environment, resources are never in existence waiting for exploitation by firms to achieve competitive advantage. Even if these resources like microfinance services are available from different institutions, smallholder coffee entrepreneurs must make purposeful decisions about recognizing and applying for these services, for example, microcredit, and farm inputs to employ and fulfill their venture needs. Timely usage and application of resources like farm inputs are needed for better results since their application starts at the beginning of every season and adequate financial resources are vital in achieving competitive advantage.

Ambrosini and Bowman (2009) observed that firms can regenerate their resources within rapidly changing environments, and they should carefully choose capabilities that will enable them to succeed. Firms can only perform efficiently and effectively if they adjust to new ways of operating within a changing environment. Microfinance services are recent trends whose usage and accessibility by smallholder coffee entrepreneurs can change their performance. Nevertheless, the theory has received criticism. For example, Barney (1991) argues that DC theory puts emphasis on an organization's ability to design, extend, and remodel resources to achieve a competitive advantage, but this can't apply to small firms, which can't create such unique resources.

Tahseen *et al.* (2021) support the argument by demonstrating that while the DC places management capability at the center of gaining a competitive advantage, it is unattainable for small firms that rely on owner-based control. Although these criticisms are vital, this theory

could not be overlooked by this study since it describes quick adoption in the dynamic environment which favors small firms compared to big firms. DC theory was used in this study since it supports the RBV theory and it explains how firms can easily adopt and utilize resources in the changing environment so as to boost their performance. The theory achors both variables that's to say microfinance services and performance.

2.2.3 Contingency Theory

Contingency theory was propounded by Edward Fiedler (1964) and it suggests that firms select strategies to carry out different actions to set up a fit with their environments. The alignment between a company's internal variables, such as resources and structure, and its external factors, such as the environment, determines its performance. These include government regulations, political, economic, and social issues, among others. The major assumption of this theory is fitness and it's observed when the inner and outside factors of the firm are equal. Van de Ven and Drazin (1985) support this by noting that the performance of the firm relies on fit amongst different factors.

Contingency theory is very vital in comprehending the behavior of the firm by showing how contextual factors or macroeconomic factors like government regulations greatly influence firm operations and its structure (Islam & Hu, 2012). According to Lawrence and Lorsch (1967), there are different ways of obtaining performance and the most appropriate approach relies on the surroundings in which a firm is found. Harsh environmental conditions like poor government regulations in terms of high taxes, inflation, and insecurity reduce the profits of entrepreneurs, hence retarding their performance. Friendly environmental conditions promote performance

since they increase the chances of earning more profits. Such conditions include low taxes and a stable political climate.

Dut (2015) acknowledged that good environmental conditions accelerate the performance. This, therefore, shows that these factors are vital in a firm's context and in determining its performance. Feng *et al.* (2017) conceded that firm capabilities operate, for example, research and development, operations, and markets to positively or negatively influence the performance of the firm, but effects depend on different market conditions.

A suitable fit amidst a firm's business-government relation strategy and structure enhances business-government relation performance (Martin & Johnson, 2005). Martin and Johnson (2005) still observed a positive alliance amidst business-government relation strategy and business-government relation performance although, between business-government relation structures and business-government relation performance, no direct alliance was observed.

Contingency theory was used in this study since it explains and supports government regulations, which is part of environmental conditions. If government regulations are harsh, they limit the performance of entrepreneurs and if they are proper, they enhance performance. Government regulations is the moderating variable in this study and therefore, improving the fit between the firm's internal and external factors enhances its overall performance.

2.3 Empirical Review

2.3.1 Financial Training and Performance of smallholder coffee entrepreneurs

Usama and Yusoff (2019) probed the influence of financial literacy on business performance in Bauchi metropolis, Nigeria, considering a sample of 500 entrepreneurs. The findings affirmed

that financial literacy has a favorable effect on firms. Moreover, 65.6% of the changes in business performance were explained by changes in financial literacy. This demonstrated that financial literacy is an important aspect of the knowledge entrepreneurs need to make sound financial decisions to boost their performance in this modern society. The previous study concentrated on only financial literacy as a service of microfinance, whereas this current study focused on financial literacy alongside other services of microfinance like microcredit, saving mobilization, and farm inputs, which are offered to smallholder coffee entrepreneurs, hence filling the conceptual gap. Moreover, the study was carried out in Bauchi metropolis, Nigeria, and incorporated all SMEs, yet this contemporary study was conducted in Uganda and concentrated on smallholder coffee entrepreneurs, which therefore filled the contextual gap.

However, findings by Usama and Yusoff (2019) contradict findings by Fitria and Rahman (2018), who affirmed that training has no impact on the viability of SMEs in the handicraft section in Indonesia. The study followed a purposive sampling of 150 entrepreneurs and further revealed that even at average levels of financial literacy, there was no impact on the survival and continuity of SMEs. This exposed how financial awareness is not vital to fostering the flourish and continuity of ventures, which contradicts recommendations by Nakabugo *et al*. (2022) whose study encouraged financial literacy for increased sustainability of firms.

Apart from the two studies presenting conflicting ideas, a study by Fitria and Rahman (2018) presented contextual and methodological gaps that this research strived to bridge. The study utilized a quantitative approach to explain the effects of variables, yet this current study employed explanatory research that brought out the casual link amidst the study variables, hence filling the methodological gap. Moreover, Fitria and Rahman's study was carried out in Indonesia

and concentrated on SMEs, whereas the contemporary study was conducted in Uganda with a focus on smallholder coffee entrepreneurs, hence filling the contextual gap.

In Kenya, Mwangi (2015) in a study amongst small-scale farmers in Kiambu county sought to investigate the effect of microfinance services on economic empowerment. The study revealed that equipping smallholder entrepreneurs with financial literacy positively influenced their economic empowerment. The study established that economic empowerment is mostly influenced by access to finance, followed by financial literacy and market access. However, the results were not normally distributed. The study utilized a descriptive research approach with 100 respondents. The sample selection was entirely purposive and based its findings on financial deepening and financial inclusion theories, hence creating both methodological and theoretical gaps that this study sought to fill. The current study utilized an explanatory research design with a multi-stage random sampling and established a link amidst the study variables and also based its findings on RBV, DC, agency, and contingency theories.

Financial training has been argued to positively enhance the performance of Medium and Small Enterprises (MSEs) in Punjab, Pakistan (Haider *et al.*, 2017). Haider *et al* (2017) also confirmed that owners of MSEs that received financial training realized an increase in their sales, level of income, business assets, number of employees, as well as meeting household expenses, yet owners of MSEs that didn't receive financial training didn't observe any increase. The study considered a random sample of 384 respondents. Descriptive analysis showed that the growth rates of MSEs who enjoyed financial training were better off compared to MSEs whose owners were never trained. This implied that MSEs needed financial training to cope with the dynamic needs of the business and increase their growth rate.

The above study incorporated all MSEs in different sectors in Punjab, Pakistan, and the variability of results could affect the generalization of the recommendations to a specific sector, yet the current study focused on smallholder coffee entrepreneurs in Uganda, hence filling the contextual gap. Besides that, the contemporary study also investigated the effect of government regulations, specifically taxes and license fees, as a moderating variable for the link amidst microfinance services and the performance of smallholder coffee entrepreneurs, which filled the conceptual gap since this moderation was overlooked by the former researchers.

Chamwada (2015) probed how financial literacy affects the financial performance of SMEs. The findings showed that financial performance was highly influenced by financial literacy, but that the impact on total capital spent was negligible. Additionally, the findings noted that financial literacy levels were inadequate amongst SME owners, hence the study recommended its inculcation to provide knowledge and skills to SME owners to boost their profits. The study applied a descriptive survey approach considering 83 SMEs in Kibera slums. The above study was conducted in Nairobi, Kenya, and concentrated on SMEs. This presented a contextual gap that this study aimed at filling since it was conducted in the central region of Uganda and focused on smallholder coffee entrepreneurs. The study also presented a conceptual gap since its main focus was on financial literacy, firm size, and capital invested, whereas this study employed different aspects of microfinance, which included microcredit, saving mobilization, and farm inputs, to fill the conceptual gap.

Financial literacy is argued to impact the financial performance of SMEs in Ruiru town, Kenya (Otieno, 2016). The study acknowledged that financial literacy had a beneficial impact on SMEs' financial performance. This implied that increased financial literacy levels amongst SMEs would automatically improve their financial performance. In this case, the study argued SME owners to

engage in financial training programs to gain more skills and knowledge for their financial betterment. The study utilized a descriptive survey design exploring 334 registered SMEs, where 100 respondents were singled out by the use of a stratified sampling technique.

The previous study created a conceptual gap by concentrating solely on financial literacy and financial performance, whereas this study employed different aspects of microfinance which included microcredit, saving mobilization, and farm inputs and their influence on performance measured broadly using both non and financial metrics. In addition, the contemporary study also focused on the moderating effect of government regulations, which was overlooked by the former study.

Lusweti and Mwasiaji (2020) surveyed how microfinance services affect women-owned businesses in Busia County, Kenya. Findings noted that financial literacy influenced the performance of women-owned businesses. A descriptive survey approach was adopted, considering 100 respondents. The study presented a conceptual gap since the study variables were financial literacy, social capital, savings, and legal framework, whereas this study, in addition to financial training, employed different aspects of microfinance which included microcredit, saving mobilization and farm inputs. Furthermore, the descriptive research design employed by the study is weak and only explains the nature and characteristics of variables, hence generating a methodological gap that this study strived to fix with an explanatory research approach to confirm the association amidst the study variables.

A study by Amoah and Mungai (2020) assessed how financial literacy affected the financial performance of SMEs in Ghana. Findings affirmed that financial literacy had a beneficial impact on SMEs. Notably, the study observed that financial performance was very low because of the

limited knowledge about financial literacy training. The study revealed that the preponderances of SME owners were ignorant about the services provided by MIFs, posing a barrier to their use. In this case, the study argued that SME owners should accede to the services offered by MIFs to boost their financial performance, and MIFs should increase their sensitization programs about their services. The study adopted an explanatory research design where 260 SMEs from 782 SMEs were singled out.

The study grounded its findings on financial intermediation theory, thus presenting a theoretical gap that this study addressed by basing the findings on RBV, DC, and contingency theories. The study also concentrated on microinsurance and financial literacy and overlooked other aspects of microfinance, thus generating a conceptual vacuum that the contemporary study strived to bridge by examining how these aspects, that is to say, saving, microcredit, and farm inputs, affect the performance of smallholder coffee entrepreneurs in the central region of Uganda.

Financial literacy was found to impact the profitability of SMEs owned by university students in Kenya (Ibrahim, 2017). Notably, the study observed a significant positive link between the financial attitude and the profitability of SMEs. Furthermore, study findings disclosed that owners of the businesses were not risk-averse and were quite relaxed about obtaining additional financial skills. In this line, the study argued that more financial education offered by different institutions and the government could enhance the financial knowledge of business owners and boost their earnings. The above study was conducted in Kenya and concentrated on SMEs owned by university students. This presented a contextual gap that this study aimed at filling since it was conducted in the central region of Uganda and focused on smallholder coffee entrepreneurs. The study also presented a conceptual gap since its main focus was on financial literacy whereas

this study employed different aspects of microfinance which included microcredit, saving mobilization, and farm inputs to fill the conceptual gap.

2.3.2 Microcredit and Performance of Smallholder coffee entrepreneurs

Alumasa and Muathe (2021) assessed the effect of mobile credit on the performance of MSEs in Kenya and noted that the four variables of mobile credit had a substantial impact on the MSEs. Notably, mobile credit access, loan amount of mobile credit, and regulation of mobile credit had a favorable effect, yet the cost of mobile credit had a substantially detrimental effect. The study, therefore, affirmed that mobile credit is very vital in uplifting the performance of MSEs in Nairobi City County, and therefore, policymakers should consider mobile credit factors to easily access financing for MSEs. The fact that the study was conducted in Kenya's Nairobi county presents a contextual vacuum that the contemporary study strived to bridge. Moreover, the study also concentrated on one service of microfinance, that of mobile credit, and overlooked other microfinance services, hence concocting a conceptual vacuum that this study strived to close through incorporating saving, mobilization, financial literacy, and farm inputs to bring out a wider view of how these services affect the performance of smallholder coffee entrepreneurs in the central region of Uganda.

Martha and Sakwa (2017) conducted a study on microfinance and household wellbeing: A case of Remu Microfinance in Nairobi County. The study noted that access to microfinance and non-financial services of MFIs influenced the income and assets of the clients. The study also observed that accessing microloans by clients was easy and flexible because of the well-established system employed by Remu Microfinance. The study adopted a survey design where 220 respondents were singled out from 1274 members that belonged to the Remu microfinance.

Descriptive analysis showed that most clients had received training in business management and financial planning. However, by concentrating solely on microloans and business development, this study disregarded additional services provided by microfinance organizations, leaving a conceptual gap that this current study attempted to bridge by integrating saving mobilization and farm inputs. Moreover, the study was solely based on Remu microfinance, which may affect the generalization of findings, and the current study focused on a broad range of microfinance services offered by different microfinance institutions to smallholder coffee entrepreneurs in Uganda.

On the contrary, Amsi *et al.* (2017) inspected how microfinance credit affects the financial performance of SMEs in Kenya and noted a weak negative correlation between credit repayment period and financial performance. However, other aspects of microfinance credit had a reasonably good impact on financial performance. The above findings also contradict the conclusions noted by Madafu (2015) that rural entrepreneurs who received bank credit accepted that their farm output levels increased due to access to bank credit. The study concluded that access to microcredit had been very effective in improving the production and livelihood levels of entrepreneurs, as observed from increases in income, land size, productivity, savings, and education for children. This implied that micro-financing plays a significant role in uplifting smallholder entrepreneurs from poverty and improving their socio-economic wellbeing.

Apart from both studies presenting conflicting ideas, a study by Madafu (2015) adopted a case study yet it is a weaker design and considered only members of one program, which limits the views of other people who get the same services but from different MFIs. The methodological gap created was addressed by using an explanatory research design and considered smallholder entrepreneurs benefiting from different MFIs. Madafu's study also overlooked other aspects of

microfinance services, thus creating a conceptual gap that this study aimed at filling by utilizing these aspects, which encompassed saving and farm inputs.

In 2018, Onwunali *et al.* (2018) assessed how financial products and services offered to smallholder farmers affected their livelihoods: a case study of the Marketing Infrastructure Value Addition and Rural Finance Support (MIVARF) program in the Iringa region, Tanzania. Results noted that obtaining financial products and services were found to be effective and helpful in improving farmers' production and also their livelihood levels in the study areas. In particular, the study noticed an increase in income, land size used for production, productivity, savings, access to healthcare, education for children, and other indicators. A qualitative and quantitative survey was conducted and data was collected from 375 respondents selected by a multistage random sampling technique from the population of smallholder farmer-beneficiaries of the MIVARF Program. The study solely relied on the MIVARF program whose deliverables may not necessarily represent services offered by all microfinance institutions and this presents a conceptual gap. The current study tackled this by concentrating on all entrepreneurs irrespective of the microfinance institution from which they get the services. Besides, the study was conducted in Tanzania, and this presents a contextual gap which this study sought to fill.

Solomon *et al.* (2016) analyzed the effects of microfinance bank loans on the livelihood of smallholder farmers in Nigeria. Loans were found to be positively linked to the livelihoods of smallholder farmers. Moreover, findings by Solomon *et al.* (2016) support the conclusion established by Nakabugo *et al.* (2021) that microcredit enhances the performance of smallholder coffee entrepreneurs. The study also noticed that Microfinance Banks (MFBs) disbursed various credits to recipients regardless of anyone's socio-class and traits. The study concluded that MFBs, together with other rural development agencies, will enhance agribusiness since it's the

major economic activity of rural smallholder farmers, and this will bring about sustainable development in Delta State in the long run. A multistage random sampling style was employed to single out 750 respondents and 15 banks.

The study focused on the impacts of MFBs' loans and loan repayment frequency and left out other microfinance services offered by MFIs, thus presenting a conceptual gap. These services include financial training, saving mobilization, and farm input that the researcher used to fill this gap and also adequately address the issue of both financial and non-financial performance of smallholder coffee entrepreneurs. Moreover, the study findings were based on non-parametric tests, which presented a methodological gap. The current study addressed this by using parametric tests with greater statistical power.

Ofeimun *et al.* (2018) studied Microfinance Banks and Small Businesses' Growth in Nigeria. The results of the study disclosed that microloans offered to SMEs had a substantial impact on SMEs' growth. However, the micro-lending rate and microloan return period had a negligible negative impact on small business growth. This implied that small enterprises were demotivated by high-interest rates on microloans. In this case, the study argued that favorable policies which allow the formation of MIFs should be formulated to enable small business owners to access credit. Ex post facto research design and secondary data that ran from 1996 to 2015 were adopted by the study. The study presented a methodological gap since it used ex post facto research strategy and concentrated on secondary data, which is at times inaccurate, outdated, and unreliable, whereas this current study employed an explanatory research strategy and utilized primary data to fill this gap. Moreover, the study concentrated on aspects of microloans and overlooked other aspects of microfinance services, hence generating a conceptual gap that this study sought to bridge through incorporating other aspects of microfinance,

including saving, mobilization, financial literacy, and farm inputs, to bring out a wider view of how these aspects affect the performance of smallholder coffee entrepreneurs in the central region of Uganda.

Ngugi and Kerongo (2014) assessed the effects of microfinance on SMEs' growth in Kenya's Mombasa County. Study findings revealed that loans positively influenced the growth of SMEs, and therefore, MFIs assisted SMEs in expanding their operations. As a recommendation, the study argued that appropriate observations should be incorporated before offering loans to SMEs. The research employed a descriptive research approach in examining the impacts of micro-financing. Data was gathered from a sample of 157 SMEs using semi-structured questionnaires. The study employed competitiveness, sales, and income as the parameters, in contrast to the microfinance services employed in this research, leaving a conceptual vacuum. Moreover, the study also presented a methodological gap since the explanatory design employed by this contemporary study was not adopted by the above study.

Prah (2016) probed the impacts of microfinance credit on SMEs' growth in the Cape Coast Metropolitan Area. Findings disclosed that higher interest, strict repayment terms, shorter repayment periods, and the small size of the loan facility all impeded SMEs from accessing credit. Moreover, findings confirmed that a good number of SMEs had gotten microfinance credit facilities and had realized a remarkable difference in growth following the utilization and access to the services. The study argued that MFIs need to increase the number of loans borrowed, have a low-interest rate, and increase the repayment period to further benefits realized by SMEs. A descriptive and quantitative study design was employed and 357 participants were singled out randomly from 5771 registered businesses in Cape Coast Metropolis. The study presented a methodological gap since a descriptive, quantitative study design and a non-

parametric data analysis were employed as opposed to the explanatory design and parametric data analysis employed by this current study which gives more powerful statistics.

Antoh *et al.* (2016) explored the effects of microfinance services on incomes and business capital in Ghana. The study utilized a descriptive research design where 361 beneficiaries and 13 senior officers from the Sinapi Aba Trust were singled out. The findings disclosed that microfinance services raised the incomes of the recipients, especially those in the finance sector. This study was carried out in Ghana as opposed to this contemporary study, since it was conducted in the central region of Uganda, focusing on smallholder coffee entrepreneurs, leaving a contextual gap. Apart from presenting a contextual gap, this study also presented a conceptual gap since its main focus was on microfinance credit facilities, yet the concentration of this current study was on farm input, financial training, saving mobilization, microcredit, and the moderating effect of government regulations.

2.3.3 Saving Mobilization and Performance of Smallholder coffee entrepreneurs

Omondi and Jagongo (2018) sought to understand how microfinance services impact the financial performance of youth SMEs in Kenya. The findings disclosed that savings had a considerable favorable impact on SMEs' financial performance. The study employed a descriptive design and sampled 135 youth SMEs that were operating in the seven sub-counties of Kisumu County. Moreover, the study based its findings on women's empowerment, games, and uniting theories of microfinance, which hence presented both methodological and theoretical gaps that this study sought to fill.

Micro saving has been argued to relatively influence the growth of SMEs in Kajiado County (Wambui, 2015). Wambui (2015), however, observed that most of the SMEs in Kajiado County

never patronized the micro-saving services offered by microfinance institutions, which limits their performance. The study findings contradict the conclusions established by Nakabugo *et al.* (2021) that saving mobilization enhances the performance of smallholder coffee entrepreneurs once properly utilized. The study utilized a quantitative descriptive design to investigate 217 SMEs selected by stratified random sampling that represented nine categories of SMEs in Kajiado County. Apart from the study presenting a contextual gap, it also presented a methodological gap since the quantitative descriptive design was adopted as opposed to the explanatory research design that was utilized by this study.

Microfinance loans and saving products have significantly improved the level of entrepreneurial activities in the Zaria metropolis (Zhiri 2017). Zhiri (2017) argued that micro saving is significant and positively linked to business performance. The study employed a cross-sectional and descriptive strategy. Three hundred participants working with Cred microfinance bank were surveyed while the regression method was used for data analysis. The findings suggest that SMEs can smoothly survive harsh economic conditions if they utilize saving products from MFIs. The study only focused on loans and savings products, which is a narrow scope for microfinance services, hence presenting a conceptual gap which this study filled by studying a comprehensive package of microfinance services such as microcredit, saving mobilization, farm inputs, financial training, and the moderating effect of government regulations.

In addition, Pålsson (2019) examined microfinance in Ugandan coffee farming in Buikwe district and noted that the saving and credit cooperative (SACCO) presented a secure site for coffee producers to keep the money rather than saving it at home, where it could be easily misappropriated. The study further revealed that coffee entrepreneurs were not extravagant as before since they had saving schedules with the SACCO. The study based its findings on the risk

management theory and was only limited to one SACCO in the Buikwe district, where interviews were applied in gathering data. This presented both theoretical and methodological gaps. Nonetheless, Pålsson's study unveiled an important aspect of saving the lives of coffee entrepreneurs in Buikwe, but it didn't bring out the effect of saving on the performance of coffee farmers within the SACCO, yet this current study has established this relationship.

Peprah (2015) probed the effect of microfinance programs on beneficiaries in Ghana. To get primary data, the author employed questionnaires and one on one interviews, and a descriptive research design was employed. Descriptive data analysis disclosed that 59% of the respondents had been attracted to MFIs by the savings products offered. This demonstrated that saving is a major service an entrepreneur pays attention to and expects from MFIs. Findings disclosed that some of the recipients realized growth in their savings, although, the standard of living and business size never changed. The study was done in Ghana, which presented a contextual gap and also overlooked other aspects of microfinance like financial training and farm inputs, which presented a conceptual gap.

Mutuma (2020) argued that saving programs adequately enhance the financial performance of SMEs. Moreover, respondents accepted that interest rates gained from their savings also boosted their business finances. Descriptive data analysis indicated that SMEs preferred MFIs' saving programs as they offer them access to other microfinance services as well as easy accessibility to their funds. The study enlightened that the profitability of SMEs would increase by effectuating more savings. The sample employed by the previous study was too small, and this was addressed by having a bigger sample size in this contemporary study. Moreover, the study only concentrated on financial performance, yet the current study employed both financial and non-financial performance metrics.

Amoah (2020) sought to explore the microfinance services and financial performance of SMEs in Ghana, where stratified random sampling was applied in singling out 260 SMEs. Findings revealed that most of the SMEs had micro-savings accounts that were meant for business expansion. However, findings still revealed a puny favorable impact on SMEs' financial performance. The study argued policymakers to establish policies that enable MFIs to have capacity training programs that help SMEs understand the value of microfinance services. The study employed stratified random sampling, and the focus was on financial performance only. The current study utilized a multi-stage random sampling approach, and performance was examined through financial and non-financial indicators. The notion that the above study was conducted in Ghana created a contextual gap.

Micro-saving, micro-credit, and training have been hypothesized to coordinate SMEs' growth in Machakos, Kenya (Kisaka & Mwewa, 2014). The study observed that micro saving had a considerable and favorable effect on SMEs. The study employed a survey research approach with 100 participants and questionnaires were used in collecting data. The study mainly focused on SMEs in Machakos, Kenya, presenting a contextual gap that this contemporary study sought to fill. Nonetheless, the study incorporated SMEs across all sectors, and the variability of the findings may not be generalized for a specific sector, yet the current study focused on smallholder coffee entrepreneurs in the central region of Uganda.

Mnunka and Oyagi (2020) sought to understand how microfinance affects the financial performance of SMEs in Tanzania. Descriptive statistics demonstrated that saving mobilization had a favorable effect on SMEs. The study used 356 participants and a descriptive research strategy to conclude. The study further argued that MFIs should put more entrepreneurial

training to equip entrepreneurs with appropriate skills. The study examined the financial performance of SMEs in Tanzania, which presented a contextual gap that this study sought to close by assessing both performance metrics of smallholder coffee entrepreneurs in the central region of Uganda.

2.3.4 Farm Inputs and Performance of Smallholder coffee entrepreneurs

In research contrasting credit beneficiaries (CB) and non-credit beneficiaries (NCB) in Tanzania, Girabi and Mwakaje (2013) studied the influence of microfinance on smallholder farm output. Utilizing fertilizers and improved seeds increased agricultural yields for credit beneficiaries, but not for non-credit beneficiaries. Credit beneficiaries noticed the difference because they had access to more inputs than non-Credit beneficiaries who did not. The data were evaluated using multiple linear regression analysis on a sample of 98 participants who were singled out from both credit and non-credit beneficiaries. Unlike this contemporary study, which concentrated on smallholder coffee entrepreneurs, the previous study focused on sunflower and maize entrepreneurs. Furthermore, the study focused just on microcredit and farm input consumption, leaving out additional variables such as saving mobilization, financial training, and the moderating effect of government restrictions, which were included in the current study.

In Zambia, Mwefyeni (2014) explored the impact of agricultural service supply on the performance of smallholder farmers. The study found that hybrid seed use, timely availability of fertilizers, and fertilizer application had an impact on maize output and farmer performance. The study followed a descriptive research design and gathered data from 8,094 participants using a stratified three-stage sampling design. The earlier study centered on maize production as a metric of farmer performance in Zambia, but the contemporary study explored diverse financial and

non-financial metrics of smallholder coffee entrepreneurs' performance in the Central region of Uganda, thus filling a contextual and conceptual gap.

Ciesielczuk (2019) evaluated the efficacy of coffee spent grounds and biomass ash-based organo-mineral fertilizer. The study found that regardless of the type of fertilizer used, yields increased by about 29% when contrasted to a sample group that did not use fertilizers. The research was based on a six-plot field experiment in which several types of fertilizers and agricultural seeds were identified and employed. The study only looked at fertilizers and crop seeds, which is far less scope than the factors employed in this study.

The Ghanaian government has made it a priority to reduce poverty by improving agricultural output rates through the adoption of modern agricultural methods. The trends in agricultural output and land productivity in northern Ghana were studied by Nakasone *et al*. (2021). Between 2004 and 2015, the researchers gathered longitudinal panel data from 67 families. To derive inferences about fertilizer and crop output, a time-fixed effect regression model was used. According to the findings, fertilizers significantly increased rice and maize returns. As a consequence, the percentage of farmers intending to use chemical fertilizers to increase their agricultural production also increased, even though the choice of fertilizer type was dependent on fluctuating prices. As such, stabilizing chemical fertilizer costs were observed as critical to enhancing Ghana's agricultural input distribution system. The study employed longitudinal panel data captured from 67 participants and utilized time fixed effect regression to draw inferences. The contemporary study utilized a cross-sectional and multi-linear regression model to reach conclusions.

The use of fertilizers effectively increases the quality of crops and soil. Liu *et al.* (2021) argued that using fertilizers for a long period can significantly increase the yields of crops. The authors observed this in the experiment performed from 2009 to 2017 with a treatment center where fertilizers were applied and a control center. Under the treatment center, yield first reduced but later kept on increasing since fertilizers used provided different nutrients in the soil. The study was entirely based on the design of an experiment where fertilizer was the only variable and crop yield was the only measure of performance as opposed to this contemporary study with four variables and performance measured in both financial and non-financial terms.

Alameraw (2020) set out to investigate the impact of maize varieties and nitrogen fertilizer on yield and yield components in farmers' fields in Western Ethiopia's mid-altitude areas. As per the results of the study, using preferred nitrogen fertilizer and hybrid maize varieties increased grain yield by 31 to 41 percent. Different kinds of optimum nitrogen fertilizer and hybrid maize seeds were used in the study's field experiment, which was conducted on farmers' fields. Being conducted in Ethiopia, the study generated a contextual gap, and it was an entirely experimental study in comparison to the current one.

In 1996, a long-term fertilization experiment was established to assess the effects of single and mixed mineral (NPK) fertilization, on crop yields and soil attributes (Li et al., 2020). According to the study outcomes, administering fertilizers for a long time had no negative impact on crop production, but it massively improved crop yields by 42 percent. The study was also totally dependent on experiments, and it only looked at fertilizers and crop seeds, which is far less scope than the factors employed in this study.

2.3.5 Microfinance, Government Regulations, and Performance of Smallholder coffee

entrepreneurs

Otwani *et al.* (2017) investigated the impact of corporate income tax on the financial performance of Kenyan companies listed on the Nairobi stock exchange. According to the findings of the study, corporate income tax has a favorable impact on the financial performance of these companies. Secondary data was obtained from the NSE database, the Capital Markets Authority (CMA) database, among others, and the study used both qualitative and quantitative methodologies. Furthermore, 59 companies were picked and considered in the study, out of a total of 69. The study was solely based on secondary data, which at times is erroneous, unreliable, and obsolete, and it took place in Kenya. By conducting a study in Uganda and using primary data, these gaps were filled.

Mwasiaji (2019) probed the impact of the legal framework on the performance of medium-sized manufacturing businesses in Kenya. Manufacturing businesses face several obstacles as a result of the intricate regulatory framework, tough customs and trade laws, expensive tax regimes, rigorous monetary and credit policies, corruption in the workforce, and labor regulations, all of which have a detrimental impact on the business performance. Data was gathered from 56 CEOs or general managers of sampled businesses as part of a descriptive research design. The study generated methodological and contextual gaps, which this study aimed to address.

MFIs have grown dramatically since their founding in 1983, although their growth has been uneven among countries (Lash & Batavia, 2016). For the period 2000-2011, Lash and Batavia (2016) studied the impact of government spending, taxes, and regulations on microcredit in 92 developing market nations. Taxes and regulations on business and finance, as per findings, lowered MFI microloans. The study used secondary data from 92 countries and the economic

freedom Index was employed as a proxy for government intervention. In contrast to the current study, this one employed secondary data and exclusively looked at microcredit and MFIs.

In Ghana, Amoah and Mungai (2021) investigated the moderating effect of government regulations on the link between microfinance services and the financial performance of SMEs. Government regulations had a negative negligible effect on the association between aforesaid parameters. This demonstrated that current restrictions were unable to strengthen microfinance services, which had a negative influence on SMEs. As a consequence, the study argued the Ghanaian government to develop appropriate strategies to enhance microfinance services to boost SMEs. The study also used an explanatory methodological approach, stratified random sampling, and a sample size of 260 SMEs. The fact that this study was conducted in Ghana and concentrated on SMEs created a contextual gap.

In growing societies, Çera *et al.* (2019) explored the correlation between selected formal institutions, informal institutions, and the business climate. According to the findings, tax treatment had a negative influence on the business climate, whereas enabling policies had a positive but insignificant impact. The study employed an ordinal regression to arrive at this hypothesis, with 404 enterprises operating in Albania being chosen. One-on-one structured interviews were used to gather primary data. In contrast to this study, which was conducted in affluent countries and the data was acquired through organized interviews. These gaps were resolved by performing a study in the Central region of Uganda, with data obtained via a semi-structured questionnaire.

MSMEs make up 99 percent of all firms in Nigeria, and they are critical contributors to the country's GDP and job prospects. However, their continued presence in business is heavily

reliant on existing laws and regulations that stifle the sector's expansion (Eniola &Entebang 2015). Eniola and Entebang (2015) studied the link between government policy and the performance of SME business management in Nigeria, findings confirmed that SME performance varied depending on which government policy was applied. The research was based on secondary data and was limited to SMEs in Nigeria. This generated methodological and contextual gaps, which this study aimed to address.

2.4 Summary of Literature and Research Gaps

Numerous studies on microfinance services have been studied and therefore, there is enough fact that microfinance services as indicated by financial training, microcredit, saving mobilization and farm inputs influences performance of differenet entreprneurs (Usama & Yusoff 2019; Alumasa & Muathe 2021; Omondi & Jagongo 2018; Girabi & Mwakaje 2013). However despite these conclusions, most of the studies reviewed were not carried out in Uganda thus making the findings non-generalizable to the Ugandan context. Moreover, even for the studies carried out in Uganda, none has addressed performance of smallholder coffee entrepreneurs in the central region of Uganda and the moderating effect of government regulations .

The literature reviewed has also presented contradicting findings. Fitria and Rahman (2018), for instance affirmed that training has no impact on the viability of SMEs in the handicraft section in Indonesia while Usama and Yusoff (2019) affirmed that financial literacy has a favorable effect on firms. On the other hand, Wambui (2015) observed that most of the SMEs in Kajiado County never patronized the micro-saving services offered by microfinance institutions, which limits their performance. The study findings contradict the conclusions established by Nakabugo *et al.* (2021) that saving mobilization enhances the performance of smallholder coffee entrepreneurs

once properly utilized. These phenomena present a justification for further assessment of the variables.

Methodological gaps have also emerged from the reviewed empirical literature. Amoah (2020) and Mnunka and Oyagi (2020) among others measured firm performance using financial performance indicators only thereby limiting linkage of the effect of the explanatory variable to a single aspect of firms' objectives. Martha and Sakwa (2017) adopted correlational analysis to establish relationships between variables hence the study did not assess the existing cause-effect relationships. Lusweti and Mwasiaji (2020) and Chamwada (2015) on the other hand used descriptive statistics only limiting the findings to merely describing the characteristics of the variables. Table 2.1 presents a summary of the reviewed empirical literature and gaps.

Table 2.1 Summary of Research Gaps

Author	Topic	Findings	Research gap	The focus of this study
Alumasa & Muathe (2021)	Effect of mobile credit on the performance of MSEs in Kenya.	The four variables of mobile credit had a considerable and favorable impact on the MSEs.	It was conducted in Nairobi, Kenya, and concentrated on MSEs. Employed stratified random sampling. The study concentrated on one service of microfinance that's mobile credit and overlooked other microfinance services.	Incorporated other microfinance services, that is to say, saving mobilization, financial literacy, and farm inputs. The study was conducted in the central region of Uganda and focused on smallholder coffee entrepreneurs. The study also employed multi-stage random sampling.
Nakasone, Ghimire, & Suvedi (2021).	Trends in crop production and land productivity in northern Ghana: A case study of Tolon-	Fertilizer extensively boosted yields. The percentage of farmers aiming to use chemical fertilizers to boost their	The study utilized longitudinal panel data gotten from 67 participants.	The study used cross-sectional and multi-linear regression models to draw inferences.

	Kumbung.	agricultural production also increased, although the choice of using the type of fertilizer depends on their prices, which are not stable.	A time-fixed effect regression model was used to draw inferences between fertilizer and crop production.	
Liu, Xu & Yi (2021)	Fertilizer effects on crop yield and C: N: P Stoichiometry in Arid and Semi-Arid Soils.	Findings revealed that using fertilizers for long period can significantly increase the yields of crops.	The study was entirely based on experiments and only variable fertilizers.	The study was entirely a survey study and incorporated other aspects of microfinance services, that is to say, saving, microcredit, and financial training.
Amoah (2020).	Microfinance services and small and medium firm financial performance in Ghana's Sekondi-Takoradi Metropolis.	Findings revealed that a good number of SMEs owned micro-savings accounts which were meant for business expansion. However, findings still revealed a puny favorable effect on SMEs.	The study employed stratified random sampling, and the focus was on financial performance only. It was conducted in	The study utilized a multi-stage random sampling approach, and performance was assessed by the use of both indicators. The study was conducted in the central

			Ghana, hence creating a contextual gap.	region of Uganda.
Mnunka and Oyagi (2020)	The impact of microfinance on the financial performance of Tanzanian small and medium businesses.	Descriptive statistics demonstrated that saving mobilization had a considerable and favorable impact on SMEs.	It adopted a sample size of 356 participants and a descriptive research design to conclude. The study solely examined financial performance.	This contemporary study assessed both financial and non-financial metrics of smallholder coffee entrepreneurs in the central region of Uganda and sampled 400 smallholder coffee entrepreneurs.
Mutuma (2020)	Microfinance services and small and medium business financial performance in Meru Town, Kenya.	Saving programs adequately enhanced the performance of SMEs. Moreover, respondents accepted that interest rates gained from their savings also boosted their business finances.	The study surveyed 93 SMEs and a stratified sampling style was employed in choosing the sample. The study only tackled financial performance.	This study applied a multi-stage random sampling and sampled 400 smallholder coffee entrepreneurs. The study employed both performance

				indicators.
Amoah & Mungai (2020	Financial literacy training and micro insurance on the financial performance of SMEs in the Sekondi-Takoradi Metropolis, Ghana.	The findings confirmed that financial literacy had a considerable favorable impact on SMEs. Notably, the study observed that financial performance was very low because of the limited knowledge concerning financial literacy training.	The study concentrated on microinsurance and financial literacy and overlooked other aspects of microfinance. It based its findings on financial intermediation theory, thus presenting a theoretical gap.	The study concentrated on other aspects of microfinance services, that is to say, saving, microcredit, and farm inputs. The study based its findings on RBV, DC, and contingency theories.
Alameraw (2020).	Effect of nitrogen fertilizer application time on the growth, yield, and yield component of hybrid maize varieties in the Mecha district, northwest Ethiopia,	Study findings disclosed that the use of recommended nitrogen fertilizer produced a mean grain yield of around 31 and 41%.	The study employed a field experiment which was done on farmers' fields and different varieties, optimum nitrogen fertilizer usage as well as hybrids maize seeds were utilized.	The study was a survey study and incorporated other aspects of microfinance services, that is to say, saving, microcredit, and financial training.

	under rain-fed conditions.		The study was also done in Ethiopia and presented a contextual gap.	The study was conducted in the central region of Uganda.
Li, Liu & Liu. (2020)	Long- term fertilization effects on crop yield and desalinized soil properties.	The study findings noted that using fertilizers for a good period had no adverse effects on crop production, but it extensively increased crop yields by 42%.	The study was an experiment and focused on fertilizers and crop seeds.	The study was a survey and incorporated a wide range of farm inputs used by coffee entrepreneurs(tarpaulin, fertilizers, and coffee seedlings.
Lusweti & Mwasiaji (2020)	Microfinance services and the performance of women-owned Business enterprises in Busia County.	Confirmed that financial literacy influences positively the performance of women's owned businesses.	A descriptive survey design was applied considering 100 respondents singled out by use of a stratified random sampling style.	An explanatory research design was employed, considering 400 respondents were singled out by the use of multi-stage random sampling.
Usama & Yusoff (2019)	The impact of financial literacy on business	Findings confirmed a statistically positive effect of financial literacy on	It concentrated only on financial literacy as a service of microfinance.	This contemporary study engrossed financial literacy

	performance.	entrepreneurial business performance.	The study was carried out in Bauchi metropolis, Nigeria, and incorporated all SMEs.	alongside other services of microfinance like microcredit, saving mobilization, and farm inputs. This contemporary study was conducted in Uganda and concentrated on smallholder coffee entrepreneurs, which filled the contextual gap.
Mwasiaji (2019).	Effect of government policy on the performance of selected manufacturing enterprises in Kenya.	Findings noted that manufacturing enterprises encounter several challenges due to the complicated regulatory regime, harsh customs and trade regulations, heavy tax regimes, strict monetary and	A descriptive design was adopted and the data was gotten from 56 CEOs or general managers of sampled enterprises.	An explanatory research design was employed, considering 400 respondents.

		credit policies, and corruption in workforce and labor regulations, all of which have a negative influence on performance.		
Çera, Breckova, Çera & Rozsa (2019)	The effect of business-enabling policies, tax treatment, corruption, and political connections on the business climate.	Results noted that tax treatment adversely affected the business climate, but enabling policies had a positive but insignificant effect on the business climate.	Data were collected using structured interviews and from different developed countries.	Data was entirely gathered from the central region of Uganda using a semi-structured questionnaire.
Ciesielczuk, Rosik-Dulewska, Poluszyńska & Ślęzak (2019)	Assessment of the effectiveness of an organo-mineral fertilizer made of coffee spent grounds and biomass ash.	The study noted that irrespective of the type of fertilizer applied, yields increased.	The study was based on a field experiment where different kinds of fertilizers and crop seeds were chosen and used.	The study incorporated another aspect of farm input, that is to say, tarpaulin on top of fertilizers and crop seeds. The study was a survey study and incorporated

				other aspects of microfinance services, that is to say, saving, microcredit, and financial training.
Pålsson (2019)	Microfinance in Ugandan coffee farming-a case study of coffee farmers in the Ugandan savings & credit cooperative "Buikwe Riis Coffee Farmers.	The study noted that the SACCO is a secure site to keep the money rather than saving it from home, where it could easily be consumed or stolen.	Didn't bring out the effect of saving on the performance of coffee farmers in the SACCO. Considered only one SACCO in the Buikwe District. Only interviews were employed as a data collection tool and the data were analyzed qualitatively, hence presenting a methodological gap.	Showed the effect of saving mobilization on the performance of smallholder coffee entrepreneurs. Considered all smallholder coffee entrepreneurs benefiting from different SACCOs. Coffee cooperatives, formal MFIs, NGOs. A semi-structured questionnaire was used and the data were analyzed both qualitatively and quantitatively to fill the

				methodological gap.
Ofeimun, Nwakoby & Izekor (2018)	Effects of microfinance banks on small businesses' growth in Nigeria.	Results of the study disclosed that microloans offered to SMEs had a favorable impact on the growth of small businesses. However, the micro-lending rate and microloan return period had an insignificant negative association amidst the variables.	Ex post facto research design and secondary data that covered a period from 1996 to 2015 were utilized. Moreover, the study concentrated on the aspect of microloans alone.	This current study employed an explanatory research design and utilized primary data to fill this methodological gap. The study incorporated other aspects of microfinance services, that is to say, saving, mobilization, farm inputs, and financial training.
Fitria & Rahman (2018).	The effect of financial literacy on the growth and sustainability of SMEs (small and medium enterprises) in the handicraft	Findings noted that financial literacy does not affect the sustainability of SMEs. The study further revealed that even at average levels of financial literacy, there	The study followed a purposive sampling of 150 entrepreneurs. The study utilized a quantitative research approach to assess the	The study followed a multi-stage random sampling and sampled 400 entrepreneurs. The study utilized an explanatory research design to assess the

	sector in Padang City.	was no impact on the survival and continuity of SMEs.	impact of variables. Finally, it was carried out in Indonesia and it concentrated on SMEs.	effect of variables and was carried out in central Uganda.
Omondi & Jagongo (2018)	Microfinance Services and Financial Performance of Youth SMEs in Kisumu County, Kenya.	Results showed that savings had a positive impact on SMEs.	The study only focused on financial performance. It was also conducted in Kisumu, Kenya and the sample size utilized was 135 SMEs.	This current study focused on both financial and non-financial performance metrics that were measured using net profit and the number of employees. The study was conducted in the central region of Uganda and used a sample of 400 respondents.
Onwunali, Olasehinde, & Theophilo (2018)	Assessment of the financial products and services extended to smallholder	Using financial products was found to be effective and helpful in improving farmers' production and also their livelihood levels in the	It was conducted in Tanzania and considered respondents benefiting from the Mivarf program.	This study was carried out in Uganda to close the contextual gap. In addition, the study

	farmers: a case study of the Mivarf program in the Iringa region, Tanzania.	study areas.		considered respondents benefiting from different Programs.
Haider, Asad & Fatima (2017)	Microfinance and the Performance of Micro and Small Enterprises: Does Training have an Impact?	Owners of MSEs that received financial training realized an increase in their sales, level of income, business assets, and the number of employees, as well as meeting household expenses.	The study was conducted in Ghana and concentrated on the performance of SMEs.	The study was conducted in the central region of Uganda and concentrated on the performance of smallholder coffee entrepreneurs.
Makola & Sakwa (2017)	Impact of Access to microfinance on household wellbeing: A case study of Remu Microfinance, Embakasi Constituency, Kenya.	Using microfinance and non-financial services of MFIs raised the income figures and assets of their clients.	Was limited to microloans and business development, and overlooked other microfinance services. It used a case study where non-members of microfinance were not considered.	Considered other MFI services like micro saving, financial training, and farm inputs, since these services are used by smallholder coffee entrepreneurs.

				This study considered all members enjoying microfinance services from different MFIs.
Zhiri (2017)	Impact of Microfinance Services on the Performance of Small and Medium Scale Enterprises (SMEs) in Zaria Metropolis.	The study revealed that microfinance services and the presence of MFIs are positively related to SME performance in the Zaria metropolis.	The focus was on SMEs in Zaria metropolis, Nigeria, hence presenting a contextual gap. Considered micro saving and credit as microfinance services that affect the performance of SMEs and overlooked other services.	The focus was on smallholder coffee entrepreneurs in the central part of Uganda. The current study considered other aspects of microfinance services and the moderating effect of government regulations, specifically considering taxes and licenses.
Ibrahim (2017).	The impact of financial literacy on the profitability of micro and small enterprises owned	Financial literacy had a considerable favorable impact on SMEs.	It was conducted in Kenya and concentrated on SMEs owned by university students.	The study was conducted in the central region of Uganda and focused on smallholder coffee entrepreneurs.

	by University students in Kenya:		The study also presented a conceptual gap since its main focus was on financial literacy.	This study employed different aspects of microfinance which included microcredit, saving mobilization, and farm inputs to fill the conceptual gap.
Amsi, Ngare, Imo, & Gachie (2017)	Effect of microfinance credit on SMEs' financial performance in Kenya.	Findings noted a weak negative correlation between the credit repayment period and SMEs. However, the effect was moderate for other aspects.	Concentration was on the financial performance of SMEs in Kenya. It was only limited to microcredit as an aspect of microfinance.	Concentration was on both performance metrics of smallholder coffee entrepreneurs in Uganda.
Otwani, Simiyu, & Makokha (2017)	Impact of capital adequacy on the financial performance of companies listed on the Nairobi Securities Exchange	Findings from the study noted that corporate income tax has a favorable impact on companies in Kenya.	The study entirely used secondary data. The study sampled 59 companies and it was conducted in Kenya.	The study was conducted in Uganda and used primary data where 400 respondents were sampled.

	in Kenya.			
Antoh, Mensah, Kwesi & Addo (2016)	Examining the effects of microfinance services on incomes and business capital in Ghana.	The study results disclosed that microfinance services led to an increase in the incomes of the beneficiaries, especially those in the finance sector.	The focus of this study was on micro-finance credit facilities. This study was also conducted in Ghana, where 361 beneficiaries and 13 senior officers from the Sinapi Aba Trust were singled out.	The focus of this study was on financial training, saving mobilization, farm input, microcredit, and moderating effect of government regulations. This study was conducted in the central region of Uganda, focusing on 400 smallholder coffee entrepreneurs.
Otieno (2016)	Influence of financial literacy on the financial performance of small and medium enterprises in Ruiru town, Kenya.	Financial literacy has a favorable and substantial link with SMEs' financial performance.	The study was only concerned with financial literacy and performance. The study used a descriptive survey approach to examine a	The study included other aspects of microfinance in addition to the moderating variable of government regulations and their influence on performance measured

			population of 334 registered SMEs, from which a stratified sampling approach was employed to choose 100 respondents.	broadly using both financial and non-financial indicators. An explanatory research design was used to examine a population of 611,782 coffee entrepreneurs and 400 participants were chosen using a multi-stage random sampling method.
Prah, (2016).	Microfinance credit facilities and the growth of small and medium-scale enterprises in the Cape Coast metropolis of Ghana.	Findings disclosed that higher interest rates, rigorous repayment terms, a shorter repayment time, and a limited loan facility size were key obstacles that SMEs encountered while using microfinance credit facilities.	The study employed a quantitative study design and a non-parametric data analysis.	The explanatory design and parametric data analysis were employed by this current study, which gave more powerful statistics.

Lash & Batavia (2016).	Government Policies and Micro Lending in Emerging Markets for a period of 2000-2011 in 92 countries.	Results indicated that taxes and regulations on business and finance reduce MFI microloans.	Data was entirely secondary data considering 92 countries, hence presenting a methodological gap.	To fill the methodological deficit, this study relied exclusively on primary data acquired from smallholder coffee entrepreneurs.
Solomon, Juliana & Antonia (2016)	Effects of microfinance bank loans on the livelihoods of smallholder farmers in Delta State, Nigeria.	The findings revealed that microfinance banks disbursed varied levels of loans to farmers based on their socioeconomic characteristics and that MFB loans/credit had a favorable impact on smallholder farmers.	The goal of this review was entirely on the livelihoods of small-scale farmers in Nigeria. The study exclusively looked at the effects of MFB loans/credit and loan recurrence frequency, skipping other MFI microfinance services.	This paper delved into the non-financial and financial performance metrics of smallholder coffee entrepreneurs in the Central region of Uganda. Other microfinance services that were included in the study comprised financial training, savings mobilization, and farm input to bridge the

				conceptual gap.
Mwangi (2015)	Effect of microfinance services on the economic empowerment of small-scale farmers in Kiambu County, Kenya.	Farmers' economic empowerment is driven by access to credit, financial literacy, and market access.	The study concentrated on the economic empowerment of small-scale farmers in Kenya.	The contemporary study focused on the performance of smallholder coffee entrepreneurs in the Central region of Uganda
Madafu (2015)	Access to bank credit by smallholder farmers in Tanzania. A case from the Mvomero district.	Findings established that entrepreneurs who obtained bank credit accepted that their farm yields increased.	The study was conducted in Tanzania, hence presenting a contextual gap, and it didn't consider regulations of the government as a moderating variable.	The contemporary study considered the moderating variable of government regulations, specifically considering taxes and licenses, and it was conducted in the central region of Uganda.
Wambui (2015)	The effect of microfinance services on the growth of SMEs in	Findings showed that the effect of micro saving is relative to the growth of SMEs and most SMEs never	Since this research was performed in Kenya, it presented a contextual gap. It also focused on	Because the target population differs, this study focused on smallholder coffee

	Kajiado County, Kenya.	patronize the micro saving services offered by microfinance.	Kajiado County's SMEs.	entrepreneurs to bridge the methodological gap. Bridging the contextual gap, the study was conducted in the Central region of Uganda.
Peprah (2015).	Assessing microfinance programs and their impact on beneficiaries in Ghana.	Descriptive data analysis disclosed that 59% of the respondents had been attracted to MFIs by the savings products offered.	The study was done in Ghana and overlooked other aspects of microfinance, like financial training and farm inputs.	The study was done in Uganda and included other aspects of microfinance that were left out by the study.
Eniola & Entebang (2015)	Government policy and performance of small and medium business management.	Results noted that SME success changed with the alternative of the policy utilized.	The analysis was based on secondary data and was only restricted to Nigerian SMEs.	The research utilized primary data and focused on smallholder coffee entrepreneurs in the Central region of Uganda.
Chamwada (2015)	The effect of financial literacy on the financial performance of	Findings showed that financial literacy has a considerable favorable impact on SMEs, but that	The study adopted a descriptive survey design and was carried in Nairobi's Kibera	The study adopted an explanatory design and was carried out in the Central region of

	small and micro enterprises in Kibera slums, Nairobi county.	the effect on total capital invested is negligible.	slums.	Uganda.
Kisaka & Mwewa (2014)	Effects of micro-credit, micro-savings, and training on the growth of small and medium enterprises in Machakos County, Kenya.	Micro-savings had a considerable favorable impact on SMEs.	A survey research approach was employed in the study, with 100 firms as participants. The research was performed in Kenya's Machakos County.	With a sample size of 400 smallholder coffee entrepreneurs, the study used an explanatory research approach. The research was performed in the Central region of Uganda.
Ngugi, & Kerongo, (2014)	Effects of micro financing on the growth of small and micro enterprises in Mombasa County.	Study findings revealed that loans positively influenced the growth of SMEs, and therefore, MFIs assisted SMEs in expanding their operations.	The influence of microfinance on SMEs was evaluated using a descriptive survey research strategy.	To evaluate the influence of microfinance services on smallholder coffee entrepreneurs, the research employed an explanatory study design.
Mwefyeni (2014)	Effect of agricultural service	The findings established a link between fertilizer	The research was conducted in Zambia	The study was carried out in the central region

	provision on the performance of smallholder farmers in Zambia.	availability and use.	and focused on agricultural services offered to smallholder farmers.	of Uganda and focused on microfinance services (financial training, savings mobilization, microcredit, and farm inputs).
Girabi & Mwakaje (2013)	The Impact of microfinance on smallholder farm productivity in Tanzania: the case of Iramba district.	Results suggested that fertilizers and improved seeds increased the farm yields of credit beneficiaries, while the farm yields of non-credit beneficiaries did not increase.	Focused on smallholder farmers of maize and sunflower in Tanzania, hence presenting a contextual gap. The study focused on microcredit and farm input use, hence presented a conceptual gap.	The study focused on smallholder coffee entrepreneurs in the central region of Uganda to fill the contextual gap. This study included other microfinance services left out, and these included micro saving and financial training

Source: Researcher (2020)

2.5 Conceptual Framework

A conceptual framework is a diagrammatic structure that exhibits correlation between the main constructs. The conceptual framework helps scholars in obtaining intuitive meaning from the study findings. The association between these two parameters is illustrated below.

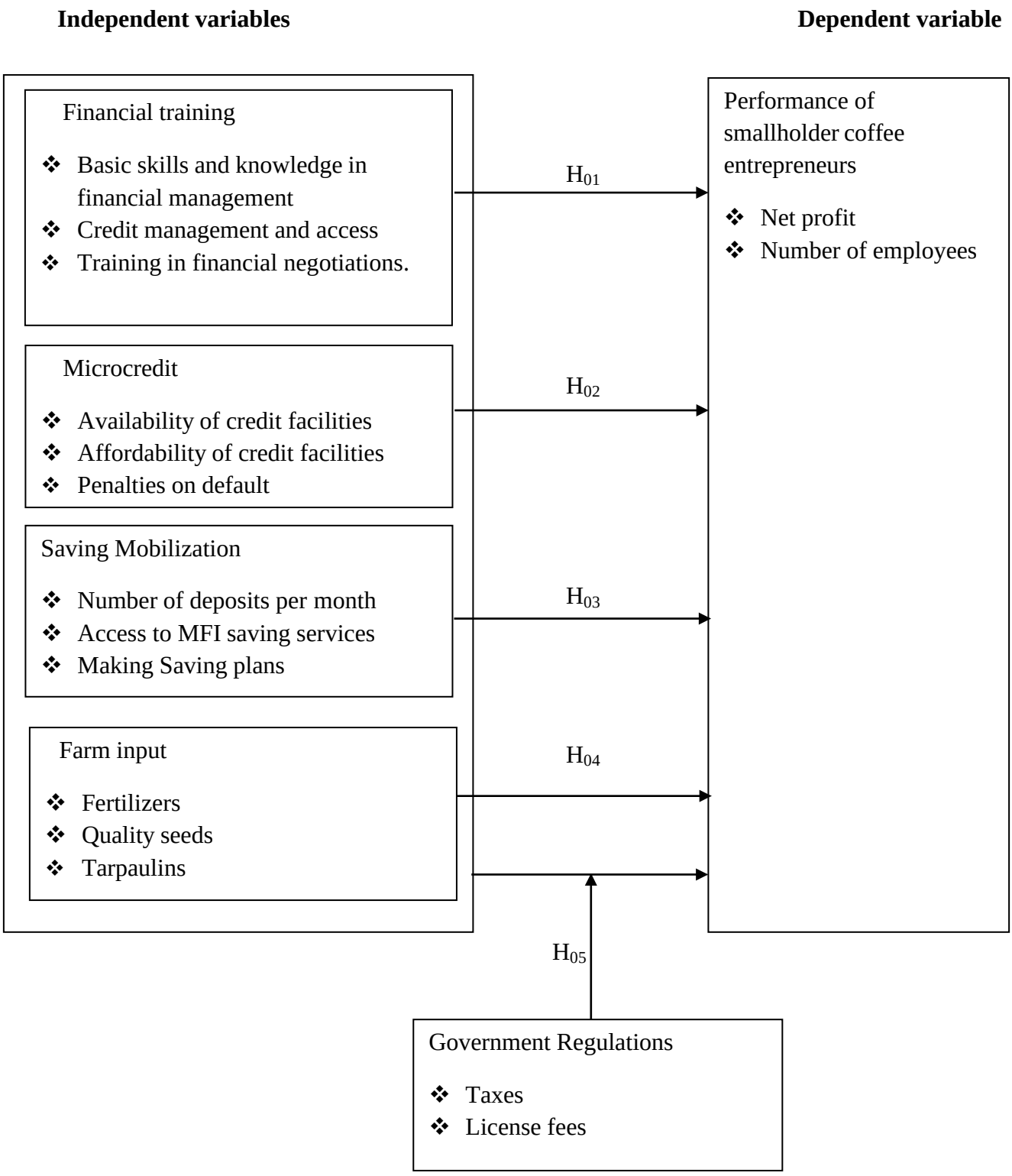

Figure 2.1: Conceptual framework

Source: Adopted from Nakabugo *et al.* (2021)

Figure 2.1 above shows the independent and dependent variables of this study.

The performance of smallholder coffee entrepreneurs is subject to various services offered by microfinance institutions, and so, they are assumed to be favorable and enhance their performance. These services include microcredit, saving mobilization, financial training, and farm inputs.

These services offered by microfinance institutions form the study's independent variables that are considered important in determining the performance of smallholder coffee entrepreneurs, and hence this is a relationship that this study strived to bring out.

The moderating variable of government regulations contributes to how the independent variable behaves towards the dependent variable. For example, taxes imposed on smallholder coffee entrepreneurs influence access to microcredit, farm inputs, and, in turn, affect the performance of smallholder coffee entrepreneurs in the central region of Uganda.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research philosophy and methodology which were employed while investigating the relationship between microfinance services and smallholder coffee entrepreneurs in central Uganda. It also consists of an overview of the target population, sampling design, data collection instrument, validity and reliability, data collection procedure, data analysis, and presentation of results, and finally ends with ethical consideration.

3.2 Research Philosophy

Any philosophy used enables the researcher to elucidate the research strategy being used, assess several methodologies, and be creative in choosing methods previously utilized by other researchers (Johnson & Clark, 2006). A research model is an outlook that is grounded on different principles, ideas, and procedures. Mcnabb (2008) noted different models such as positivism, realism, and social constructivism that scholars employ. Positivism assumes events in an environment are impartial, extrinsic, and individualistic, while social constructivism deduces that events are socially constructed and subjective.

As recommended by Creswell (2009), this study used positivism research philosophy and this philosophy is grounded on a rationalistic, empiricist philosophy and shows a deterministic philosophy that determines impacts (Mertens, 2005; Creswell, 2009). Mertens (2005) noted that positivism is used in communities on the principle that communities might be analyzed similarly to the ordinary world, employing a useful technique that gives descriptions of a causal nature.

In the positivism philosophy, outcomes are unbiased and Saunders *et al*. (2009) noted that this philosophy is utilized while dealing with facts that can be observed and that findings of studies can be generalized. This study was based on different hypotheses which were tested to either accept or reject them.

3.3 Research Design

Saunders *et al.* (2007) urged that research designs can be catergorised as exploratory, descriptive, and explanatory. A descriptive study aims to describe the behavior and characteristics of the study variables and also describe the accuracy of an event and its participants. Moreover, an explanatory study aims at establishing causal relationships between study variables, and finally, an exploratory research design aims at establishing what is occurring, asking questions, and evaluating an event in a new light.

This study used an explanatory research design because it strived to verify a causal effect association amidst variables of the study as it explains the reasons for an event that is observed as noted by Saunders *et al.* (2009). Explanatory research design puts more emphasis on understanding circumstances to elucidate the correlations between variables. Therefore, this design brings out explanations of the nature of the relationships between the independent variables (financial training, microcredit, saving mobilization, and farm inputs) and the performance of smallholder coffee entrepreneurs.

In addition, the study sought explanations when a moderating variable was introduced to the association between microfinance services and the performance of smallholder coffee entrepreneurs, to bring out this causal relationship. This was the major theme of this study since

it sought to verify how microfinance services affect the performance of smallholder coffee entrepreneurs in central Uganda.

3.4 Target Population

The target population of this study encompassed coffee entrepreneurs, totaling 611,782 smallholder coffee entrepreneurs, according to the International Coffee Report Council (2019). The target population was spread across 25 districts in the central region of Uganda, as indicated in Appendix 4. According to the report of the International Coffee Council (2019), the central region of Uganda is made up of 25 districts and the type of coffee produced is Robusta.

3.5 Sampling Design and Procedure

This study was conducted in 5 randomly chosen districts in the central region of Uganda and therefore it was not easy to get a sampling frame because the population was very large and the geographical area was big as well as dispersed. Therefore, a multi-stage random sampling approach was employed. Chauvet (2015) supported the use of this approach and noted that it is more viable to use this sampling technique when the study population is widely scattered.

The multi-stage random sampling approach is cost and time-effective when collecting primary data from a geographically dispersed population. For example, the technique has been used by other researchers in their studies, for example, Solomon *et al.* (2016), and three or more stages of sampling are always applied in this method.

Stage one: this involved the selection of five districts from the twenty-five districts in the central region of Uganda, and the selected districts included Luweero, Mityana, Masaka, Kalungu, and Bukomansimbi. A simple random sampling approach was employed to give an equal chance of being independently selected.

Stage two: after the selection of the five districts from a total of twenty five districts, two sub-counties were selected from the five districts using a simple random sampling approach, hence yielding ten sub-counties.

Stage three: a simple random sampling approach was employed to choose forty smallholder coffee entrepreneurs from each sub-county. This gave a total of four hundred smallholder coffee entrepreneurs, which was the sample size of this study.

Researchers use different techniques during sample size determination, for example, census, use of published tables and formulas, among others (Singh & Masuku, 2014). This study used the Yamane (1967) formula since it is easy to understand and gives a good representative sample size of the target population of 611782 smallholder coffee entrepreneurs. This formula has been used by other researchers. For example, in Gathiira *et al.* (2019) and Israel (2003), the same formula was used to calculate different published tables at a 95% confidence level.

The Yamane (1967) formula is given as:

$n= N/1+N (e)^2$

Where,

n = is the sample size,

N = is the population size

e = is the level of precision or the error term at 95% confidence level

This implies that,

N = 611,782

e = 0.05

$n = 611,782/ 1+611,782 (0.05)^2$

n = 399.7~ 400 after rounding off

Sample size = 400

3.6 Data Collection Instrument

Primary data on microfinance and the performance of smallholder coffee entrepreneurs in the Central region of Uganda was used. A semi-structured questionnaire was circulated to 400 smallholder coffee entrepreneurs in the Central region of Uganda for the study using drop and pick method. The closed-ended questions provided organized feedback that allowed for quantitative analysis, hypothesis testing, and conclusion formation. To help the researcher gather unstructured responses, open-ended questions generated more information than closed-ended queries did.

Operationalization and Measurement of Variables

The performance of smallholder coffee entrepreneurs was the dependent variable for this study, while microfinance services were the independent variable. The study also considered government regulations as a moderating variable, and therefore the table below displays the way variables were described and operationalized.

Table 3. 1 Operationalization and Measurement of Variables

Variable	Nature	Operationalization definition	Measurement Criteria in Questionnaire
Performance	Dependent	Performance describes how well a firm	Section F

of smallholder coffee entrepreneurs	variable	attains it's stated and predefined objectives characterized by financial, customer, internal processes and learning dimensions.	Q32 and Q33
Financial training	Independent variable	These are training that aims at improving the financial knowledge and skills of smallholder coffee entrepreneurs.	Section B Q7, Q8, Q9, Q10, Q12 and Q13
Microcredit	Independent variable	Small loans provided to smallholder coffee entrepreneurs on credit without collateral security.	Section C Q14, Q15, Q16, Q17and Q18
Saving mobilization	Independent variable	These are small deposits made by smallholder coffee entrepreneurs after a given period to accumulate their finances	Section D Q19, Q20, Q21 and Q22
Farm inputs	Independent variable	These are production items like fertilizers, quality seeds, tarpaulins provided to smallholder coffee entrepreneurs on credit.	Section E Q23, Q24, Q25, Q26, Q27, and Q28
Government regulations	Moderating variable	Rules put in place by the government to control, guide, and restrict business operations for example taxes and license	Section F Q29, Q20, and Q31

Source: Researcher (2020)

3.7 Pilot Testing

As noted by Saunders *et al.* (2009), any data collection instrument chosen should be clear and unambiguous, consequently, it is vital to do pilot testing before real data collection starts. Regarding this, testing of instruments was conducted in Mayuge district considering 20 smallholder coffee entrepreneurs as per the suggestion by Saunders *et al*. (2009) that 10

respondents during the pilot testing are enough. Mayuge district is found in the eastern region of Uganda so it's not part of the 25 districts found in central Uganda. This pilot testing was administered personally by the researcher to get more comments, unclear instructions, verge questions, and suggestions from these respondents. Some of the questions were found to be verge and therefore the questionnaire was unrealiable but the researcher removed the verge questions, rectified the questionnaire and carried out another pilot study in the same district which turned out be reliable.

3.7.1 Validity

Validity shows the accuracy of data obtained in the study, so in simple terms, it shows the intensity with which a research tool assesses what it is obliged to assess. As noted by Cooper and Schindler (2003), for a research instrument to have content validity, it must have a good representative sample of questions covering all the relevant key topics.

To emphasize content validity in this study, the questionnaire was given to the panel of two (2) experts and the supervisors to give more judgment on the standard of the instrument in collecting the required data and also assess if the tool has a good sample of questions covering all the subject matter of interest as per suggestions by Cooper and Schindler (2003). After this evaluation, the adjustments and recommendations were incorporated before administering them to the respondents.

Construct validity evaluates if the measurement tool represents the items interested in measuring. Construct validity ensures that the method of measurement matches the construct that the researcher intends to measure. By gleaning the research variables, measurements, or indicators from relevant literature and current theories, this study proved to construct validity.

3.7.2 Reliability

Reliability indicates the degree to which the data gathering tool brings out consistent findings or the extent the tool brings out the results or measures the same style and manner every time it is administered under the same state as well as similar subjects.

The Cronbach Alpha coefficient was employed and it is the measure of internal consistency where the findings gotten from one module are correlated with results from another module in the instrument. To authenticate the reliability of the collected data, SPSS software was utilized. The coefficient ranges between 0 and 1, and the acceptable level is 0.70 (Streiner, 2003; Field, 2009). A coefficient of 0.7 and above shows that a variable is reliable, whereas a coefficient below 0.7 indicates that a variable is not reliable.

Table 3. 2 Results of Reliability Test

Variable	number of items	Cronbach's Alpha	Comment
Financial training	12	0.715	reliable
Microcredit	12	0.788	reliable
Saving mobilization	09	0.800	reliable
Farm inputs	12	0.775	reliable
Government regulation	06	0.881	reliable
Performance	06	0.767	reliable
Overall Reliability Coefficient	57	0 .787	reliable

Source: Pilot Data (2021)

Table 3.2 displays all the variables and their Cronbach's Alpha coefficient. Notably, Cronbach's Alpha is in the acceptable bracket of 0.7 to 0.9 (Streiner, 2003). Moreover, government regulations have the highest coefficient (α= 0.881), followed by saving mobilization (α=0.800), microcredit (α=0.788), farm inputs (α=0.775), performance (α=0.767), and financial training (α=0.715). The findings indicate that all the parameters are reliable since their coefficients are greater than the established 0.7 thresholds (Mertens, 2005; Field, 2009). The items in the test

measurements are therefore internally consistent and interrelated. It also agrees with Sekaran (2009) who affirms that for consistency in social science research, an appropriate Cronbach's alpha coefficient should be 0.7 or above.

The aggregate alpha value for this study (α=0.787) also falls within the prescribed range for reliability contended by different scholars (Streiner, 2003; Field, 2009). This implies that 57 elements are internally consistent and unidimensional, hence the instrument is reliable. This is affirmed by DeVellis (2003), who noted that a scale below 0.7 is unacceptable and if the item being tested yields values below the recommended scale, the questionnaire needs to be revised and retested again to bring out the element of internal consistency

3.8 Data Collection Procedure

The clearances from Kenyatta University graduate school and the Uganda Investment Authority were secured by the researcher, allowing the gathering of data from five districts of central Uganda to proceed. The researcher did a survey visit in the selected five districts (Luweero, Mityana, Masaka, Kalungu, and Bukomansimbi) to study the area and also get research assistants in each district who gave a hand during data collection. In four districts, two research assistants were employed, while in the last district, Mityana, the researcher worked alone. These research assistants were trained on the ethical considerations, the significance, and the procedure for gathering data before anything started.

The researcher utilized one method during this process to meet the respondents that's drop and pick, a strategy where questionnaires were distributed to respondents by the researcher and the research assistants. Respondents were briefed on the approach to filling out the questionnaires

and accorded a fortnight to answer all the questions. The researcher collected data for a period of two months, starting from April 2021 to June 2021.

3.9 Data Analysis and Presentation

When data collection was done, editions were done to secure perfectness, absoluteness, and coherence. Delusions were removed by sorting, cleaning, and then coding to accelerate data entry, which enabled quantitative data and qualitative analysis.

Quantitative data were analyzed using descriptive and inferential statistics. Descriptive was employed to abridge the nature of each variable in the study and these included frequencies, mean and standard deviations. Inferential statistics encompassed the utilization of a multiple linear regression model to inspect the significant effect of microfinance services in terms of financial training, microcredit, saving mobilization, and farm inputs on the performance of smallholder coffee entrepreneurs in central Uganda.

This regression was used because it is useful in identifying the strength of the effect of the independent variable on the dependent variable. It is also used to forecast the effects of changes. That's to say, it helps the researcher understand how much the dependent variable (performance of smallholder coffee entrepreneurs) changed when the independent variables changed (microfinance services). This regression has also been used by other researchers in their studies, for example by Mwangi (2015) and Bare (2017).

This models is presented below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

Y = Dependent variable (Performance of smallholder coffee entrepreneurs)

X1 = Financial training

X2= Microcredit

X3 = saving mobilization

X4 = Farm inputs

β_0= Constant

e=Error term

β = Coefficient of independent variables

Therefore, after substituting the model becomes; Performance of smallholder coffee entrepreneurs= β_0 + β_1 (Financial training) +β_2 (Microcredit) +β_3 (Saving mobilization) + β_4 (Farm inputs) + ε

3.9.1 Testing the Moderating Effect of Government Regulations

In testing for moderation effects, the researcher utilized the two steps put forward by Whisman and McClelland (2005). This test determines if the coefficient of the interaction term (microfinance services *government regulations) is strictly distinct from zero. This co-efficient strengthens and directs the moderator.

The moderation model gave a scenario of whether the bivariate relationship between the independent and dependent variables was linearly connected but informed by a third variable. Nevertheless, the moderating variable affects the course and strength of the correlation between the variables by alternating, intensifying, or decreasing the effect of the independent variable

(Fairchild & MacKinnon, 2009). During the analysis, equation 1 was a direct effect model which was first regressed; later the moderator was annexed as shown in equation 2 and was regressed. The moderation effect was seen as the association effect between the variables, in that the predictor effect relies on the magnitude of the moderating variable.

$Y = \beta_0 + \beta_1 Xi + \varepsilon$ .....(1)

$Y = \beta_0 + \beta_1 Xi + \beta_{12} Z + \beta_{13} XZ + \varepsilon i$..... (2)

Where;

Y = Performance of smallholder coffee entrepreneurs (Dependent variable)

Z = Government Regulations (Moderator)

Xi = microfinance services (Independent variable)

Where;

β_0 = Constant

ε = the error term

β_1 = coefficient relating the independent variable, Xi, to Y, when Z = 0,

β_{12}= coefficient relating the moderator variable, Z, to Y, when X = 0,

β_{13} = coefficient relating to the interaction effects (XZ) between the moderator and the independent variable.

Table 3. 3 Decision Criteria for Moderation

Model 1	Model 2	Total effect	Conclusion
β_1 is not significant ($p>0.05$)	_	_	No overall effect to moderate
β_1 is significant ($p\leq0.05$)	β_{12} is not significant ($p>0.05$)	_	Moderating variable is an explanatory variable
β_1 is significant ($p\leq0.05$)	β_{12} is significant ($p\leq 0.05$)	β_{13}	The moderating variable has a moderating effect

Source: Whisman and McClelland (2005)

Research hypotheses from this study were tested at a 95% level of confidence to draw inferences. Feedback from every independent variable of this study was consolidated using SPSS to produce composite findings that were utilized. Analysis of variance was utilized to test if the models used in this study were statistically significant by showing if R^2 would occur by chance. The F-ratio generated and its p-value must be under 0.05 at 95% for the equation to be statistically significant. If the p-value is above 0.05, then the model is insignificant. To be considered significant at a 95% confidence level, the p values obtained in the regression analysis for the various variables in this study must be under 0.05.

Table 3. 2 Hypotheses Testing

Objective	Research Hypotheses (Ho)	Statistical Approach	Thresh-hold for Interpretation
To find out the effect of financial training on the performance of smallholder coffee entrepreneurs in the central region of	Financial training has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda	multiple linear regression model $Y = \beta_0 + \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4+ e$	R^2 Value F Value t Value $P \leq 0.05$

Uganda			
To determine the effect of microcredit on the performance of smallholder coffee entrepreneurs in the central region of Uganda.	Microcredit has no significant effect on the performance of smallholder coffee entrepreneurs of the central region of Uganda		.
To analyze the effect of saving mobilization on the performance of smallholder coffee entrepreneurs in the central region in Uganda.	Saving mobilization has no significant effect on the performance of smallholder coffee entrepreneurs of the central region in Uganda	multiple linear regression model $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$	R^2 Value F Value t Value $P \leq 0.05$
To examine the effect of farm inputs on the performance of smallholder coffee entrepreneurs in the central region of Uganda	Farm Inputs have no significant effect on the performance of smallholder coffee entrepreneurs of the central region in Uganda		
To analyze the moderating effect of government	Government regulations have no significant moderating effect on the relationship between	Regression analysis $Y = \beta_0 + \beta_1 X + \varepsilon$ $Y = Y = \beta_0 + \beta_1 X_i +$	Change in R^2 Value

regulations on the relationship between microfinance services and the Performance of Smallholder coffee entrepreneurs in the central region of Uganda	microfinance services and the Performance of Smallholder coffee entrepreneurs in the central region of Uganda	$\beta_{12} Z + \beta_{13} XZ + \varepsilon_i$	Change in F value $P \leq 0.05$ Change in β_1

Source: Researcher (2020)

Finally, the presentation of the quantitative data was done by using tables, pie charts, frequencies, percentages, and graphs.

3.9.2 Diagnostic Tests

Before classical linear regression analysis is carried out, diagnostic tests are always conducted in advance, and according to Field (2009), different tests need to be conducted to certify that the data collected meets the properties of regression. In addition, diagnostics also help in assessing statistical assumptions in different models.

Sampling Adequacy, Linearity, normality, Multicollinearity, and Heteroscedasticity tests were used to certify that the multiple linear regression model was defined adequately and, there were no chances of getting unstable findings.

3.9.2.1 Sampling Adequacy

This test enabled the researcher to measure if data was suited for Factor Analysis. This test measured sampling adequacy for each of the independent variables. The Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity tests were utilized to find the sampling adequacy of the

research data. KMO values range from 1 to 0 but values of 0.50 and above are accepted, but values of 0.49 and below are rejected (Brown & Onsman,2012).

3.9.2.2 Linearity

Testing for linearity of the association amidst the variables, Pearson's correlation coefficient was employed. The coefficient shows the strengthen and course of a linear correlation. A negative coefficient stipulates a contrary association between two variables. For example, they progress in the reverse case. A positive connection shows that the two parameters progress in a similar direction. For example, as one reduces, the other reduces too. It shows direct influence (Blumberg *et al.*, 2014).

3.9.2.3 Normality

A normality test helps researchers to discover if sample data drawn from a given population is normally distributed and it can be tested using different tests and also by the use of graphs. If the assumptions of normality are invalid, then it means results from the test are unreliable. The Shapiro-Wilk test was employed in this study because it shows the p-value. If the p-value is below 0.05, then the data will be insignificant and will diverge from a normal distribution, thus rejecting the null hypothesis.

3.9.2.4 Multicollinearity

It's a condition when independent variables are highly inter-correlated, and for that reason, it is classified as a disturbance or disruption in the data. If multicollinearity exists, then statistical inferences generated regarding the data may turn out to be unreliable (Guajarati, 2007).

If predator variables are extremely coordinated with each other, then there exists a challenge of multicollinearity that makes some variables non-significant (Menard, 2002). This appears once predator variables are exceedingly related as a result of complications in detecting the sole contribution of each predator variable to the general fit of the regression.

This drives the regression to be so sensitive to minor changes that attaching or detaching a predictor variable brings huge changes in the values of the coefficient or significance of other variables. Testing for multicollinearity, tolerance, and variance inflation factor (VIF) was utilized. Landau and Everitt (2004) noted that VIF should be greater than or equal to 10 and a tolerance of less than 0.1 stipulates the presence of multicollinearity.

3.9.2.5 Homoscedasticity

Homoscedasticity means the same scatter and that the independent variables in a study have the same or equal finite variance, and if this is different, then the association is heteroscedastic (Hair *et al.,* 2010). Heteroscedasticity was assessed by use of the Breusch-Pagan test since it executes an auxiliary regression of the squared residuals on the variables Garson (2013). The Breusch-Pagan test is chi-squared and if the statistic has a p-value below the threshold (0.05), then homoscedasticity is rejected and heteroscedasticity assumed.

3.9.3 Qualitative Data Analysis

According to Potter and Levine- Donnerstein (1999), content analysis easily identifies the aims, focus, communication trends of a group and it also enables the use of different variables recognized from previous quantitative research. Therefore, content analysis was used to evaluate qualitative data.

3.10 Ethical Consideration

The university graduate school granted permission to the researcher that enabled her to collect and get data from smallholder coffee entrepreneurs in five (5) districts of central Uganda and clearance from the Uganda Investment Authority. The researcher introduced herself to the smallholder coffee entrepreneurs and explained what the study entailed; its aim and its significance. A good relationship was built with the respondents at the beginning to gain their hope and confidence. Notably, the researcher clearly explained to the respondents that the study was solely for academic purposes. The identity and information gave by the respondents in this study, remained confidential and the respondents were given this assurance. The respondents had an equal opportunity to exit or depart from this study at any moment.

CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter shows, the response rate, biographical Information, demographic traits, quantitative data, descriptive statistics, diagnostics tests, inferential statistics, and qualitative data analysis.

4.2 Response Rate

400 questionnaires were given out by the researcher, but 396 were filled in and returned as shown in the table below.

Table 4. 1 Results of Response Rate

Response	Frequency	Percentage
Filled in and Returned	396	99
Non-Returned	004	01
Total	**400**	**100**

Source:Survey Data(2021)

Table 4.1 displays that 99% of the participants answered and brought back the questionnaire. Mugenda and Mugenda (2003) affirmed that when the feedback rate is 50%, then it's just sufficient for further analysis; 60% is satisfactory while beyond 70% is magnificent. The rate of response to this study is therefore excellent for drawing conclusions and inferences as recommended (Mugenda & Mugenda, 2003)..

4.2. Respondents' Biographical Information

. The District of residence and marital status of the participants were analyzed, and the analysis is displayed below.

Table 4. 2 Analysis of Background Information

District of residence	Frequency	Percentage
Luweero	80	20.2
Masaka	80	20.2
Kalungu	80	20.2
Bukomansimbi	**79**	19.9
Mityana	**77**	19.4
Total	**396**	**100.0**
Marital status		
Single	53	13.4
Married	309	78.0
Divorced	7	1.8
Separated	3	0.8
Widow	21	5.3
Widower	3	0.8
Total	**396**	**100.0**

Source: Survey Data (2021)

Moreover, there was the same percentage of participants in three districts, Masaka, Luweero, and Kalungu, which was 20.2% whereas Bukomansimbi and Mityani had 19.9% of the respondents and 19.4% respectively. This demonstrates that respondents from all five districts were fairly represented.

Furthermore, 78.0% of the respondents were married, 13.4% were single, 5.3% were widowed, 1.8% were divorced, and 0.8% were both widowers and separated. This aligns with Ngeywo *et al.* (2015) who noted in their research that married respondents were 74.5% whereas 21% were widows while 4.7% were single or separated. This, therefore, indicates that the biggest percentage of smallholder coffee entrepreneurs were married, and it concurs with Wanyeki (2003), whose study results noted that married people are the designated holders of farms but not singles. In comparison to single people, married people are considered more responsible and dedicated.

4.3. Respondents' Demographic Traits

This section shows details regarding the demographic traits of participants, that is to say, gender, age, education, and farm size. Demographic traits of the respondents are further indicated below.

Table 4. 3 Analysis of Demographic Traits

Response	Frequency	Percent
Gender		
Male	281	71.0
Female	115	29.0
Total	**396**	**100.0**
Age		
Below 20	2	0.5
21-30	46	11.6
31-50	193	48.7
Over 50	155	39.1
Total	**396**	**100.0**
Level of education		
Primary	306	77.3
Secondary	129	32.6
Certificate	31	7.8
Diploma	9	2.3
Degree	23	5.8
Never attended school	27	6.8
Total	**396**	**100.0**
Farm size		
Less than one acre	36	9.1
1-4 acre	263	66.4
5-9 acres	77	19.4
Above 9 acres	20	5.1
Total	**396**	**100.0**

Source: Survey Data (2021)

From table 4.3, most of the participants were men, at 71.0%, while females were at 29.0%. This confirmed that at least both genders participated in this research. It also indicates that men participate more actively in the coffee business than women, as they own more land compared to women. These findings coincide with those of Ntabo (2011), who concluded that there is a gender bias in coffee farming where male entrepreneurs dominate the business. This can deprive

female entrepreneurs of active participation in coffee farming activities, thus limiting coffee production since women are key in the actual farm operations.

Moreover, the age of the participants was established and the biggest percentage of respondents were over 50 years accounting for 39.1% of the entire participants, followed by 41-50, who were 28.8%, 31-40 were 19.9%, 21-30 were 11.6%, and finally below 20 were 0.5%. This indicates that most smallholder coffee entrepreneurs are old enough, and can provide relevant information about the research variables.

It also showed that coffee farming is largely carried out by old people, mainly above 50 years. This is in line with findings by Theuri (2012), who argued that the lowest average age for coffee farmers was 51 years. Ngeywo *et al.* (2015) also concluded that 71% of the participants in coffee production were over 50 years. This, therefore, proves that youth participation in coffee production is scarce.

Findings from table 4.3 further stipulated that 44.7% of the participants were at primary level, 32.6% were at the secondary level, 7.8% were of certificate level, 2.3% were of diploma level, 5.8% were of degree and finally 6.8% had never been at school. This indicates that smallholder coffee entrepreneurs at least attained basic primary education which is crucial in managing business finances and setting financial goals.

However, it is crucial to note that education levels in rural areas are low and that is why the majority of people in villages engage in subsistence agriculture. The findings accede with the views of Mwatawala *et al.* (2016), who noted that most people who rely on agricultural activities in low developed countries have low levels of education. The results also accede with the observation made by Onwunali *et al*. (2018), who noted that great bulk of the smallholder

farmers had completed primary education, and the percentage was 63.7%, while only 2.4% of the respondents never attended school.

Lastly, in terms of farm size, 66.4% of the respondents had 1-4 acres and comprised the majority, 19.4 respondents had 5-9 acres, 9.1% had less than an acre, and the rest of the respondents (5.1%) had above 9 acres. This confirms that the study participants were smallholder coffee entrepreneurs who own small acreage of land which is linked to low production. The study results agree with findings established by Ngeywo *et al.* (2015) where coffee production was low due to the ownership of small plots of land, with 61.1% of the respondents having less than 1 acre of the coffee farm, while 24.4% had between 1-2 acres, and only 7.5% had more than 2 acres.

4.5 Financial Trainings from Microfinance Institutions

The study attempted to determine whether MIFs are offering smallholder coffee entrepreneurs different financial training, the number of times such training is being offered, and, finally, the quality of such training. These financial trainings offer financial skills and knowledge to coffee entrepreneurs so as to better manage their daily finances, set financial goals among others. This analysis is shown in different tables below.

4.5.1 Type of Training offered by Microfinance Institutions

The study sought to establish different pieces of training offered by microfinance institutions and these are indicated below.

Table 4. 4 Results of types of training offered by microfinance institutions

Pieces of training from microfinance institutions	Frequency	Percentage
Credit use	342	24.1
Farm management	383	26.9
Saving	334	23.5
Bookkeeping	196	13.8
Debt management	120	8.4
Budgeting	47	3.3
Total	1422	100.0

Source: Survey Data (2021)

From table 4:4, farm management has the highest percentage of 26.9%, followed by credit use (24.1%), saving (23.5%), bookkeeping (13.8%), debt management (8.4%), and budgeting (3.3%). In comparison with other pieces of training, the greatest bulk of participants agreed that they received farm management training from microfinance institutions.

4.5.2 Number of times Microfinance Institutions offer Training

Respondents indicated the number of times they received training per year from microfinance institutions. Findings from the bar graph below show that 71.7% of the respondents were always visited at their premises for training, 18.9% were always called for training programs, 7.3% only received training after getting loans, and 2.0% did not receive any training at all. This is further shown in figure 4.1 below.

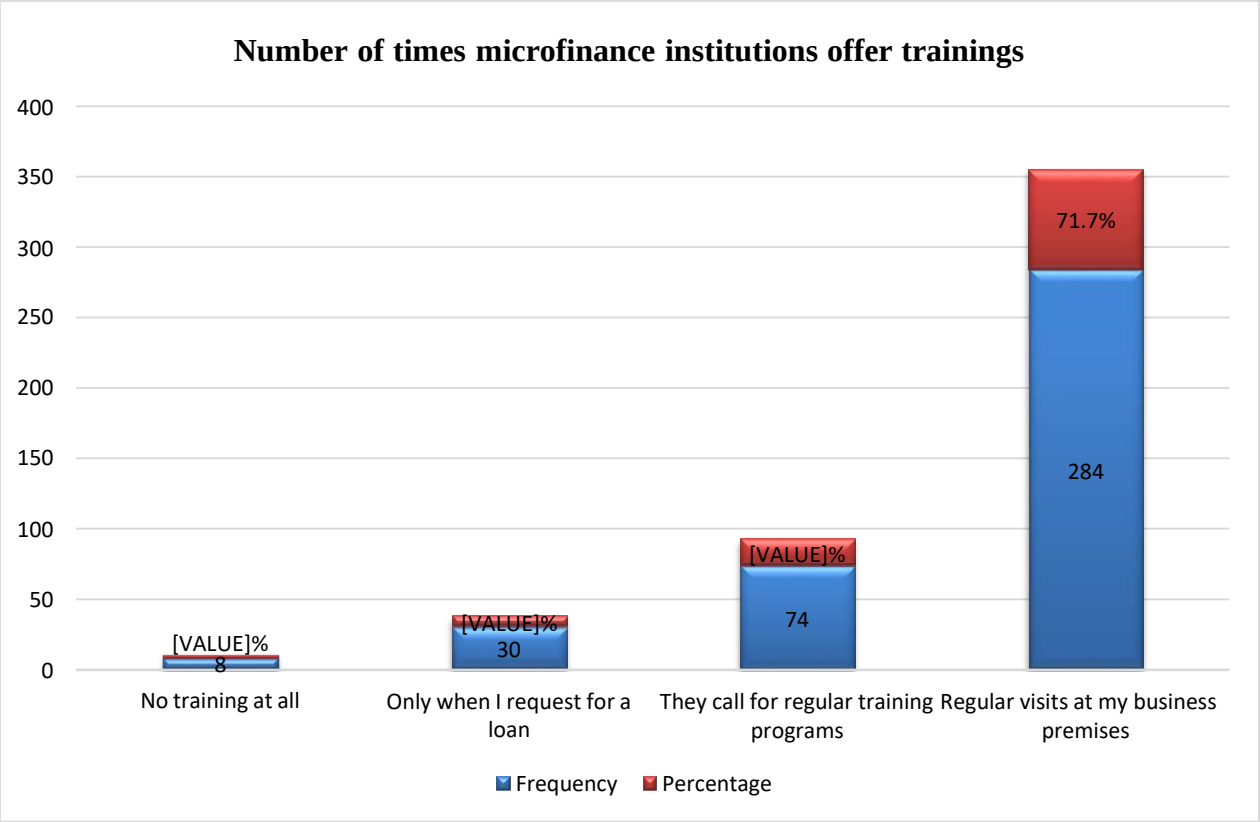

Figure 4.1: number of times MIF offer training

Source: Survey Data (2021)

4.5.3 Quality of Financial Training Services offered by MFIs and Performance of Coffee Entrepreneurs

The study also aimed at finding out the rate of different training offered by microfinance institutions, and these are indicated in figure 4. 2 below.

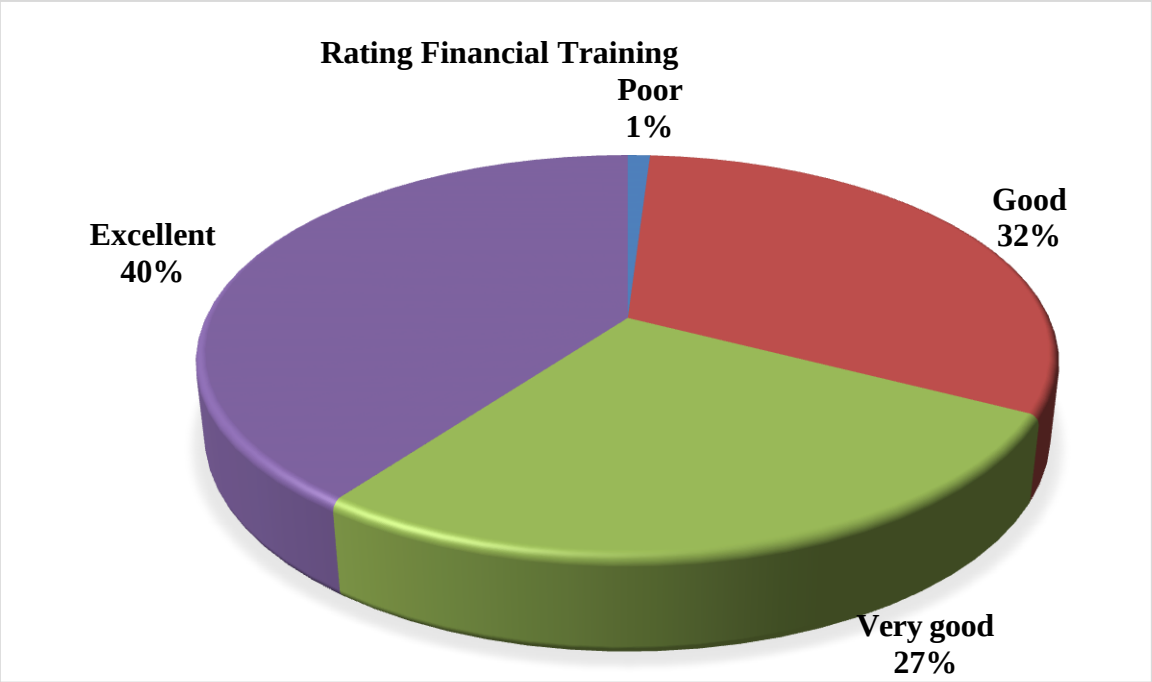

Figure 4.2: Rating financial training

Source: Survey Data (2021)

From figure 4.2, 40% of the participants accepted that financial training was excellent, 32% accepted that financial training was good, 27% accepted that these pieces of training were very good, and finally 1% agreed that these pieces of training were poor, and none of the respondents accepted that the training was very poor. This means that the financial training offered by MIF to smallholder coffee entrepreneurs is excellent and influences their performance.

4.6 Performance of Smallholder coffee entrepreneurs

The study sought to establish different levels of income for smallholder coffee entrepreneurs after using microfinance services, particularly, financial training, microcredit, saving mobilization, and farm inputs. The outcomes are stipulated in the table below.

Table 4. 5 Analysis of Levels of Income after using Different Microfinance Services

Variable	Level of income (Ugx)	Frequency(N)	Percentage (%)
Before receiving financial training	Below 1,000,000	267	67.4
	1000,001-5,000,000	107	27.0
	5,000,001-10,000,000	19	4.3
	More than 10,000,000	03	0.8
Total		**396**	**100.0**
After receiving financial training	Below 1,000,000	63	15.9
	1000,001-5,000,000	229	57.8
	5,000,001-10,000,000	81	20.5
	More than 10,000,000	23	5.8
Total		**396**	**100.0**
Before receiving Microcredit	Below 1,000,000	271	68.9
	1000,001-5,000,000	104	26.3
	5,000,001-10,000,000	19	4.8
	More than 10,000,000	02	0.5
Total		**396**	**100.0**
After receiving Microcredit	Below 1,000,000	63	15.9
	1000,001-5,000,000	234	59.1
	5,000,001-10,000,000	77	19.4
	More than 10,000,000	22	5.6
Total		**396**	**100.0**
Before receiving Saving mobilization	Below 1,000,000	280	70.7
	1000,001-5,000,000	100	25.3
	5,000,001-10,000,000	14	3.5
	More than 10,000,000	02	0.5
Total		**396**	**100.0**
After receiving Saving mobilization	Below 1,000,000	55	13.9
	1000,001-5,000,000	241	60.9
	5,000,001-10,000,000	80	20.2

	More than 10,000,000	20	5.1
Total		**396**	**100.0**
Before receiving Farm inputs	Below 1,000,000	273	68.9
	1000,001-5,000,000	104	26.3
	5,000,001-10,000,000	16	4.0
	More than 10,000,000	08	0.8
Total		**396**	**100.0**
After receiving Farm inputs	Below 1,000,000	57	14.4
	1000,001-5,000,000	238	60.1
	5,000,001-10,000,000	78	19.7
	More than 10,000,000	23	5.8
Total		**396**	**100**

Source: Survey Data (2021)

From table 4.5, results manifest that before receiving financial training from MIFs, majority of the respondents earned an income below Uganda Shillings 1,000,000 and this is clearly represented by the percentage of 67.4%. After obtaining financial training, the biggest percentage of the respondents earned between 1,000,001 -5,000,0000 Uganda Shillings as shown by 57.8%. This indicates how financial training from MIFs is important to coffee entrepreneurs since the percentage of coffee entrepreneurs earning below 1,000,000 reduced from 67.4% to 15.9%.

Furthermore, before receiving microcredit from MIFs, a significant proportion of smallholder coffee entrepreneurs earned income below Uganda shillings 1,000,000, accounting for 68.4% of the total but this later changed to 15.9% after receiving microcredit from MFIs. The biggest proportion of respondents earned between 1,000,001-5,000,000 after receiving micro credit from MFIs as shown by 59.1%.

Moreover, saving mobilization followed the same dynamics as before smallholder coffee entrepreneurs began employing saving services; their income bracket was typically below Uganda shillings 1,000,000, as reflected by the huge portion of 70.7 %. This later reduced to 20.2% after utilizing saving services. This also clearly shows how significant saving mobilization is in improving the incomes of the respondents since majority(60.9%) of the respondents now earned between 1,000,001-5,000,0000 Ugx.

In conclusion, farm inputs follow the same path as most smallholder coffee entrepreneurs had an income of under 1,000,0000 Uganda shillings, before using farm input advance, as shown by their percentage of 68.9%. After utilizing farm inputs, the percentage of coffee entrepreneurs earning below one million reduced fom 68.9% to 14.4% but the biggest percentage earned between 1,000,001 and 5,000,000 Uganda shillings as shown by 60.1%.

4.6.3 Average net profit of smallholder coffee entrepreneurs per year

The study sought to assess the respondents' current average net profit per year, and the biggest proportion, 58.8%, confirmed that they generated a net profit between Uganda Shillings 1,000,001 and 5,000,000. Following that, 19.9% agreed they earned between 5,000,001 and 10,000,000 Uganda shillings, 15.4% earned below 1,000,000 Uganda shillings, and 5.8% agreed they made a net profit exceeding 10,000,000 Uganda shillings. The facts are visualized in fig 4.3 below.

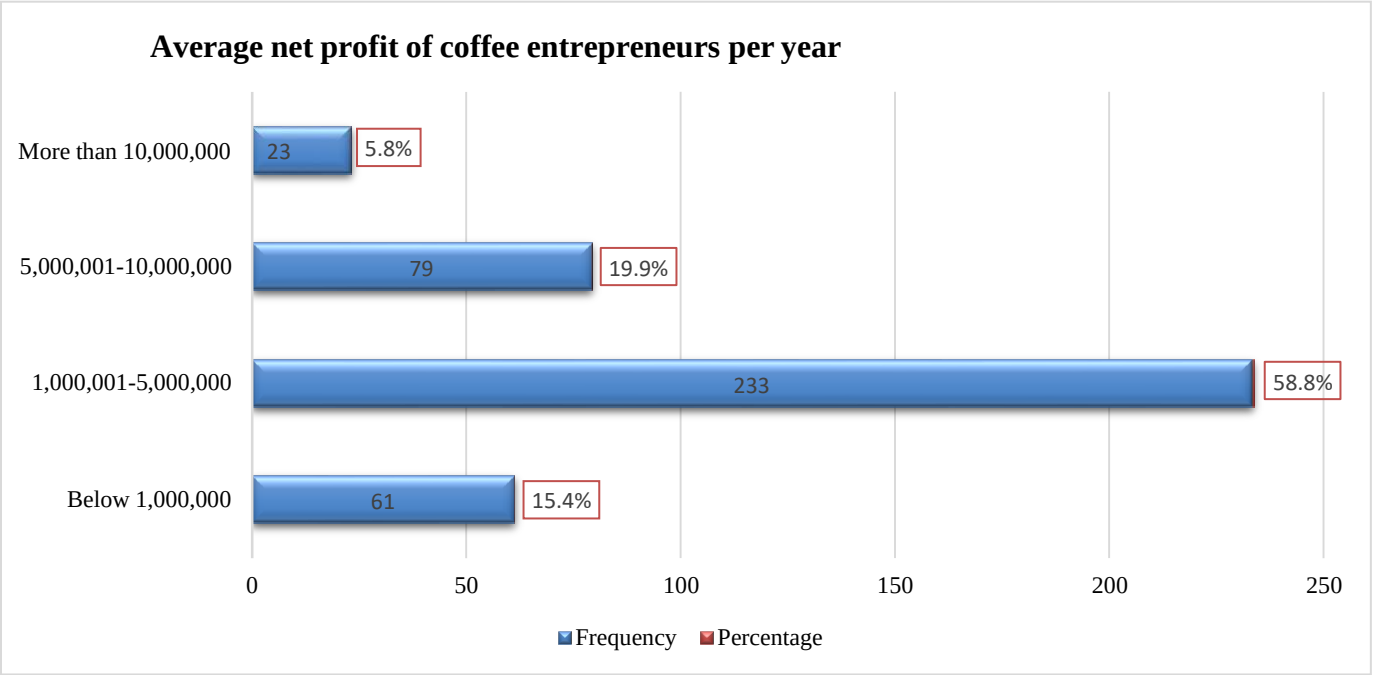

Figure4.3: Average net profit of smallholder coffee entrepreneur per year

Source: Survey Data (2021)

From the above findings in figure 4.4, it can be concluded that the biggest percentage of the respondents earn a net profit between Uganda Shillings 1,000,0001-5,000,0000.

4.7 Descriptive Statistics

Descriptive statistics give several methods for example measures of central tendency specifically standard deviation and mean that break down large data sets into smaller outcomes to explain the observations. In this study, a Likert scale of 1 to 5 that evaluated the level of agreement and disagreement was used.

4.7.1 Mean Range

To obtain the mean of each indicator, the study used the mean range of response outlined in table 4.6.

Table 4. 6 Analysis of Mean Range

Mean range of response	Response mode
1.00-1.49	Strongly Disagree
1.50-2.49	Disagree
2.50-3.49	Neutral
3.50-4.49	Agree
4.50-5.00	Strongly Agree

Source: Survey Data (2021)

Table 4.6 shows the mean range of different responses and in this case, 1 – 1.49 represents responses failing under strongly Disagree, 1.50-2.49 represents responses failing under Disagree, 2.50-3.49 represents responses failing under Neutral, 3.50-4.49 represents responses failing under Agree and finally 4.50-5.00 represents Strongly Agree.

4.7.2 Financial Training

Financial training was measured using indicators that comprised basic skills and knowledge in financial management, credit management and access, and training in negotiations. The descriptive statistics for all the dimensions are below. The responses range between 1 (strongly Disagree) and 5 (Strongly Agree).

Table 4. 7 Descriptive Statistics for Financial Training

	N	Minimum	Maximum	Mean	Standard deviation
Basic skills and knowledge in financial management	396	1	5	1.77	1.212
You are now able to make a budget and plan for expenditures					
Training from microfinance	396	1	5	1.90	1.258

institutions has enabled you to maintain a record of all business transactions					
Financial knowledge provided to you has enabled you to effectively invest money	396	1	5	1.90	1.250
Financial knowledge and skills provided to you are adequate	396	1	5	3.29	1.642
Aggregate findings Basic skills and knowledge in financial management				**2.215**	**1.3405**
Credit management and access	396	1	5	3.00	1.584
It is easy to access credit services from microfinance institutions in this area					
Microfinance institutions offer training on credit management	396	1	5	3.36	1.670
You can make a plan to reduce debt and avoid excessive debt	396	1	5	3.83	1.689
You borrow with the full understanding of terms and conditions	396	1	5	3.60	1.784
Aggregate findings Credit management and access				**3.4475**	**1.68175**
Training in negotiations					
You can now negotiate for what you want in business	396	1	5	2.03	1.631

transactions					
The financial knowledge gained through training has improved your economic and business decision-making ability	396	1	5	4.74	.671
It is easy for you to take an active role in decisions over your earnings	396	1	5	4.76	.619
Your now committed to stick to negotiating objectives	396	1	5	4.73	.730
Aggregate findings Training in negotiations				**4.065**	**.91275**
The aggregate score for financial training				**3.2425**	**1.3117**

Source: Survey Data (2021)

Table 4.7 stipulates that the total mean response for basic skills and knowledge in financial management is 2.215 and the standard deviation is 1.3405. Notably, the score is similar to the value of 2.00 (disagree) on the scale utilized so respondents disagreed that they were equipped with basic skills and knowledge in financial management. Moreover, a smaller variation of the findings from the mean was observed as encapsulated by the aggregate standard deviation of 1.3405. However, there was doubt as to whether respondents accessed and managed their credit effectively, as indicated by a mean of 3.4475, which is next to 3.00 (neutral).

Small variations in the findings from the mean were also noted since the aggregate standard deviation was 1.6817. For training in negotiations, the mean was 4.065 and the standard deviation was 0.91275. The mean score is 4.065, which is next to 4.00 (agree), and this specifies that respondents are in a position to do or carry out financial negotiations in their businesses.

Furthermore, the standard deviation of 0.91275 indicates that the findings are huddled tightly all over the mean, indicating that respondents are in a position to negotiate and enhance their performance.

The overall mean score for financial training is 3.2425, which is approximately 3.00 (neutral) as per the scale employed by the study. However, a mini variation of the findings from the mean was noted, as exemplified by the total standard deviation of 1.3117. The accumulative mean score of financial training stipulates that different activities regarding financial training are moderate.

4.7.3 Microcredit

Microcredit was measured using indicators including the availability of credit facilities, affordability of credit facilities, and penalties on default. The descriptive statistics for all the dimensions are below.

Table 4. 8 Descriptive Statistics for Microcredit

	N	Minimum	Maximum	Mean	Standard deviation
Availability of credit facilities					
Microfinance institutions always borrow you the amount of money you apply	396	1	5	2.62	1.549
Getting a business loan from microfinance institutions is involves short procedures	396	1	5	3.81	1.457
The aggregate score for credit facilities				**3.215**	**1.503**

Affordability of credit facilities					
The interest rate charged by microfinance institutions is favourable	396	1	5	3.61	1.432
The repayment period given is always enough	396	1	5	3.86	1.467
Microfinance institutions lend you money basing on a credit limit	396	1	5	3.76	1.582
Microfinance institutions lend you money in the presence of a collateral security	396	1	5	3.99	1.426
The aggregate score for Affordability of credit facilities				**3.805**	**1.477**
Penalties on default					
Microfinance institutions always extend the repayment period on failure to clear to zero balance	396	1	5	4.05	1.417
Microfinance institutions never increase interest rates once you fail to pay on time	396	1	5	3.95	1.524
Microfinance institutions handle credit defaulters well	396	1	5	3.50	1.606
The aggregate score for Penalties on default				**3.833**	**1.516**
The aggregate score for microcredit				**3.6177**	**1.4986**

Source: Survey Data (2021)

Table 4.8 contains statistics on microcredit utilized by smallholder coffee entrepreneurs, illustrating that the total mean for credit availability is 3.215 and the standard deviation is 1.503. On the scale utilized, 3.215 is equivalent to 3 (neutral). This demonstrates that participants were unsure about the various financing options available to them. In addition, as seen by the total standard deviation of 1.503, there was a mini fluctuation in findings from the mean. On another side of the coin, respondents agreed that they could afford credit facilities availed to them by MIFs as reflected by the mean of 3.805, which is approximate 4 (agree) on the scale used. The standard deviation was 1.477, indicating that there was mini dispersion in the findings from the mean.

Furthermore, penalties on default have a mean of 3.833 and a standard deviation of 1.516. On the scale utilized, the aforesaid score is 4.00 (agree), signifying that respondents agreed to pay MIF penalties in the event of default. Generally, the responses showed a slight variation from the mean, as indicated by a figure of 1.4986. The cumulative mean value for the three microcredit indicators is 3.6177, which is close to 4.00 (agree). Additionally, the overall standard deviation value of 1.4933 highlighted that a mini fluctuation in the findings from the mean existed. Microcredit activities are high, with a slight variation from the mean, as per the total mean replies.

4.7.4 Saving Mobilization

Saving mobilization was measured using the number of deposits per month, access to MFI saving services, and making saving plans. All of the dimensions' findings are displayed below.

Table 4. 9 Descriptive Statistics for Saving Mobilization

	N	Minimum	Maximum	Mean	Standard

					deviation
Number of deposits per month	396	1	5	3.86	1.507
The more saving deposits you make per month, the more interest you earn					
There are minimal penalties for irregular deposits regarding savings	396	1	5	3.19	1.711
The aggregate score for the number of deposits per month				**3.525**	**1.609**
Access to MFI saving services	396	1	5	3.61	1.615
The procedures for opening a saving account are easy					
It is convenient and easy for you to make deposits into your account	396	1	5	3.50	1.428
You can access your savings any time you are in need	396	1	5	4.10	1.528
The aggregate score for Access to MFI saving services				**3.737**	**1.524**
Making saving plans.					
Your savings earn a good interest rate at the end of the saving period	396	1	5	3.68	1.562
You spend less to increase on your saving	396	1	5	3.86	1.468
The aggregate score for				**3.77**	**1.515**

making saving plans.		
The aggregate score for saving mobilization	**3.6773**	**1.5493**

Source: Survey Data (2021)

Table 4.9 stipulates that the total mean for monthly deposits is 3.525, with a standard deviation of 1.609. On the scale employed, this is 4.00 (agree), reflecting that respondents agreed to make a varied number of savings deposits per month. Moreover, there was a slight fluctuation in the findings from the mean, as evidenced by the total standard deviation of 1.609. In the case of MFIs saving services, respondents stated that they use them, as proven by a mean of 3.737, which is close to 4.00 (agree) on the scale.

As demonstrated by a standard deviation of 1.524, the findings stipulated a mini fluctuation around the mean. Making savings plans has a total mean of 3.77 and a standard deviation of 1.515. On the scale employed, the score is 4.00 (agree), signifying that respondents agreed that they are in a position to create savings goals. The standard deviation of 1.515 indicates that the findings are less close to the mean.

The entire mean score for the three metrics of saving mobilization is 3.6773, which is near to 4.00 (agree) on the scale employed. Additionally, the overall standard deviation of 1.5493 proved that a mini fluctuation in the findings from the mean existed. The saving mobilization aggregate score signifies that saving mobilization actions are high.

4.7.5 Farm Inputs

Farm inputs were measured using fertilizers, coffee seedlings, and Tarpaulins. The descriptive statistics for all the dimensions are below.

Table 4. 10 Descriptive Statistics for Farm Inputs

	N	Minimum	Maximum	Mean	Standard deviation
Fertilizers					
Coffee yields always increase due to fertilizer advance	396	1	5	2.80	1.725
The period for fertilizer repayment is enough and flexible	396	1	5	4.17	1.199
The interest rate charged on fertilizer advance is low	396	1	5	4.14	1.181
Getting coffee fertilizer advance involves short procedures	396	1	5	2.84	1.439
You are always happy with the quality and quantity of coffee fertilizers disbursed to you	396	1	5	4.12	1.204
The aggregate score for coffee seedlings fertilizers				**3.614**	**1.3496**
Coffee seedlings					
Coffee seedlings given to you are disease resistant	396	1	5	4.39	.986
The coffee seedlings you receive give higher yields	396	1	5	4.46	.942
Coffee seedlings provided to you are drought resistant	396	1	5	4.44	1.031
You are contented with the quality and quantity of coffee seedlings given to you	396	1	5	4.57	.856
The aggregate score for				**4.465**	**.9538**

coffee seedlings					
Tarpaulins					
Tarpaulins offered to you on credit have increased the quality of your dry coffee cherries	396	1	5	4.68	.672
The time period for tarpaulin repayment is enough	396	1	5	4.73	.606
You are always happy with the quality and size of the coffee tarpaulin disbursed to you	396	1	5	4.38	1.054
The aggregate score for Tarpaulins				**4.5967**	**.7773**
The aggregate score for farm inputs				**4.2252**	**1.0269**

Source: Survey Data (2021)

Concerns about farm inputs are discussed in Table 4.10 and are based on three metrics: fertilizers, coffee seedlings, and tarpaulins. Fertilizers have a total mean of 3.614 and a standard deviation of 1.3496, coffee seedlings have a total mean of 4.465 and a standard deviation of 0.9538, and tarpaulins have a total mean of 4.5967 and a standard deviation of 0.7773. Because the mean score for fertilizers was 3.614, which is equivalent to 4.00 (agree), respondents accepted that fertilizers boosted the quantity of their coffee output. However, as illustrated by the total standard deviation of 1.3496, there was a mini fluctuation in the findings from the mean.

Furthermore, respondents agreed that the coffee seedlings offered were drought and disease-resistant and that they yielded higher yields. This is per the coffee seedling's aggregate mean score of 4.465, which is 4.00 (agree) on the scale. Nevertheless, as signified by the total standard

deviation value of 0.9538, a modest dispersion of the results from the mean existed. With a total mean of 4.5967 and a standard deviation of 0.7773, participants believe tarpaulins have enhanced the quality of their dry coffee cherries. This is further supported by the aggregate mean of 4.5967, which is 5 (strongly agree) on the scale.

Besides, tarpaulins had a low standard deviation which means that the findings are consolidated around the overall mean, making the estimator of the true mean stable and reliable. As a result, tarpaulins have improved the dry quality of coffee cherries significantly. The entire mean score for the three metrics of farm input indicators is 4.2252, which is close to 4.00 (agree) on the scale. Additionally, as demonstrated by the overall standard deviation of 1.0269, a minor fluctuation from the entire mean score existed. The entire mean of farm inputs reveals a high degree of activity in terms of farm inputs.

4.7.6 Government Regulations

Taxes and licenses were used to measure government regulations and descriptive statistics for the two dimensions are below.

Table 4. 11 Descriptive Statistics for Government Regulations

	N	Minimum	Maximum	Mean	Standard deviation
Taxes					
Taxes charged by the government on mobile money you receive as microcredit offered by microfinance institutions are favourable	396	1	5	1.94	1.548
Prices of coffee fertilizers are	396	1	5	3.82	1.676

low irrespective of taxes imposed by the government					
It is cheap to buy tarpaulins irrespective of heavy taxes levied on them	396	1	5	1.63	1.032
The aggregate score for Taxes				**2.4633**	**1.4187**
License					
Without a coffee license, you are free to participate in the coffee business on a large scale	396	1	5	3.15	1.715
Obtaining a license to establish a coffee cooperative and participate in coffee trading is affordable	396	1	5	3.05	1.650
The fee you pay while obtaining a coffee business license affects your business performance	396	1	5	3.18	1.664
The aggregate score for License				**3.1267**	**1.6763**
The aggregate score for government regulations				**2.795**	**1.5475**

Source: Survey Data (2021)

Table 4.11 indicates that the total mean for taxes is 2.4633, with a standard deviation of 1.4187. Notably, this score is analogous to a 2.00 (disagree), indicating that respondents disagree that government taxes are inexpensive. Furthermore, as proven by the total standard deviation number of 1.4187, there was a minor fluctuation in the findings from the mean. However, as verified by a mean of 3.1267, which is 3.00 (neutral) on the scale, there was skepticism about

whether permits are inexpensive and easily accessible by respondents who want to participate in the coffee business.

The overall standard deviation of 1.6763 signified a mini fluctuation in the findings from the mean. The entire mean score for all government regulatory indicators is 2.795, which is close to 3.00 (neutral) on the scale used. Furthermore, as demonstrated by the total standard deviation of 1.5475, there was a minimal fluctuation in the findings from the mean. The entire mean score for government regulations suggests that respondents are uncertain of the effect of government regulations on their business activity.

4.7.7 Performance of Smallholder coffee entrepreneurs

The performance of smallholder coffee entrepreneurs was measured using two indicators, that is to say, the number of employees and net profit. Descriptive statistics for the two indicators are below.

Table 4. 12 Descriptive Statistics for Performance of Smallholder coffee entrepreneurs

	N	Minimum	Maximum	Mean	Standard deviation
Number of employees					
The number of your employees has increased in your enterprise ever since you started using microfinance products and services	396	1	5	3.17	1.650
Because of microfinance services, you can now hire a different number of	396	1	5	1.55	.963

employees.					
You have hired permanent employees to work in your coffee business because of microfinance service	396	1	5	3.05	1.650
The aggregate score for the Number of employees				**2.59**	**1.421**
Net profit					
Net profit has increased due to microfinance services	396	1	5	3.89	1.461
Your business is doing well in terms of profits ever since you joined microfinance services	396	1	5	3.81	1.537
Your business can meet all the operational costs.	396	1	5	3.82	1.472
The aggregate score for Net profit				**3.84**	**1.49**
The aggregate score for the performance of smallholder coffee entrepreneurs				**3.215**	**1.4555**

Source: Survey Data (2021)

Table 4.12 shows performance based on two vital aspects: the number of employees and net profit. The number of employees has a total mean of 2.59, a standard deviation of 1.421, and net profit has a total mean of 3.84, a standard deviation of 1.49. The respondents were undecided if the number of their employees increased since the mean score for the number of employees was 2.59, which is equivalent to 3.00 (neutral). However, as proven by the overall standard deviation of 1.421, there was a mini fluctuation in the findings from the mean.

Furthermore, participants agree that their net profit rose, as proven by an aggregate mean score of 3.84, which is analogous to 4.00 (agree). Likewise, the total standard deviation of 1.49 suggested a mini fluctuation in the values from the mean. Finally, the entire mean score for the two indicators of smallholder coffee entrepreneurs' performance is 3.215, which is nearly 3.00 (neutral). Nevertheless, the overall standard deviation of 1.4555 suggested a mini dispersion from the mean score. The entire mean score of smallholder coffee entrepreneurs' performance implies that respondents are undecided.

4.8 Diagnostic Tests

Researchers who utilize multiple linear regression analysis must verify diverse assumptions to avoid biased relationship estimates (Cohen et al. 2003; Chatterjee & Hadi, 2012). Before executing the regression analysis for this study, inferences were made based on sampling adequacy, linearity, normality, multicollinearity, and heteroscedasticity.

4.8.1 Sample Adequacy Test

This test enabled the researcher to measure if data was suited for Factor Analysis. Therefore, sampling adequacy for the independent variable was measured using Kaiser-Meyer-Olkin measure (KMO) and Bartlett's Test of Sphericity tests. KMO values range from 1 to 0, but values of 0.50 and above are accepted, but values of 0.49 and below are rejected (Brown and Onsman (2012). The results are as below.

Table 4. 13 KMO and Bartlett's Test

Scale	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity Approx. Chi-square Df Sig.

Financial training	0.708	3830.151	66	0.000
Microcredit	0.513	169.365	36	0.000
Saving mobilization	0.555	39.085	21	0.010
Farm inputs	0.747	647.180	66	0.000

Source: Survey Data (2021)

Table 4.13 displays the KMO measures which fall from 0.513 to 0.747 while Bartlett's test of Sphericity was below 0.05. Consequently, the sample was sufficient, as noted by Brown and Onsman (2012).

4.8.2 Test of Linearity

A correlation was employed to test linearity, and specifically, Pearson's correlation coefficient (r) was employed. This test indicates substantial correlations as well as interdependencies between the independent and dependent variables (Cooper & Schindler, 2014). The table abridges the findings.

Table 4. 14 Correlation Analysis

	Performance of smallholder coffee entrepreneurs	**Financial training**	**Microcredit**	**Saving mobilization**	**Farm input**
Performance of smallholder coffee entrepreneurs					
Pearson correlation	1	0.525	0.209	0.521	0.286
Sig. (2-tailed)		0.000	0.000	0.000	0.000
N	396	396	396	396	396
Financial training					
Pearson correlation	0.525	1	0.011	0.360	0.134

Sig. (2-tailed)	0.000		0.820	0.000	0.007
N	396	396	396	396	396
Microcredit					
Pearson correlation	0.209	0.011	1	0.042	0.269
Sig. (2-tailed)	0.000	0.820		0.400	0.000
N	396	396	396	396	396
Saving mobilization					
Pearson correlation	0.521	.360	0.042	1	0.191
Sig. (2-tailed)	0.000	.000	0.400		0.000
N	396	396	396	396	396
Farm inputs					
Pearson correlation	0. 286	0.134	0.269	0.191	1
Sig. (2-tailed)	0.000	0.007	0.000	0.000	
N	396	396	396	396	396

Correlation is significant at the 0.01 level (2 tailed)

Source: Survey Data (2021)

A medium positive connection allying performance and independent variables is stipulated in Table 4.14. Financial training (r = 0.525, p 0.01), microfinance (r = 0.209, p 0.01), saving mobilization (r = 0.521, p 0.01), and farm inputs (r = 0.286, p 0.01) are all favorably correlated with the performance of smallholder coffee entrepreneurs. This signifies that the variables will vary in the same way, so expanding microfinance services will enhance the performance of smallholder coffee entrepreneurs. Wooldridge (2000), on the contrary, claimed that correlation does not always prove causation. It only implies that the explanatory variable has predictive power, allowing for further causal study using regression analysis**.**

4.8.3 Test of Normality

The Shapiro-Wilk test is important in evaluating normality if the sample size falls from 3 to 5,000 (Royston 1995). Normality is the presumption that the underlying residuals are normally distributed, and if the p-value is above 0.05, the null hypothesis is accepted and the alternative hypothesis is rejected (Razali & Wah, 2011). Because the sample size of this study falls below the recommended cutoff, the Shapiro-Wilk test was utilized to determine whether the residuals were normal, as shown below

Table 4. 15 Shapiro-Wilk Statistics

	Shapiro-Wilk		
	Statistic	Df	Sig
Standardized residuals	.995	372	.313

Source: Survey Data (2021)

Table 4.15 stipulates the Shapiro-Wilk value is 0.313, which exceeds the threshold of 0.05, signaling that the null hypothesis of the normal distribution is credited. The computed probability value of the standardized residuals surpasses 0.05 in this situation, and so follows a normal distribution (Razali & Wah 2011).

4.8.4 Test for Multicollinearity

The study utilized the variance inflation factor (VIF), which should be below or equal to 10, and tolerance of at least 0.1, to detect multicollinearity amidst independent variables. (Bougie & Sekaran, 2010).

Table 4. 16 Collinearity Statistics

Model	Variables	Tolerance	VIF	Comment

1	Financial training	.865	1.156	No multicollinearity
	Microcredit	.927	1.079	No multicollinearity
	Saving mobilization	.850	1.177	No multicollinearity
	Farm input	.890	1.123	No multicollinearity

Source: Survey Data (2021)

Table 4.16 shows variance inflation factor (VIF) and tolerance figures ranging between 1.177 to 1.079 and the tolerance ranges between 0. 927 to 0.850 respectively thus concluding that multicollinearity was not dictated in the data set.

4.8.5 Test for Heteroscedasticity

Because it performs supplementary regression of the squared residuals on the independent variables, the Breusch-Pagan-Godfrey test was applied in testing for heteroscedasticity. Homoscedasticity cannot be assumed if the sig value of the chi-square is under 0.05. (Garson, 2013).

Table 4. 17 Breusch-Pagan Statistic

Chi-Square	**Df**	**Sig**	**Comment**
.050	1	.823	Homoscedasticity is present

Source: Survey Data (2021)

The Breusch-Pagan Godfrey test is conducted on the residuals of the predictor variables in Table 4.17, and the p-value exceeds 0.05, suggesting the existence of homoscedasticity.

4.9 Test of Hypotheses

The five hypotheses of this study were analyzed using regression analysis and a 95% level of the confidence interval was also employed to draw inferences. Composite findings for every variable were generated and these findings were utilized in regression analysis. The regression investigated both direct and moderated relationships.

4.9.1 The Direct Relationship

Four hypotheses, which included financial training, microcredit, saving mobilization, and farm inputs, were regressed on the performance of smallholder coffee entrepreneurs as stipulated below.

Table 4. 18 Model Summary

Model	R	R Square	Adjusted R Square	Std Error of the Estimate	Durbin-Watson
1	.733[a]	.537	.532	.49447	1.980

Source: Survey Data (2021)

a) Dependent Variable: Performance of smallholder coffee entrepreneurs

b) Predictors: (Constant), Farm input, Financial training, Saving mobilization, Microcredit

From the model summary, R squared = 53.7% and it's the correlation coefficient of determination.

In this case, Adjustments in financial training, micro-credit, saving mobilization, and farm inputs accounted for 53.7% of the changes in the performance of smallholder coffee entrepreneurs. To verify if residuals were auto-correlated, the Durbin Watson (DW) test was employed. There was no autocorrelation because the DW value was 1.980, which is analogous to 2.0 for residual independence.

Table 4.19 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	104.071	4	26.018	106.413	.000[b]
	Residual	89.731	367	.244		
	Total	193.803	371			

Source: Survey Data (2021)

a) Dependent Variable: Performance of smallholder coffee entrepreneurs

b) Predictors: (Constant), Farm input, Financial training, Saving mobilization, Microcredit

From the Anova table 4.19, the whole model is statistically significant at F (4, 367) = 106.413 and computed probability = 0.000 since the P-value equals 0.000 and is below 0.05.

Table 4. 20 Coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	-1.435	0.285		-5.042	0.000
	Financial training	0.468	0.042	0.431	11.220	0.000
	Microcredit	0.206	0.047	0.163	4.374	0.000
	Saving mobilization	0.461	0.049	0.362	9.331	0.000
	Farm input	0.222	0.061	0.138	3.625	0.000
a. Dependent Variable: Performance of smallholder coffee entrepreneurs						

Source: Survey Data (2021)

The regression model for the direct association that was estimated in Table 4.20 is shown below.

$Y = \mathbf{-1.435+ .468f}\ X_1\mathbf{+.206}X_2\ \mathbf{+.461}X_3\mathbf{+.222}\ X_4$

Additionally, regression analysis stipulated that the performance of smallholder coffee entrepreneurs would be at -1.435 if microfinance services are equal to zero,

4.9.2 Test of Hypothesis One

H_{01}: Financial training has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda**.** Results from Table 4.20 showed that financial training is statistically significant at $\beta = 0.468$; $t = 11.220$; $p = 0.000$, thus at a 95% confidence interval, financial training has a positive effect on the performance of smallholder coffee entrepreneurs hence the null hypothesis is rejected. Findings illustrate that increasing financial training by 1 increases the performance of smallholder coffee entrepreneurs to 0.468. This research deduces that there is a connection allying financial training and the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

In this case, expanding the number of financial training opportunities available to smallholder coffee entrepreneurs will continue to enrich them with more financial skills and knowledge, putting them in a better position to manage their finances and, boost their earnings. Amongst the indicators of financial training, credit management, and access, and training in financial negotiations, have a greater contribution than basic financial management skills and knowledge. This signifies that greater effort should be placed into exercises involving basic financial management skills and knowledge.

The outcomes of this study validate RBV's theoretical claims that intangible resources such as financial knowledge and skills acquired via financial training, as well as a unique historical sequence, are difficult to duplicate. Entrepreneurs use these resources because they tend to

provide greater returns than tangible resources, which are easily replicated by competitors (Jones & Hill, 2009).

Furthermore, the study outcomes are compatible with those of Mwangi (2015), who stated that financial literacy has an impact on small-scale farmers' economic empowerment. The results are also compatible with those of Haider et al. (2017), who claimed that financial training improved the performance of SMEs. Haider et al. (2017) continued to assert that owners of SMEs who received financial training saw a rise in sales, level of income, business assets, number of employees, and meeting household expenses, but owners of SMEs who did not receive financial training saw no improvement.

Conversely, study findings contradict Fitria and Rahman's (2018) findings that financial literacy has no impact on the sustainability of SMEs in Padang City's handicraft industry. The study also found that even when SMEs' financial literacy levels are average, financial literacy has little effect on SMEs' long-term viability. In this case, the study contributes to the existing research evidence by proving that three dimensions of financial training, namely basic financial skills and knowledge, credit management and access, and training in negotiations, all influence the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

4.9.3 Test of Hypothesis Two

H_{02}: Microcredit has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda

Results from Table 4.20 showed that microcredit is statistically significant at $\beta = 0.206$; $t = 4.374$; $p = 0.000$, thus at 95% confidence interval, microcredit has a positive effect on the performance of smallholder coffee entrepreneurs hence null hypothesis is rejected. Findings illustrate that

increasing microcredit by 1 increases the performance of smallholder coffee entrepreneurs to 0.206. This research deduces that there is a connection between microcredit and the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

The study findings uphold that providing microcredit to smallholder coffee entrepreneurs allows them to make additional investments on their farms, such as purchasing farm inputs and extending their company operations by purchasing extra land, resulting in increased production and income. Although microcredit affects the performance of smallholder coffee entrepreneurs, the contribution of various metrics varies, with the affordability of loans and penalty on default having a greater effect than credit availability. This suggests that more focus should be placed on activities related to credit availability.

The outcomes of this study validate RBV and DC's theoretical claims. RBV states that a firm should have financial resources to improve its performance (Jones & Hill, 2009). Microcredit is an example of a financial resource, and financial resources are valuable since smallholder coffee entrepreneurs need them to secure other business physical assets like land, motorcycles to boost their business performance, and no business can function without them. DC theory proposed that a firm should design, extend, and remodel its resource base using conscious decision. DC resonates well with the correct use of microcredit because smallholder coffee entrepreneurs require timely and enough financing to increase their performance.

Furthermore, the study's outcome is coherent with the findings of Onwunali *et al.* (2018), who discovered that microloans to smallholder farmers were beneficial and helpful in boosting farmers' production and livelihood levels in Iringa, Tanzania. They also agree with the findings of Solomon *et al.* (2016) who noted that microloans supplied to farmers were favorably associated with smallholder farmers' livelihoods regardless of their socioeconomic status.

In Kenya, however, Amsi *et al.* (2017) noted a slightly detrimental effect between the credit repayment period and SME financial performance, although other features of Microfinance Credit had a moderate favorable influence on SME financial performance. In this case, the study contributes to the existing research evidence by proving that credit facilities, credit affordability, and default penalties all influence the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

4.9.4 Test of Hypothesis Three

H_{03}: Saving mobilization has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda.

Results from Table 4.20 showed that saving mobilization is statistically significant at $\beta = 0.461$; $t = 9.331$; $p = 0.000$, therefore at a 95% confidence interval, saving mobilization has a positive effect on the performance of smallholder coffee entrepreneurs hence the null hypothesis is rejected. Findings illustrate that increasing saving mobilization by 1 increases the performance of smallholder coffee entrepreneurs to 0.461. This research deduces that there is a connection between saving mobilization and the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

The findings of this study accentuate the significance of saving mobilization in improving the performance of smallholder coffee entrepreneurs and therefore concur with the conclusions established by Juliet Nakabugo *et al.* (2021) that saving mobilization enhances the performance of smallholder coffee entrepreneurs. Smallholder coffee entrepreneurs should strive to increase their savings to take advantage of many benefits, such as interest rates on savings and the ability to receive quick loans, among other things.

Although saving mobilization has a substantial effect on smallholder coffee entrepreneurs' performance, the contribution of indicators varies, with access to MFI saving services and developing savings plans having a larger effect than the number of deposits per month, which is quite modest. As a result, smallholder coffee entrepreneurs should place a greater focus on activities connected to the number of deposits per month, which is currently low.

The outcomes of this study are congruent with RBV theoretical arguments, which say that a firm can have particular and important resources, but if it lacks the necessary capabilities to successfully employ these resources, it may fail to increase performance (Jones & Hill, 2009). Saving mobilization is an uncommon but useful capacity that gives a company a competitive advantage over its competitors. Entrepreneurs rarely save and have no savings strategies, but for those who do, savings help them build up their business capital, manage risks, and accumulate assets.

The findings of the study also back up Zhiri's (2017) claim that micro saving is important and favorably linked to business performance. They also concur with the findings of Omondi and Jagongo (2018), who found that savings have a favorable impact on SMEs' financial performance. Similarly, Mutuma (2020) found that saving programs helped SMEs improve their financial performance, and participants acceded that the interest rates they earned from their savings helped them grow their businesses. Withal, on contrary, Wambui (2015) noted that micro saving had a minor effect on SMEs' growth and that most SMEs never used microfinance's micro saving services. This study supplements the available research evidence by verifying that the number of monthly deposits, access to MFI saving services, and setting saving plans all influence the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

4.9.5 Test of Hypothesis four

H_{04}: Farm Inputs have no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda.

Results from Table 4.20 showed that farm inputs are statistically significant at β= 0.222; t = 3.625; p = 0.000, therefore at a 95% confidence interval, farm inputs have a significant positive effect on the performance of smallholder coffee entrepreneurs hence the null hypothesis is rejected. Findings illustrate that increasing farm inputs by 1 increases the performance of smallholder coffee entrepreneurs to 0.222. This research deduces that there is a connection between farm inputs and the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

Consequently, smallholder coffee entrepreneurs who employ farm inputs such as fertilizers, quality seedlings, and tarpaulins boost their productivity, resulting in higher earnings. MFIs should continue to grant agricultural input advances to smallholder coffee entrepreneurs because these inputs increase their output. The indicators of farm inputs had a favorable beneficial effect on the performance of smallholder coffee entrepreneurs, but the contribution of specific indicators varied as tarpaulins and coffee seedlings contributed more than fertilizers. This means that greater effort should be put into fertilizer-related activities.

The findings of the study are congruent with those of Girabi and Mwakaje (2013), who found that using inputs, such as fertilizers and improved seeds, enhanced farm yields for Credit Beneficiaries while farm yields for Non-Credit Beneficiaries remained unchanged. Furthermore, Credit Beneficiaries' farm yields were consistently higher than Non-Credit Beneficiaries' yields. They also agree with the findings of Nakasone *et al*. (2021), who affirmed that fertilizers had significantly enhanced rice and maize yields, as well as the percentage of farmers planning to use chemical fertilizers to boost their agricultural productivity. Similarly, the study results

collaborate with conclusions made by Alameraw (2020) that using approved nitrogen fertilizer and better maize varieties considerably boosted grain output for maize farming in western Ethiopia's mid-latitude region.

Furthermore, the study's outcome is commensurate with RBV and DC theoretical propositions. According to RBV, a company should have physical or tangible and valuable resources that enable it to create unique value for its clients (Jones & Hill, 2009). Farm inputs are an example of a tangible and useful resource that enhances entrepreneurs to boost the quality and quantity of their coffee yields, thereby providing special value for their customers by improving the quality and number of coffee cherries.

In addition, Teece (2007) noted that in changing environments, resources are never available to enterprises for exploitation to gain a competitive edge. Even if these resources, such as farm inputs, are available from a variety of sources, smallholder coffee entrepreneurs must make deliberate judgments to recognize and apply for these resources to employ them and meet their venture's demands. Because fertilizer application begins at the beginning of each season, timely use and application of farm inputs like fertilizers are required for better results.

4.9.6 Test of Hypothesis five

H_{05}: Government regulations have no significant moderating effect on the relationship between microfinance services and the Performance of Smallholder coffee entrepreneurs in the central region of Uganda.

Two regression models were used to evaluate this hypothesis. Microfinance was regressed on performance in the first model. However, in the second model, the performance of smallholder coffee entrepreneurs was regressed to microfinance services, government regulations, and the

link between microfinance services and government regulations. Table 4.21 displays the findings.

Table 4. 21 Model Summary for moderation

Model	R	R Square	Adjusted R Square	Std Error of the Estimate	Change Statistics					
					R Square Change	F Change	df 1	df2	Sig. F Change	Durbin-Watson
1	.646[a]	.417	.416	.57729	.417	281.944	1	394	.000	
2	.764[b]	.583	.580	.48943	.166	78.077	2	392	.000	1.951

Source: Survey Data (2021)

a. Predictors: (Constant), Microfinance services

b. Predictors: (Constant), Microfinance services, Government regulations, Product of Microfinance services, and Government regulations

c. Dependent Variable: Performance of smallholder coffee entrepreneurs

Model one confirms a significant relationship between microfinance services and the performance of smallholder coffee entrepreneurs in the central region of Uganda. Model two highlights the interplay between microfinance services and government regulation.

The change in the coefficient of determination (R-square value) = 0.166, F change = 78.077, and estimated probability = 0.000 show that government regulation has a considerable moderating influence on the relationship between microfinance and the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

Table 4. 22 ANOVA for moderation

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	93.961	1	93.961	281.944	.000[b]
	Residual	131.305	394	.333		
	Total	225.267	395			
2	Regression	131.367	3	43.789	182.803	.000[c]
	Residual	93.900	392	.240		
	Total	225.267	395			

Source: Survey Data (2021)

a) Dependent Variable: Performance of smallholder coffee entrepreneurs

b) Predictors: (Constant), Microfinance services

c) Predictors: (Constant), Microfinance services, Government regulations, Product of Microfinance services, and Government regulations.

Table 4.22 demonstrates that, in the absence of the interlinkage term, the regression model is statistically significant with F (1, 394) = 281.944 and estimated probability = 0.000b. Nevertheless, with F (3, 392) = 182.803 and estimated probability = 0.000c, the regression model including the interlinkage term is also statistically significant.

Table 4. 23 Coefficients for moderation

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	-1.691	.294		-5.759	.000	-2.268	-1.114
	Microfinance services	1.377	.082	.646	16.791	.000	1.216	1.539
2	(Constant)	-2.280	.784		-2.906	.004	-3.822	-.737

Microfinance services	1.256	.226	.589	5.556	.000	.812	1.701
Government regulations	.812	.274	1.001	2.967	.003	.274	1.351
Product of Microfinance services and Government regulations	-.124	.076	-.636	-1.616	.107	-.274	.027

Source: Survey Data (2021)

a. Dependent Variable: Performance of smallholder coffee entrepreneurs

The regression model for the moderating connection that was estimated in Table 4.23 is shown below.

Y = **-1.691+1.377** Xi..... **Model 1**

Microfinance services are statistically significant at β=1.377; t = 16.791; p = 0.000, implying that there is a link between microfinance services and smallholder coffee entrepreneurs' performance that might be regulated.

Y = **-2.280 + 1.256**Xi **+ 0.812**Z **- 0.124XZ .....Model 2**

Microfinance services are statistically significant at β =1.256; t = 5.556; p =0.000. Government regulations are statistically significant at β = 0.812; t = 2.967; p = 0.003 while the interlinkage term is statistically insignificant at β = -0.124; t = 1.616.; p = 0.107 as per the regression results for model 2.

Table 4. 24 Decision Criteria for Moderation

Model 1	Model 2	Total effect	Conclusion
β_1 = 1.377 (p<0.05)	_	_	There is an overall effect to moderate
β_1 = 1.377 (p<0.05)	β_{12} = 0.812 (p<0.05)	_	Moderating variable is an explanatory variable

$\beta_1 = 1.377$ ($p<0.05$)	$\beta_{12} = 0.812$ ($p<0.05$)	$\beta_{13=}$ -.124	Moderating variable has a moderating effect

Source: Survey Data (2021)

Table 4.24 disclosed that government regulations moderate the relationship between microfinance services and the performance of smallholder coffee entrepreneurs. β_{13}= -0.124 is the value interlinkage term signifying that for every unit growth in government regulations, the slant of microfinance services and performance of smallholder coffee entrepreneurs drops by -0.124. Therefore, at a 95% confidence interval, government regulation has a negative effect on the relationship between microfinance services and the performance of smallholder coffee entrepreneurs. Consequently, this confirms that government regulations negatively moderate the relationship between the two aforesaid variables.

These results confirm that government regulations, such as taxes and license fees, have a negative influence on the performance of smallholder coffee entrepreneurs. This signifies that the taxes charged are high and licenses are difficult to obtain, both of which limit the business operations and affect the earnings of smallholder coffee entrepreneurs. Furthermore, the study outcomes are coherent with the theoretical propositions of the Contingency theory, which states that harsh environmental conditions such as poor government regulations in terms of high taxes, inflation, and insecurity reduce entrepreneurs' profits, thereby slowing their performance (Lawrence & Lorsch, 1967).

The study outcomes are compatible with those of Lash and Batavia (2016) who found that taxes and regulations on business and finance lowered MFI microloans. They also agree with Mwasiaji's (2019), whose study found that a complex regulatory environment, rigorous customs and trade laws, high tax regimes, tight monetary and credit policies, and labor regulations all

have a detrimental impact on manufacturing firms' performance. Analogously, Amoah and Mungai (2021) found that government rules harmed the association between financial performance and microfinance services. The results, however, were statistically insignificant. Contrariwise, Otwani *et al.* (2017) found that tax had a beneficial impact on the financial performance of Kenyan companies.

Table 4. 25 Summary of Hypotheses Testing

Hypotheses	Results	Decision
$H0_1$: Financial training has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda	P= 0.000 <0.05	Rejected **$H0_1$**
H_{02}: Microcredit has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda.	P = 0.000 <0.05	Rejected **$H0_2$**
$H0_3$: Saving mobilization has no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda	P = 0. 000 <0.05	Rejected **$H0_3$**
$H0_4$: Farm Inputs have no significant effect on the performance of smallholder coffee entrepreneurs in the central region of Uganda	P = 0. 002 <0.05	Rejected **$H0_4$**
$H0_5$: Government regulations have no significant moderating effect on the relationship between microfinance services and the Performance of Smallholder coffee entrepreneurs in the central region of Uganda	P = 0. 000 <0.05	Rejected **$H0_5$**

Source: Survey Data (2021)

4.10 Qualitative Data Analysis

Financial training, microcredit, saving mobilization, farm inputs, and government regulations were among the microfinance services used in this study, and each provided qualitative replies.

4.10.1 Financial training

In the case of financial training, financial and farm management knowledge and abilities were the major financial training extended by MFIs to participants. This has enabled smallholder coffee entrepreneurs to attain skills and knowledge that they did not possess before attending financial training hence facilitating an increase in their earnings per season by enabling them to create financial objectives, better manage their funds, and maintain optimism and drive. Furthermore, such financial training is recommended to continue to uplift the performance of participants.

4.10.2 Microcredit

In this regard, 80% of the respondents appreciated that microcredit has enabled them to borrow money and complete deals on time, pay school tuition, buy a new property and develop their agriculture operations, pay workers, and solve their current concerns on time. This has limited them from selling their fresh and unready coffee cherries which earns them little pay compared to dry coffee. It is therefore recommended that MFIs should continue to avail cheap and affordable microcredit services to smallholder coffee entrepreneurs to enhance their performance.

4.10.3 Saving Mobilization

A high proportion of respondents, 90.0% agreed that saving has earned them good interest at the end of the saving period, saving has enabled them to easily borrow money from their respective SACCOs with fewer restrictions, and saving has kept their money safe. Respondents use their savings to buy reasonable assets such as motorcycles, land, build houses, and start other projects such as piggery and poultry. This has provided them with a good side income, allowing them to diversify their income and decrease their reliance on the coffee business. Consequently, it is recommended that saving mobilization be increased in favor of boosting the performance of coffee businesses.

4.10.4 Farm Inputs

Most respondents, 95% of Smallholder coffee entrepreneurs acknowledge that fertilizers have doubled their coffee harvests, and many can now harvest throughout the two seasons, which was previously impossible. However, they have invested in fewer kilograms of fertilizer than their acreage, and the interest rate on fertilizers is high. The coffee seedlings delivered to them take a long time to bear fruit, but they bear larger coffee cherries. Besides, they can withstand drought, but pests and diseases have a significant impact on them. Respondents also claimed that the quality of their dry coffee cherries had improved. The coffee cherries are now stone-free and dust-free since they are dried on tarpaulins rather than on the bare ground as was the case in the past. However, they cited inconsistencies in the distribution of tarpaulins in some districts like Masaka. To maintain their performance, coffee businesses contend that MFIs should continue to implement programs of fertilizer advances, supply of hybrid coffee seedlings, and high-quality tarpaulins.

4.10.5 Government Regulations

When it comes to government regulations, 99% of the respondents are completely unsatisfied with the government of Uganda's high taxes. Taxes, both direct and indirect, increase their expenses while lowering their final profits. Indirect taxes raise the price of farm inputs such as herbicides, pesticides, and tarpaulins, resulting in higher overall farm expenditures. Direct taxes, such as taxes on mobile money, diminish the earnings of smallholder coffee entrepreneurs, and the government should consider to reduce these taxes to improve the performance of smallholder coffee entrepreneurs.

CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

The chapter entails an overview of the research results and the study's contribution to knowledge and conclusions. The chapter concludes with policy and practice recommendations, and suggestions for future studies.

5.2 Summary

Smallholder coffee entrepreneurs primarily produce coffee, which is Uganda's principal export commodity and a source of foreign currency. Coffee production contributes significantly to the social-economic activity in Uganda, offering earnings to nearly 611,782 smallholder coffee entrepreneurs and providing jobs throughout the entire coffee value chain, hence lowering the unemployment burden. Smallholder coffee entrepreneurs are pivotal to Uganda's economy, and their contribution as vehicles of growth is paramount to achieving Uganda's Vision 2040.

In this regard, the Ugandan government and other institutions have devised various initiatives to serve as the fundamental funding mechanism for smallholder coffee entrepreneurs to enhance performance. Despite these efforts, the performance of smallholder coffee entrepreneurs has not improved. As such, this thesis probed to examine the effect of microfinance services on the performance of smallholder coffee entrepreneurs in the Central region of Uganda. Specifically, the study's goal was to determine the effect of financial training, microcredit, saving mobilization, and farm inputs on the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

The study also intended to determine if government regulations had a moderating effect on the association between microfinance services and the performance of smallholder coffee entrepreneurs in the Central region of Uganda. Resource-based, dynamic capability, credit rationing, and contingency theories were used in this study. The data was gathered from 396 smallholder coffee entrepreneurs in Uganda's five central districts using a semi-structured questionnaire. Descriptive statistics were employed to define features, and inferential statistics, such as multiple linear regression, were employed to estimate the influence of microfinance services on the performance of smallholder coffee businesses in the Central region of Uganda.

The first study objective strived to find out the effect of financial training on the performance of smallholder coffee entrepreneurs in the central region of Uganda. Financial training was found to have a favorable and beneficial effect on the performance of smallholder coffee entrepreneurs. Additionally, the study verified that basic skills and knowledge of financial management, as well as credit management and access, and negotiating training, all aided smallholder coffee entrepreneurs' performance. However, credit management and access and training in negotiations had a bigger contribution compared to basic skills and knowledge of financial management.

The second objective strived to analyze how microcredit affected the performance of smallholder coffee entrepreneurs in the Central region of Uganda. Microcredit has a beneficial effect on the performance of smallholder coffee businesses in the Central region of Uganda. Furthermore, the study acknowledged that access to finance, the affordability of credit, and the penalty for default all influenced smallholder coffee entrepreneurs' performance. However, as compared to the availability of credit facilities, the affordability of credit and the penalty for default had a greater effect. Microcredit was the least predictive of the four services of microfinance studied.

The third objective was to investigate the effect of saving mobilization on the performance of smallholder coffee entrepreneurs in the Central region of Uganda. In this case, the study affirmed that saving mobilization has a favorable effect on the performance of smallholder coffee entrepreneurs in the Central region of Uganda. Moreover, the study acknowledged that the number of deposits per month, access to MFI saving services, and making saving plans all affected smallholder coffee entrepreneurs' performance.

The fourth objective was to assess the effect of farm inputs on the performance of smallholder coffee entrepreneurs in the Central region of Uganda. Farm inputs have a statistically beneficial effect on the performance of smallholder coffee entrepreneurs in the Central region of Uganda. This research revealed that increasing farm inputs improves the performance of smallholder coffee entrepreneurs in the Central region of Uganda. Furthermore, the study acknowledged that fertilizers, coffee seedlings, and tarpaulins influenced the performance of smallholder coffee entrepreneurs. Coffee seedlings and tarpaulins contributed more than fertilizers.

The fifth study objective was to establish the role of government regulations in moderating the association between microfinance services and the performance of smallholder coffee entrepreneurs. The objective concentrated on taxes and license fees, and the results indicated that government regulations have a negative moderating effect on the association between microfinance services and the performance of smallholder coffee entrepreneurs in the Central region of Uganda.

5.3 Conclusion

In Uganda, transforming smallholder agricultural enterprises into functioning and sustainable businesses has become a top priority for attaining middle-income status by 2040. Consequently,

different financing options and business enabling services that smoothen operations and boost business earnings are required to achieve this goal. Smallholder coffee entrepreneurs need microfinance services in this regard to achieve greater coffee production and increase their overall performance. Examples of such services include financial training, micro-credit, savings mobilization, and farm inputs.

Financial training service offered to smallholder coffee entrepreneurs has a statistically significant favorable effect on their performance. Through their participation in financial training programs, smallholder coffee entrepreneurs can develop financial and farm management knowledge and skills, which enhance their performance. Additionally, the utilization of microloans by smallholder coffee entrepreneurs in the Central region of Uganda has a considerable favorable effect on their performance. Microcredit activities have aided smallholder coffee entrepreneurs to borrow money to purchase more property, develop farm businesses, and conclude timely deals, pay workers, and resolve immediate concerns.

The utilization of saving mobilization services by smallholder coffee entrepreneurs in the central region of Uganda has a favorable effect on their performance. In light of this, the study recognized that saving has enabled smallholder coffee entrepreneurs to borrow money more quickly with fewer limitations than commercial banks, and with a high rate of return at the end of the saving period.

Moreover, farm inputs are statistically significant and enhance the performance of smallholder coffee entrepreneurs in the Central region of Uganda. The study noted that farm inputs employed by smallholder coffee entrepreneurs have doubled their coffee harvests, increased the size of coffee cherries, and improved the quality of dry coffee cherries with fewer stones and dust.

Finally, government regulations in Uganda have a detrimental effect on the link between microfinance services and the performance of smallholder coffee entrepreneurs. On the whole, the study found out that license fees and taxes are high, putting a ceiling on smallholder coffee entrepreneurs' earnings.

5.4 Contribution of the Study to Knowledge

The influence of microfinance services on the performance of smallholder coffee entrepreneurs in the Central region of Uganda was explored in this study. Although earlier empirical literature showed the effect of microfinance services on business performance, they were concentrated in SMEs and maize farmers. Financial literacy, microcredit, savings mobilization, fertilizers, and micro-insurance are all examples of microfinance services that have been shown to influence business performance in empirical studies. However, these studies showed censorial limits in the theory, methodology, context, concept, and coherence of results.

To complement the available literature, this study effectively tests the research hypotheses that financial training, micro-credit, savings mobilization, and farm inputs have no significant effect on the performance of smallholder coffee entrepreneurs in central Uganda. The hypothesis that government regulations have no moderating effect on the association between microfinance services and the performance of smallholder coffee entrepreneurs in central Uganda was also satisfactorily evaluated in this study.

In addition, the study incorporates a moderating variable (government regulations) into the conceptualization of the link between microfinance services and the performance of smallholder coffee entrepreneurs. The conceptual framework was enhanced to provide a deeper comprehension of the study's variables. This diagram aided the researcher in drawing intuitive

inferences from several studies and integrating them into this one by connecting all the variables and their relationships. This model has implications for both scholars and practitioners in the field of microfinance.

Moreover, this research supplements the theoretical literature by giving groundwork for verifying the theoretical justifications used to establish the research hypotheses. The research backs up RBV's theory that intangible resources, such as financial knowledge and skills acquired via financial training, evolve in a unique historical sequence and are difficult to duplicate. As a result, entrepreneurs require these resources because they tend to provide better results than tangible resources that are easily replicated by competitors.

Furthermore, the research proves RBV's argument that a firm should have financial resources to enhance its performance. Microcredit is an example of a financial resource, and financial resources are valuable since coffee entrepreneurs require them to procure other business physical assets such as land and motorcycles in favor of uplifting their business performance, and there is hardly a firm that can function without them.

5.5 Recommendations for Policy and Practice

The study findings have crucial repercussions for microfinance institutions, the Ugandan government, and the general population, particularly smallholder coffee entrepreneurs. Consequently, numerous recommendations have been given.

Financial training has a beneficial effect on the performance of smallholder coffee entrepreneurs in the Central region of Uganda. MFIs should introduce more programs, seminars, and campaigns to supplement and enhance the existing financial training. Before offering information related to financial training initiatives to smallholder coffee entrepreneurs, MFIs

should examine the relevance of the content. Consequently, smallholder coffee entrepreneurs will be able to gain more crucial financial skills and information, putting them in a better position to manage their business finances, hence improving their long-term performance.

Moreover, microcredit has a favorable influence on the performance of smallholder coffee entrepreneurs in central Uganda. Therefore, MFIs should make credit more accessible to smallholder coffee entrepreneurs by opening new branches, appointing different agents in different sub-counties, easing lending limits, lowering interest rates, and extending the payback period. This will enable smallholder coffee entrepreneurs to borrow money more easily and handle problems more quickly, thus enhancing their performance.

In addition, saving mobilization has a beneficial effect on the performance of smallholder coffee entrepreneurs in the Central region of Uganda. In this circumstance, smallholder coffee entrepreneurs should always save their deposits in time to avoid the harsh penalties for irregular saving because this practice eliminates many of them and they miss out on saving opportunities. SACCOs should also use a beneficial manner of sharing interests. This will eventually encourage smallholder coffee entrepreneurs to save more money, allowing them to earn more interest and obtain low-cost, easy loans, improving their overall performance.

Since farm inputs have a favorable effect on the performance of smallholder coffee entrepreneurs, MFIs should reduce the interest rate on fertilizers and focus on the reducing-balance repayment strategy. MFIs should extend repayment periods to at least six months, and enough fertilizer should be distributed to coffee farmers basing on their acreage.

The government through the ministry of agriculture, animal industry and fisheries, MFIs, and other NGOs, should ensure that smallholder coffee entrepreneurs receive clonal coffee seedlings

that take 9 months to bear and are resistant to pests and diseases. This will allow smallholder coffee entrepreneurs to grow high-quality, disease-resistant coffee plants that bear vast quantities of large-sized coffee cherries, enhancing their productivity.

The government of the Republic of Uganda through the ministry of finance should lower indirect taxes on all farm inputs. These taxes raise the price of farm inputs, resulting in higher farm expenditures and lower purchasing power. Reduced indirect taxes will allow smallholder coffee entrepreneurs to buy adequate farm supplies thus boosting coffee output. It will also enable them to save more money for new investments, enhancing the performance of the coffee business.

The Uganda registration services bureau should also shorten the time required to secure a license for the founding of genuine coffee cooperatives, as well as the high costs involved. This will make it easier for various farmer groups in Uganda's many sub-counties to obtain these licenses and participate in the coffee business on a broad basis, as well as export coffee to other countries.

5.6 Recommendations for Further Study

This research probed the effects of microfinance services on the performance of small-scale coffee farmers in the Central region of Uganda. It also focused on determining whether government regulations had a moderating effect on the link between microfinance services and the performance of smallholder coffee entrepreneurs in the Central region of Uganda. As a result, study findings are constrained to the performance of small-scale coffee businesses in the Central region of Uganda.

Moreover, the study overlooked the effect of coffee prices on the performance of smallholder coffee entrepreneurs in central Uganda. Therefore, subsequent research needs to assess the effects of coffee prices on the performance of smallholder coffee entrepreneurs in central

Uganda. Additionally, numerous variables such as competition, and market access that may affect the association between study variables were not considered in this study. Therefore, further research should examine these variables while concentrating on the performance of smallholder coffee entrepreneurs.

To establish any available relationship, more research should concentrate on assessing the effects of microfinance services on the performance of smallholder coffee entrepreneurs in Uganda's other regions, namely the eastern, western, and northern regions, as well as other entrepreneurs dealing in other products like maize, matooke, and rice, cotton, and tea, among others.

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APPENDICES

Appendix 1: Questionnaires for smallholder coffee entrepreneurs

Dear Respondent,

I am Nakabugo Mary Juliet a student of Kenyatta University undertaking a Master's of Science Degree in Entrepreneurship Development. In partial fulfillment of the requirements for the award of a Master's of Science Degree in Entrepreneurship Development, I am undertaking research titled Microfinance services and Performance of Smallholder coffee entrepreneurs in the Central region of Uganda. The questionnaire provides a set of structured questions seeking responses on the topic as provided. Please be as objective as possible in filling this questionnaire. All responses offered will remain confidential; and will be used purely for academic purposes.

SECTION A: BIODATA & STATUS

INSTRUCTION: Please kindly tick where applicable or write brief explanations

1. Indicate district of residence ……..……

2. Gender

Male [ ] Female [ ]

3. Age:

a) Below 20 [ ] b) 21-30 [ ] c) 31-40 [ ] d) 41-50 [ ] e) Over 50 [ ]

4. Marital status

a) Single [ ] b)Married [ ] c)Divorced [ ] d)Separated [ ] e)window[ ] widower [ ]

5. Level of education?

Primary [ ] Secondary [ ] Certificate [ ] Degree [ ] Post graduate [ ]

Never attended school [ ]

6. Farm size

Less than one acre [ ] 1-4 acres [ ] 5-9 acres [ ] above 9 acres [ ]

SECTION B: FINANCIAL TRAINING

7. How often do you get training from microfinance institutions?

a) No training at all [ ]

b) Only when I request for a loan [ ]

c) They call for regular training programs [ ]

d) Regular visits at my business premises [ ]

8. Which of the following training does microfinance offer to you?

Credit use [ ] Farm Management [ ] saving [ ] Book keeping skills [ ]

Debt management [ ] budgeting [ ]

9. For the following statements please indicate your opinion to what extent you agree or disagree with them by ticking (√) where applicable.

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Basic skills and knowledge in financial management You are now able to make a budget and plan for expenditures					
Training from microfinance institutions has enabled you to maintain a record of all business transactions.					
Financial knowledge provided to you has enabled you to effectively invest money					
Financial knowledge and skills provided to you are adequate					
Credit management and access It is easy to access credit services from MFIs in this area					
Microfinance institutions offer training on credit management					
You can make a plan to reduce debt and avoid excessive debt					
You borrow with the full understanding of terms and conditions					
Training in financial negotiations. You can now negotiate for what you want in business transactions					
The Financial knowledge gained through training has improved your economic and business decision-making ability					
It is easy for you to take an active role in decisions over your earnings					
You are now Committed to stick to negotiating objectives					

10. How would you rate the financial training services offered by MFIs and the performance of your firm?

i) Very poor [ ] Poor [ ] Good [ ] Very good [ ] Excellent [ ]

11. What was your average level of income before you received financial training from any microfinance institution?

Below 1,000,000 [ ]

1,000001- 5,000,000 [ ]

5,000,001-10,000,000 [ ]

More than 10,000,000 [ ]

12. What is your average current income after receiving financial training from any microfinance institution?

Below 1,000,000 [ ]

1,000001- 5,000,000 [ ]

5,000,001-10,000,000 [ ]

More than 10,000,000 [ ]

13. Why do you think it is relevant for coffee entrepreneurs to get financial trainings?

a) ……

b) ……

SECTION C: MICROCREDIT

14. For the following statements please indicate your opinion to what extent you agree or disagree with them by ticking (√) where applicable.

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Availability of credit facilities Microfinance institutions always borrow the amount of money you apply for.					
Microcredit is easy to access from MFIs					

Getting a business loan from microfinance involves short procedures					
Affordability of credit facilities The interest rate charged by microfinance institutions is favorable.					
The repayment period given is enough.					
Microfinance institutions lend you any amount of money basing on a credit limit					
Microfinance institutions lend you money basing on your capacity to pay					
Microfinance institutions lend you money in the presence of a collateral security					
Penalties on default On failure to pay off the loan, guarantors clear on your behalf					
Microfinance institutions always extend the repayment period on failure to clear to zero balance					
Microfinance institutions never increase interest rates once you fail to pay on time					
Microfinance institutions handle credit defaulters well					

15. What was your average level of income before you received a loan from any microfinance institution?

Below 1,000,000 [ ]

1,000001- 5,000,000 [ ]

5,000,001-10,000,000 [ ]

More than 10,000,000 [ ]

16. What is your average current income after receiving a loan from any microfinance institution?

Below 1,000,000 [ ]

1,000001- 5,000,000 [ ]

5,000,001-10,000,000 [ ]

More than 10,000,000 [ ]

17. How have loans gotten from microfinance institutions uplifted your coffee business?

a) …….

b) ……

SECTION D: SAVING MOBILIZATION

18. For the following statements please indicate your opinion to what extent you agree or disagree with them by ticking (√) where applicable.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Number of deposits per month The more saving deposits you make per month; the more interest you earn.					
There are minimal penalties for irregular deposits regarding saving per month					
Access to MFI saving services The procedures for opening a savings account are easy					
It is convenient and easy for you to make deposits into your account					
Different microfinance institutions offer micro saving services to you					
You can access your savings any time you are in need.					
Making Saving plans Your savings earn good interest rates at the end of the saving period.					
You spend less to increase your savings					

You are confident in the benefits of savings					

19. What was your average level of income before saving any microfinance institution?

Below 1,000,000 [ ]

1,000001- 5,000,000 [ ]

5,000,001-10,000,000 [ ]

More than 10,000,000 [ ]

20. What is your average current income after saving any microfinance institution?

Below 1,000,000 [ ]

1,000001- 5,000,000 [ ]

5,000,001-10,000,000 [ ]

More than 10,000,000 [ ]

21. What inspires you to keep on saving with microfinance institutions?

a) ……

b) ……

SECTION D: FARM INPUTS

22. For the following statements please indicate your opinion to what extent you agree or disagree with them by ticking (√) where applicable.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Fertilizers Coffee yields always increase due to fertilizer advance					
The period for fertilizer repayment is enough and flexible					
The interest rate charged on fertilizer advance is low					
Getting coffee fertilizer					

advance involves short procedures					
You are always happy with the quality and quantity of coffee fertilizers disbursed to you.					
coffee seedlings Coffee seedlings given to you are disease resistant					
The Coffee seedlings you receive give higher yields					
Coffee seedlings provided to you are drought resistant					
You are contented with the quality and quantity of coffee seedlings given to you.					
Tarpaulins Tarpaulins offered to you on credit have increased the quality of your dry coffee cherries					
The period for tarpaulin repayment is enough.					
You are always happy with the quality and size of the coffee tarpaulin disbursed to you.					

23. For how long have you been on the farm input advance program?

Less than 1 year [ ] 1-3 years [ ] more than 3 years [ ]

24. Before using farm inputs advance given to you by microfinance institutions, did u always harvest coffee during your fly season?

Yes [ ] No [ ]

25. If yes, how many tins or bags of dry cherries on average did you always harvest in fly season?

……

26. How many tins or bags of dry cherries on average do u harvest in the fly season after receiving fertilizer advance?

……

27. What was your average level of income before you received farm inputs advance from any microfinance institution?

Below 1,000,000 [ ]

1,000001- 5,000,000 [ ]

5,000,001-10,000,000 [ ]

More than 10,000,000 [ ]

28. What is your average current income after receiving farm inputs advance from any microfinance institution?

Below 1,000,000 [ ]

1,000001- 5,000,000 [ ]

5,000,001-10,000,000 [ ]

More than 10,000,000 [ ]

29. What benefits have you enjoyed from getting farm inputs on credit from microfinance institutions?

a) …….

b) …….

SECTION E: GOVERNMENT REGULATIONS

30. Fill the table below and indicate by ticketing (√) your opinions regarding taxes and license fees that you pay

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Taxes Taxes charged by the government on mobile money you receive as microcredit offered by microfinance institutions are favorable					
Prices of coffee fertilizers are low irrespective of taxes imposed by the government.					
It is cheap to buy tarpaulins irrespective of the heavy taxes levied on them.					
License					

Without a coffee license, you are free to participate in the coffee business on a large scale					
Obtaining a license to establish a coffee cooperative and participate in coffee trading is affordable					
The fee you pay while obtaining a coffee business license has no impact on your business performance					

31. In what ways do taxes that you pay to affect the performance of your business?

1…….

2……

SECTION F: PERFORMANCE OF SMALLHOLDER COFFEE ENTREPRENEURS

32. Fill the table below and indicate by ticketing (√) your opinions regarding your business performance

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Number of employees The number of your employees has increased in your enterprise ever since you started using microfinance products and services.					
Because of microfinance services, you can now hire a different number of employees.					
You have hired permanent employees to work in your coffee business because of microfinance services					
Net profit Net profit has increased due to microfinance services					
Your business is doing well in terms of profits ever since you joined microfinance services					

Your business can meet all the operational costs					

33. What is your average business net profit each year?

Below 1,000,000 [ ]

1,000001- 5,000,000 [ ]

5,000,001-10,000,000 [ ]

More than 10,000,000 [ ]

34. Has your business performance improved after the use of microfinance services and products?

Yes [ ] No [ ]

35. If no, kindly explain why it has not changed after using microfinance services and products?

a) …….

b) …….

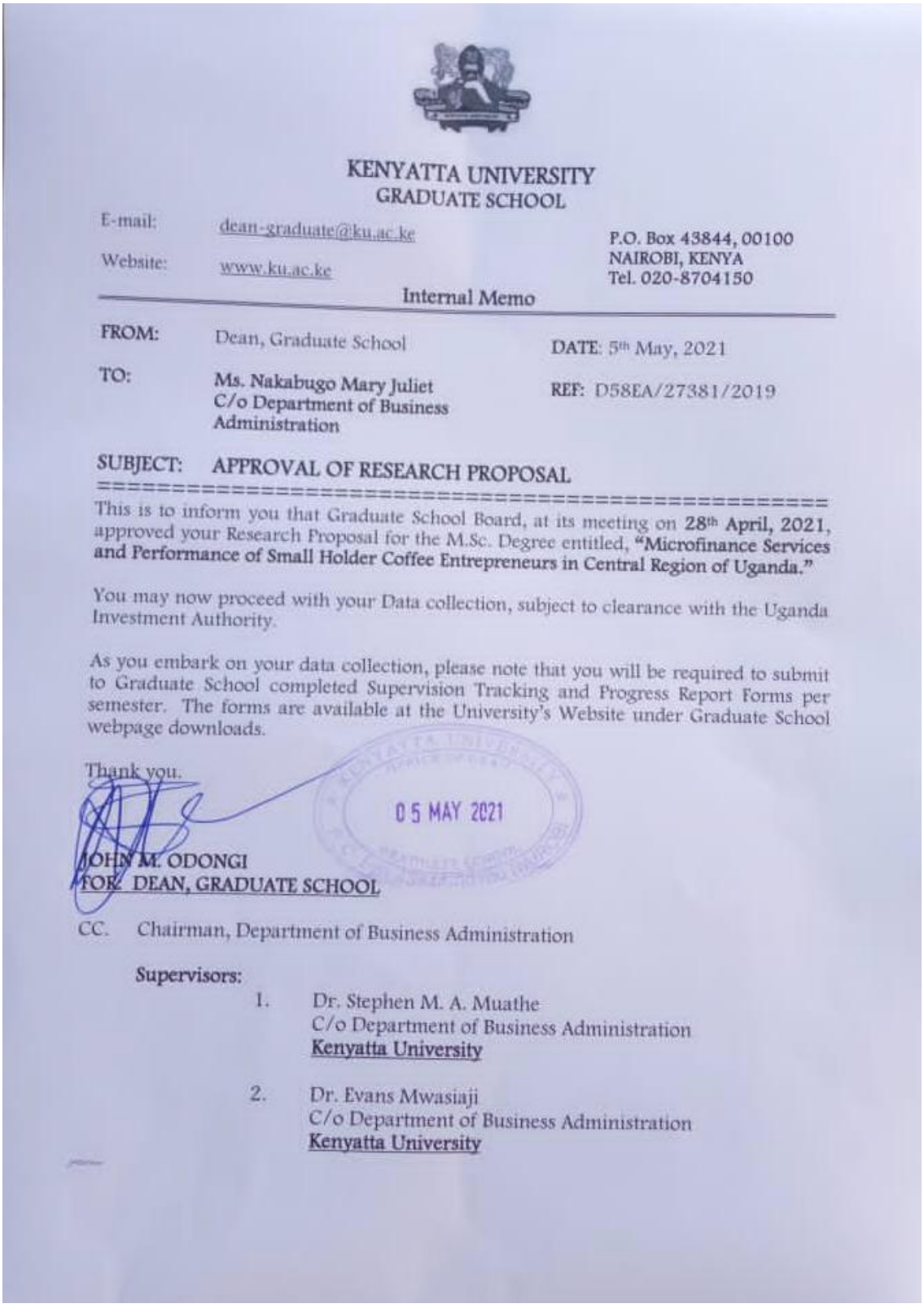
Thank you for participating in this study

Appendix 2: Distribution of the Target population

Cluster	Number of respondents	Percentage of the total
Buikwe	14,923	2.43
Bukomansimbi	39,013	6.38
Butambala	12,672	2.1
Buvuma	7,912	1.29
Gomba	12,793	2.1
Kalangala	548	0.89
Kalungu	36,490	5.96
Kampala	0	0
Kasanda	11,253	1.84
Kayunga	25,151	4.11
Kiboga	14,109	2.31
Kyankwanzi	19,400	3.17
Kyoteera	14,000	2.29
Luweero	55,126	9.01
Lwengo	23,068	3.77
Lyantode	1,088	0.18
Masaka	71,286	11.65
Mityana	96,560	15.78
Mpigi	51,576	8.43
Mubende	21,849	3.57
Mukono	40,019	6.54
Nakaseke	16,400	2.68
Nakasongola	9,700	1.59
Rakai	11,495	1.88
Sembabule	3,941	0.64
Wakiso	1,410	0.23
Total	611,782	100

Source: UBOS (2014)

Appendix 3: Approval of Research Proposal



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Internal Memo

FROM: Dean, Graduate School

DATE: 5th May, 2021

TO: Ms. Nakabugo Mary Juliet
C/o Department of Business Administration

REF: D58EA/27381/2019

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board, at its meeting on 28th April, 2021, approved your Research Proposal for the M.Sc. Degree entitled, **"Microfinance Services and Performance of Small Holder Coffee Entrepreneurs in Central Region of Uganda."**

You may now proceed with your Data collection, subject to clearance with the Uganda Investment Authority.

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

Thank you.

05 MAY 2021

JOHN M. ODONGI
FOR: DEAN, GRADUATE SCHOOL

CC. Chairman, Department of Business Administration

Supervisors:

1. Dr. Stephen M. A. Muathe
C/o Department of Business Administration
Kenyatta University

2. Dr. Evans Mwasiaji
C/o Department of Business Administration
Kenyatta University

Appendix 4: Research Authorization

UGANDA INVESTMENT AUTHORITY

The Investment Centre, TWED Plaza, Plot 22, Lumumba Avenue.
PO Box 7418, Kampala Uganda. I Tel: +256 313-301000, +256 313-301100
Email:.info@ugandainvestment.go.ugl Website: www.ugandainvest.go.ug

ODG 09/01

Date: 21 st May 2021

The Dean Graduate School
Kenyatta University
P.O Box 43844, 00100 Nairobi, Kenya

RE: RESEARCH AUTHORISATION FOR MS. NAKABUGO MARY JULIET.
REG. NO. D58EA/27381/19

Uganda Investment Authority (UIA) acknowledges receipt of Juliet's introductory letter, Ref: D58EA/27381/2019 dated 5 th May 2021.

On behalf of the Institution, I promise to give her the required information for her MSc Thesis Proposal entitled, "Microfinance Services and Performance of Small Holder Smallholder coffee entrepreneurs in Central region of Uganda".

Yours Sincerely,

Daniel Kitone
DEPUTY DIRECTOR-RESEARCH AND PLANNING
c.c Ms. Nakabugo Mary Juliet.