THE IMPACT OF MICROCREDIT ON LIVELIHOOD IMPROVEMENT OF WOMEN IN MUHANGA DISTRICT, RWANDA

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends to the Open University of Tanzania the research dissertation titled: ***"The Impact of Microcredit on Livelihood Improvement of Women in Muhanga District, Rwanda",*** in partial fulfilment of the requirements for the Degree of Master of Business Administration of the Open University of Tanzania.

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Prof. Joseph Magali

(Supervisor)

……

Date

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DECLARATION

I, **Felix Ndayambaje,** do hereby declare that this dissertation is my original work and that it has not been submitted and will not be submitted for any academic award in any other University for a similar or any other degree award. It is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfilment of the requirements for the Degree of Master of Business Administration of the Open University of Tanzania.

Signature

……

Date

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ABSTRACT

The study entitled “the impact of microcredit on livelihood improvement of women in Muhanga district, Rwanda” was conducted for assessing the validity of seven specific objectives such as to assess the impact of microcredit on women income, asset acquisition, productivity, business capital, health and education, number of meals and house building or maintenance. The sample size was 309 women beneficiaries of CLECAM EJOHEZA Plc microcredits who were randomly and systematically selected out of 1349 of total population. The study used primary data which were collected using structured questionnaire and entered in SPSS version 20. The study results revealed a positive correlation between loan size borrowed and increase of all tested indicators namely women income, value of assets, overall production, business capital, number and quality of meals, and house construction or maintenance, and improved education fees and health services. But on the other hand, there is a negative correlation between loan size and crops production. In summary, microcredits have a positive impact on women’s livelihoods in Muhanga district, fostering economic empowerment, livelihood enhancement, and poverty reduction. The study concludes that there is a significant impact of microcredit on women livelihood improvement in Muhanga district. The study recommends policy makers set loans provisions with suitable conditions and increase partnership between the government, microfinance institutions and the private sector.

Keywords: *Impact of Microcredit; Livelihood Improvement, Rwanda*

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LIST OF SYMBOLS, ABBREVIATIONS AND ACRONYMS

ANOVA : Analysis of Variance

EU : European Union

EUR : Euro

ISALS : Internal Savings and Lending Schemes

Kg : Kilo-gramme

MFI : Micro-Finance Institutions

NGOs : Non-Governmental Organizations

NISR : National Institute of Statistics of Rwanda

OLS : Ordinal Least Square

PSM : Propensity Score Matching

QIAM : Quantitative Impact Assessment Model

RWF : Rwandan Francs

SACCO : Saving and Credit Cooperatives

SDG : Sustainable Development Goals

SPSS : Statistical Package for Social Sciences

SWOT : Strength, weaknesses, Opportunities and threats.

ToC : Theory of Change

TVET : Technical and Vocational Education and Training

VSLs : Village Savings and Loans

WLI : Women livelihood improvement

CHAPTER ONE

INTRODUCTION

1.1 Overview

This is the first chapter which is the general introduction. It briefly comprises the background of the study, problem statement, objectives, research questions, hypotheses, significance and delimitation of the study and brief description of dissertation structure.

1.2 Background of the Study

The essence of MFIs is poverty alleviation and access to finance by offering microcredits to marginalized people particularly including women, in a purpose of increasing their income towards their livelihood improvement. Various authors mentioned the impact of microcredits on women income in their studies. Studies done in America and Europe were Quibria (2015) in Maryland, Baumert (2012) in German, and Bildirici and Özaksoy (2017) in Turkey in Middle East. Studies done in Asia were Islam et al. (2016), Shamim and Hossain (2019) in Bangladesh, Than (2019) in Myanmar, Dubey et al. (2021), Datta and Sahu (2021) in India, Alshammari and Daud (2021) in Jordan, and Yu et al. (2020) in China. Studies done in Africa were Olajide (n.d) and Bagudu (2018) in Nigeria, Zelu et al. (2022) in Ghana, Hanur and Goshu (2023) and Mekonnen (2017) in Ethiopia. Studies done in the East Africa were Isoto and Kraybill (2019) in Uganda. The literature showed that the studies didn't integrate the women income on women livelihood improvement. Also, there were no available studies done in Muhanga District, in Rwanda.

Some studies also pointed on the impact on women asset possession or increase to address the issue raised by Bird (2018). To mention a few, in Europe there were Muharremi and Madani (2021) in Albania. In Asia we had Fadhl (2019) in Lebanon, Jiang et al. (2020) in China, Alshammari and Daud (2021) in Jordan, Al-shami et al. (2021) in Yemen and Dubey et al. (2021) in India. The studies in Africa were Abdallah Ali et al. (2020) in Djibouti, Chitema and Chitongo (2020) in Zimbabwe, Yadeta and Gobena (2020), Mengstie (2022), Shumye (2023) and Hanur and Goshu (2023) in Ethiopia. The studies in East Africa were Muhwezi (2021) and Isoto and Kraybill (2019) in Uganda. The objectives of mentioned studies were impact on women empowerment, while asset possession was among other indicators. Also, studies in Rwanda focused on rural women empowerment.

Regarding women productivity, Benaglio et al. (2017) generally in Europe and Zioło and Luty (2020) in Poland stressed that one of the target groups for microloans is women. Fwamba et al. (2015) in developing countries investigated women entrepreneur's empowerment regarding self- employment, access to finance, considerable saving amount and asset acquisition and possession. Studies in Asia were Sahu et al. (2021) and Datta and Sahu (2021) in India mentioned the employment in rural area and Al-Shami et al. (2016) in Malaysia pointed on women business activities through MFIs. In Africa, there were Chitema and Chitongo (2020) in Zimbabwe, Mengstie (2020) in Ethiopia and Merroun and Hamiche (2023) in Morocco. Furthermore, in East Africa, Namayengo et al. (2023) in Uganda in assessing growth in agricultural production for rural women concluded that microcredit is thus unlikely to lead may negatively affect food security. Therefore,

according to the literature analysis there were no available studies linking microcredits with women productivity in a way of improving livelihood, especially in Muhanga district.

Looking on the impact on women business capital, studies in developing countries, namely Banto and Monsia (2020) aligned that women use their loans for consumption rather than investment. Studies in Asia were Anchhangbo (2017) in Nepal, Al-Shami et al. (2016) and Haque et al. (2021) in Malaysia, Shafique and Siddique (2020) in Pakistan, while in Sri Lanka, Rathnayaka and Silva (2023) concluded that microcredits didn't increase the monthly income, investment, and living conditions of women in rural areas. Studies in Africa were Alam and Azad (2021) in Ethiopia. In East Africa, studies were Rwela (2023) and Tundui and Tundui (2020) in Tanzania. Following the analysis of literature there were few studies linking the microcredits with women business capital and the impact on their livelihood. Especially, there were no available studies in Muhanga district in Rwanda.

Concerning the impact on health and education, in Europe there were Basto et al. (2020) in Portugal and Muharremi and Madani (2021) in Albania. Studies done in Asia were Hossain et al. (2017) Bangladesh, Fayyaz et al. (2016) in Pakistan and Santoso et al. (2020) in Indonesia. Maaitah (2019) in Jordan revealed that the level of education, social status and the whole dimension of social empowerment have not been affected by profitability policy, while Razith and Nihara (2022) in Sri Lanka supported the relationship and strength between microcredit and women livelihood

namely poverty, education, saving, family size. Studies in Africa were Wondimu et al. (2023) in Ethiopia, Kaka (2022) in Nigeria, and Chitema and Chitongo (2020) in Zimbabwe focused on the role of ISALs. Studies in East Africa were Rwela (2023) in Tanzania who considered all members' livelihood outcomes and Kevela and Magali (2022) in Tanzania aligned that education had a moderating role on the impact of SACCOS microcredits and empowerment of the women headed households. In Rwanda Igihozo (2017) pointed on the education loan but didn't measure the impact on livelihood. Considering the literature review there were a few studies linking microcredits with women livelihood improvement in terms of health and education. Particularly, it was difficult to find out the studies in Muhanga District, in Rwanda.

To analyze the impact in number and quality of meals/food, in America, Feldhoff et al. (2019) concluded that microfinance has a significant positive effect on school and food expenditure but no apparent effect on entrepreneurship in Mexico. The studies in Asia were Aguja et al. (2024) in Philippines, Islam (2022) and Islam et al. (2016) in Bangladesh and Shahid and Bohara (2020) in Nepal. All the above were not specific for women borrowers. Studies done in Africa were Okesina (2021) and Izekor and Ilavbarhe (2021) in Nigeria. In East Africa, the studies were Namayengo et al. (2023) and Namayengo et al. (2018) in Uganda who focused on agriculture and food security. In Rwanda there were Nsabimana (2024) and Habimana and Haughton (2022). This analysis of the literature showed that there were no available studies which integrated the microcredits and the number or quality of meals/food for women borrowers towards their livelihood improvement specifically in Muhanga district, in Rwanda.

Looking on the improvement of women housing, some authors pointed out on the utilization of loans to buy, build or repair their houses. In Europe, Martin et al. (2019) investigated the effects of a housing boom on credit to non-housing firms. In Asia there were Rahman and Ley (2020) and Al-Amin and Ar- Rashid (2022) in Bangladesh, Kapoor (2019) in India, and Hushmat and Basri (2023) in Pakistan. Studies in Africa were Johnson (2015) in Kenya and Mukhooli (2015) in East Africa who established the effect of microcredit interventions on women's empowerment in Uganda, Kenya and Tanzania. This literature analysis showed that there were few studies which integrated the women house building or repair and acquired loan specifically in Muhanga district in Rwanda.

Muhanga district is one among 30 Rwandan districts dominated by rural area and less economic development activities. According to the NISR (2022), it was having 358,433 populations with 184,818 females. By the labour-force participation rate among the resident population aged 16 years and above by sex, Southern Province, district, and area of residence, it was found that only 34% of total women in Muhanga district are working. Among the available information, there was a lack of general overview on the Muhanga district women with access to microcredits and which activities women developed using microcredits. Thus, this study intended to assess the impact of microcredits on livelihood improvement of women in Muhanga district, Rwanda.

1.3 Statement of the Problem

According to Bird (2018), globally, gender inequity causes women to remain poorly paid and in unsecured work, not owning assets or owning fewer than men, and leave them blocked from having the similar roles, deprive their way of earning income, limited access to education, etc. The consequence infiltrates into all other social, political and economic domains and undermine crucial programs of Sustainable Development Goals (SDGs) which need to be achieved by the way of leaving no one behind. Different countries elaborated policies of eliminating this inequity and inequality and programs have been put in place where different MFIs got into process to accelerate access to finance by offering microcredits to marginalized people. In their study, Abuto et al. (2022) with evidence from Ethiopia, revealed that woman was still considered a housewife and leave high income-generating activities to husband due to the local norms. This problem statement aimed to investigate how microcredit interventions specifically benefit women towards their overall livelihood improvement.

While there was substantial research on microcredit programs globally, it was difficult to find out studies specifically focusing on the women livelihood improvement in Muhanga District in Rwanda. Investigating the unique context, challenges, and opportunities faced by women in this specific region would provide valuable insights (Akhter & Cheng 2020). However, there was a need to explore the long-term effects of microcredits on women's livelihoods. The study aimed to assess benefits of the loan repayment period beyond economic indicators, there was a gap in assessing the holistic impact of microcredits.

The study concentrated the impact of microcredits on women's income, business capital, health, education, asset, meals/food, house repair or building. Understanding how microcredits influence various dimensions of women's lives was crucial. Microcredit programs often assumed that empowering women economically automatically translates to empowerment in other spheres (Huque, 2017). However, there was a need to explore whether women gain from the elaborated programs.

1.4 Research Objectives

This study is divided into two categories of research objectives as stated below:

1.4.1 General Objective

This study was aimed at assessing the impact of microcredits on livelihood improvement of women in Muhanga district, Rwanda.

1.4.2 Specific Objectives of the Study

i. To assess the impact of microcredits on women income in Muhanga District.
ii. To examine the impact of microcredits on increasing women assets in Muhanga District.
iii. To test the impact of microcredits on increasing women productivity in Muhanga District.
iv. To assess the impact of microcredits on women business capital in Muhanga District.
v. To examine the impact of microcredit on women health and education in Muhanga District.

vi. To determine the impact of microcredits on women number of meals in Muhanga District.

vii. To review the impact of microcredits on women house building or maintenance in Muhanga District.

1.5 Significance of the Study

The study evaluated the "impact of microcredits on livelihood improvement of women in Muhanga district, Rwanda". This is an interesting research project for the scientist, stakeholders for women livelihood change and microcredits access, Open University of Tanzania, other learning institutions (universities) and other researchers. Rwanda intends to become a middle-income country by 2050 (NISR, 2022). This would be achieved with a joint sector development which also included microcredits agencies and also with joint people both men and women (Akhter & Cheng 2020). However poor access to microcredits and poor utilization may hinder this vision of 2050 which focuses on improved livelihood of the population (Daniels, 2014). Due to that, this study concentrated on assessing the best practices ensured by women beneficiaries of microcredits in Muhanga district toward livelihood improvement.

In this research, data collector got interested in applying theoretical skills and developing practical skills while conducting an applied study with data collection. Here also the researcher got an opportunity for developing skills but also it was a method of meeting the academic criteria and requirements for a master's degree program.

Theories and field study findings are relevant enough to facilitate microcredit institutions management to improve the way of loan delivery to women beneficiaries and the way of facilitating them toward livelihood change. The researcher also concluded in recommending possible measures necessary for best practices toward women livelihood change.

1.6 Delimitation of the Study

This study focused on domain of microcredits and women livelihood improvement and all other domains were not scope of this study. Geographically, it was delimitated to Muhanga District women in their living place, mainly women using microcredits, specifically women beneficiaries of CLECAM EJO-HEZA plc to its loan delivery for the period of 4 years counted from calendar year period 2020-2023.

1.7 Brief Description of Thesis Structure

This research report is organized into five chapters. The first chapter is the general introduction briefly comprising the background, problem statement, objectives, hypotheses, significance, delimitation and limitations of the study and brief description of thesis structure. Chapter two covers the literature review which reviewed briefly the ideas of preceding authors about the topic, starting with definition of key concepts saying microcredits, livelihood, improvement, women livelihood improvement. Furthermore, it provides views of other authors on theoretical review, theory and model to be adapted in this research, empirical review and conceptual framework. Chapter three describes the methodological details and technics of data collection, process and analysis. There is research philosophy, research design, research approach, methodological choices, population with

sampling design and procedures. Furthermore, it provides variables and measurement procedures to reveal the expected results. Chapter four discusses data presentation, data analysis and interpretation while chapter five is major findings, conclusion, and recommendations. The overall report apart from these 5 chapters also is composed of preliminary pages, references, and appendices.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

Chapter two which is the literature review, states the existing information on the study objectives extracted from the similar studies conducted by other authors. It also gives model or theories which define the variables of the study, it gives conceptual review, gives empirical review and gap as well as conceptual framework of the study. Each used reference was noted and all information are relevant to the current study subject matter.

2.2 Definition of Key Concepts

2.2.1 Microcredits

According to EU report, microcredits is defined as a loan up to EUR 25,000 granted to existing and potential micro-entrepreneurs at risk of social and financial exclusion, with the policy objective of entrepreneurial support and job creation in Europe (EU, 2020). The primary goal of microcredit is to alleviate poverty, promote entrepreneurship, and empower individuals to start or expand their small businesses. These loans are typically granted to entrepreneurs, small business owners, and self-help groups in rural and underserved areas (Datta & Sahu 2021). Unlike conventional

loans, microcredits often involve minimal or no collateral requirements and aims to support those who lack a steady source of income or credit history.

Microcredit refers to the provision of small loans, typically without collateral, to individuals or groups who lack access to formal banking systems. These loans are often granted to entrepreneurs, small business owners, and self-help groups in rural and underserved areas. Microcredit aims to support income-generating activities, improve livelihoods, and uplift individuals from poverty by providing them with financial resources to start or expand their businesses.

2.2.2 Women Livelihood Improvement

Women livelihood improvement refers to the process of enhancing the socio-economic status and quality of life of women through increased access to income, assets, services, and opportunities. As Chitema and Chitongo (2020) note, women's livelihood strategies are often constrained by systemic barriers such as limited access to financial resources, education, and healthcare.

In this study, the concept of livelihood improvement is operationalized through seven key indicators. First, income is used as a direct measure of economic improvement. It refers to the money earned by women through their economic activities, especially after accessing microcredit. Increased income reflects financial empowerment and improved household welfare. Second, asset ownership includes tangible and intangible resources such as land, livestock, household equipment, or savings. Ownership of assets provides financial security and serves as a buffer against

economic shocks. Third, productivity refers to the efficiency and output of women's economic engagements, such as the quantity of goods produced or services rendered in businesses or farms. Higher productivity indicates better utilization of resources and increased returns from economic activities (Abdallah Ali et al., 2021).

Fourth, business capital is defined as the financial resources invested in women's enterprises. This includes initial startup funds as well as reinvestments made to grow or sustain the business. Access to capital often determines the scale and sustainability of income-generating activities. Fifth, health and education access capture the ability of women to pay for healthcare and educational needs, either for themselves or their families. These aspects of livelihood improvement are crucial for long-term development and reflect improved use of financial resources for basic human needs. Sixth, number of meals or food security relates to the frequency and nutritional adequacy of meals consumed in a household. It serves as a proxy for well-being and the ability to meet daily nutritional needs through increased income or agricultural productivity. Lastly, housing condition, defined in terms of the ability to construct or maintain a home, reflects improvements in physical living standards. A better house provides not only safety and comfort but also symbolizes stability and dignity in the community (Chitema & Chitongo, 2020).

2.3 Theoretical Review and Model

The current study has adopted Quantitative Impact Assessment Model and Theory of Change Framework to assess at which extent microcredits had the impact on livelihood improvement of women, case of Muhanga district, Rwanda. The conceptual framework of 7 indicators was retrieved from the model framework

developed by Mayoux (2011) which explained how development of financials services (this where microcredit was born) and mobilization of microcredit has changed women livelihood.

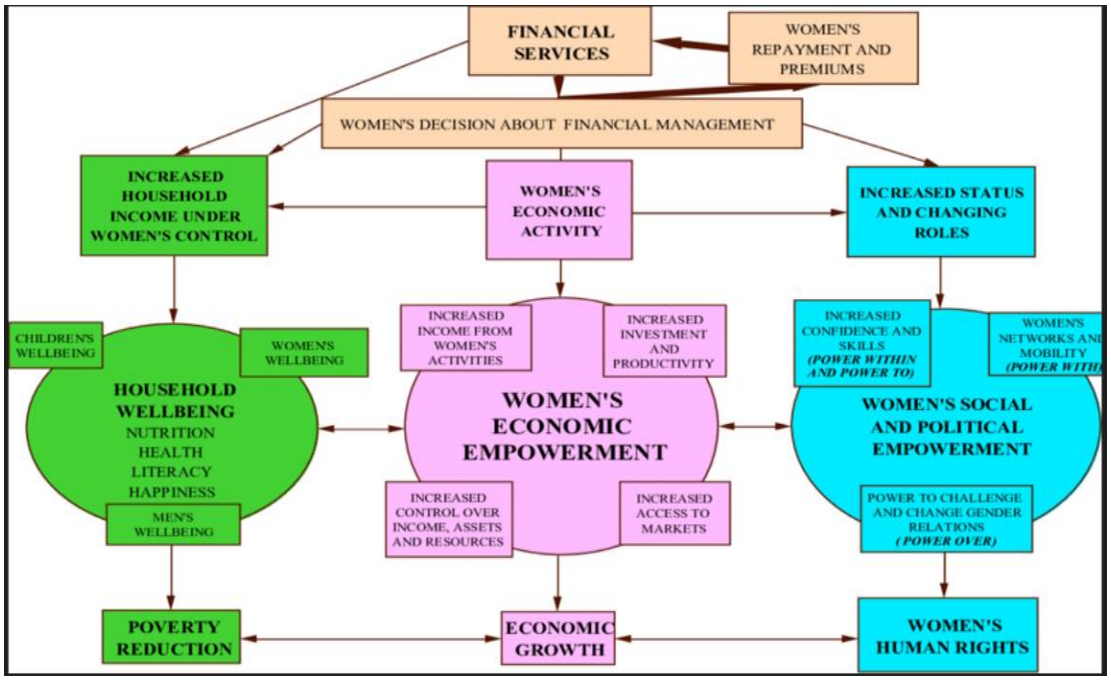

Figure 2.1: Theoretical Review and Model

Source: (Mayoux, 2011)

2.3.1 Theory of Change Framework

The Theory of Change (ToC) framework, initially developed by Weiss (1995), is a structured approach that outlines how and why a desired change is expected to happen in a particular context. It emphasizes the identification of long-term goals and the backward mapping of necessary preconditions and interventions. ToC has found widespread application across various sectors. Valters (2012) highlights its importance in planning and evaluation by explicitly linking activities to outcomes and assumptions. Davi et al. (2023) conducted a rapid systematic review demonstrating how ToC integrates evidence in healthcare programming, while

Andrews (2022) applied it in instructional change processes in education. Similarly, Jeffrey (2022) identifies common change management strategies consistent with ToC's causal logic. Other related frameworks, such as Kotter's (2012) model and McKinsey's 7-S framework by Company (2008), share similarities with ToC by emphasizing interconnected factors that drive change. Pettigrew and Whipp (1991) and Nadler and Tushman (1997) further underline the role of contextual alignment, which is central to ToC's holistic approach. Weiss (2019) reiterated ToC's strength in linking program inputs with long-term outcomes.

Despite its wide use, ToC's direct application to assess the impact of microcredits on women's livelihoods remains limited (Weiss, 2019). This study uses ToC to map how microcredit interventions lead to changes in livelihood indicators such as income, assets, productivity, health, education, meal frequency, and housing conditions. wedged and managed.

2.3.2 Quantitative Impact Assessment Model

The Quantitative Impact Assessment Model (QIAM) does not have a clearly defined origin or a single founding author, but it has evolved across disciplines to measure changes through quantifiable indicators (Mayoux, 2011). Redman (2015) explained its cross-sectoral utility through a narrative review, identifying its reliance on mixed methodologies such as citation analysis, interviews, and case studies. Martin (2019) applied a quantitative impact approach to evaluate educational interventions in Australia, demonstrating the model's clarity in identifying effective strategies. Kuwayama (2022) recommended completing an Impact Assessment Framework

using systematic quantitative methods. Sedghi (2021), in a scoping review, emphasized the process-based nature of QIAM as essential for enhancing research impact. Smith (2019) supported its application in health economics, while Wang (2020), Liu (2019), and Huang (2021) demonstrated its use in assessing urbanization, climate change, and ecosystem services, respectively.

2.4 Empirical Analysis of Relevant Studies

Razith and Nihara (2022) investigated the Impact of Micro Loan on Women's Livelihood: Evidence from Manmunai North Division in Batticaloa using descriptive, correlation and regression analysis. The results revealed the relationship and strength between microcredit and women livelihood namely poverty, education, saving, family size but didn't talk about income, asset, meals and house building which is the gap. This study also analyzed the impact of factors/indicators of microcredit which are repayment, lending, interest rate, time which is the difference from the current study which took microcredits as it is.

In Sri Lanka, Rathnayaka and Silva (2023) assessed the impact of Microcredit program on rural women livelihood development using descriptive and inferential statistical analysis and found that Microcredits didn't increase the monthly income, investment, and living conditions of women in rural areas, consequently, livelihood not improved; instead, debts have been increased. Here, other indicators of livelihood improvement such as asset, education, productivity and house building have not been covered and microcredit programs is a broad independent variable.

In India, Sahu et al. (2021) assessed the effectiveness of microcredit in employment generation and livelihood transformation of tribal women entrepreneurs with evidence from Pradhan Mantri Mudra Yojana using ordered logistic regression, Wilcoxon Sign test, and Effect Size test to analyze data. The results revealed a significant influence of loans amount not only on the employability but also livelihood of women has been improved regarding the economic, psychological and social empowerment but it took tribal women entrepreneurs while the current study assessed all women borrowers regardless of their profession living anywhere. Moreover, income, asset, education, house building as indicators of women livelihood improvement are not assessed while the current study developed them more as dependent variables.

Maaitah (2019) explored the legitimacy of profit of microlending institutions and Women's Empowerment in Jordan. Using descriptive and regression analysis and the results revealed that the level of education, social status and the whole dimension of social empowerment have not been affected by profitability policy. However, income, asset, productivity, and house building or maintenance are not covered. Hence, it also covered policy and not microcredits provided by MFIs.

Kapoor (2019), analyzed the Entrepreneurship for Economic and Social Empowerment of Women in India using sample size of 145 women and descriptive analysis. The results show the effectiveness of social mobilization and economic development where some respondents use money for house construction among others.

Hossain et al. (2017) assessed the women's Empowerment through NGOs Intervention in rural Area in Rangpur using 282 sample size and triangulation analysis. Results revealed that NGO is promoting the empowerment of women in rural area in Rangpur through providing its microcredit and training program in the aspects of small entrepreneurship and trade, House Building, Own business purpose, Education, Marriage, Agriculture, Manufacturing, Livestock. The study focused on rural areas and NGO intervention and Microcredits is not taken as independent variable.

Kaka (2022) in Nigeria, assessed the way of empowering women through microfinance with qualitative evidence. Ordinary least square – OLS and propensity score matching – PSM have been used to test data and revealed the influence of MFIS towards business income and assets generation, decision making, household expenditure, group solidarity and continuity in microfinance, decision making and education but it didn't cover productivity and house building or maintenance indicators of livelihoods. It also lacks quantitative data.

Mengstie (2020) assessed Ethiopian women economic empowerment through microfinance in Ethiopia. Multiple regression and moderated regression and Hayes (2018) process macro software have been used to analyze data and concluded that MFIs influence economically women empowerment and business exposure regarding their income, asset possession and monthly saving amount have been improved by

MFIs. However, the study didn't assess the impact on productivity, house building or maintenance, business capital and meals.

In Kenya, Oluoch et al. (2022) conducted a study to assess the influence of micro-finance credit on livelihoods of women beneficiaries in Kisumu East Sub-County. By using descriptive and thematic data analysis they realized that microcredit services affected positively women livelihood and also gained financial freedom. The study took the entire women livelihood as one dependent variable and did not assess how more indicators of it have been affected which is the gap.

In Rwanda, Igihozo (2017) assessed the link between microfinance credit and empowerment of rural women in Nyanza district by using descriptive and regression method of data analysis; while qualitative data was also descriptively analyzed. The results showed the impacts on education loan and business loan, agriculture loan and rural women empowerment. Her study lacks the impacts on income, asset and house building and only focused on empowerment of women located in rural area while the current study assessed how microcredit affect urban and rural women empowerment in terms of livelihood.

For investigating how microcredits influence income, some studies analyzed how women can be empowered through MFIs but didn't assess specifically the significance of microcredits on women income improvement. Hence, women empowerment and MFIs are large scopes than women's income development and microcredits respectively. For instance, Mengstie (2020) studied Ethiopian women

economic empowerment through microfinance. However, MFIs is independent variable which is broad than microcredits and only the dependent variables of income, asset possession and monthly saving were considered. Kaka (2022) linked how microfinance facilitate women to develop income generating activities and to participate in decision making. Hadidi (2020) connected increased household income of women and access to MFIs services. Haque et al. (2021) highlighted that MFIs and governments need to strengthen programs to increase women income, asset possession and business capital. Similarly, the studies on the impact of microfinance credit and empowerment of rural women focused on different variables and rural areas. Datta and Sahu (2021) investigated a connection between microcredits and rural women borrowers to start up new activities which generate income and to engage workers from their household and beyond.

Rathnayaka and Silva (2023) revealed that Microcredits didn't increase the monthly income, investment, and living conditions of women in rural areas, consequently, livelihood not improved; instead, debts have been increased. Akhter and Cheng (2020) examined the significant connection between microcredits and rural women borrower's empowerment in the aspects of living standards, income, asset, mobility, legal awareness and decision making. Igihozo (2017) investigated the relationship between Microfinance credit and rural women empowerment through education loan and business loan, agriculture loan but leave out income, asset and house building.

In the global context, a study by Hamad and Fernald (2015) in Peru utilized binomial and multinomial logistic regression models to examine associations between

microcredit program participation and maternal health service utilization. While not directly measuring income, the study found that microcredit program awareness and participation were associated with higher odds of antenatal care, postnatal check-ups, and use of modern contraceptives, suggesting potential indirect effects on women's income through improved health outcomes. In Africa, Adu-Okoree et al. (2020) conducted a descriptive survey in Ghana to assess the accessibility of microcredit among women groups and its impact on economic activities. The study found that microcredit access positively influenced women's income-generating activities, highlighting the role of financial services in enhancing women's economic status. In Rwanda, Mukamuhoza et al. (2023) examined the role of microcredit services in advancing the growth of women-led enterprises in Gasabo District. Using a descriptive survey approach, the study found a substantial and positive relationship between microcredit services and the growth of women-led enterprises, indicating an improvement in income levels among beneficiaries. Empirical studies have consistently shown that access to microfinance can enhance women’s income by enabling small-scale business activities where women who access microcredits are more likely to increase their household income due to greater business opportunities. Therefore, the hypothesis was developed as follow:

Hypothesis 1: *There is positive impact of microcredits on women income in Muhanga District.*

By exploring the impact on asset acquisition or increase, various studies focused on diverse variables. Some authors investigated the impact of financial services and capital on assets. Sawalu and Itunu (2023) revealed the great impact between social

capital and financial benefits, tangible and intangible benefits which creates security for their livelihood activities. Kochar et al. (2022) found out a big impact of financial access on women's intra-household allocations and decision-making but didn't consider microcredits as independent variable. For instance, Akhter and Cheng (2020) revealed how Microcredit Borrowings significantly empowered rural women borrowers in the aspects of living standards, income, asset, mobility, legal awareness and decision making. Kaka (2022) focused on the influence of MFIS towards business income and assets generation, decision making, household expenditure, group solidarity and continuity in microfinance, decision making and education. Different studies also focused on diverse independent variable like ISALs than microcredits to influence the asset acquisition for women borrowers.

Globally, Al-Shami et al. (2021) explored the relationship between microcredit and asset accumulation among women in low-income countries. The study found that microcredit participation was associated with increased asset values, suggesting that access to financial services can enhance women's economic stability. In the African context, Chitema and Chitongo (2020) in Zimbabwe linked ISALs and poverty alleviation for women in rural areas regarding household assets, education and healthcare, livestock. In Rwanda, the study by Mukamuhoza et al. (2023) also highlighted that microcredit services contributed to the growth of women-led enterprises, which likely facilitated asset accumulation among the beneficiaries. Empirical review proved that microcredit may also contribute to asset building, as women invest in livestock, household goods, or land with their profits. Asset

ownership is a critical marker of economic empowerment and stability. Thus, the hypothesis is developed based on the empirical literature as follows:

Hypothesis 2: *There is a positive impact of microcredits on increasing women assets in Muhanga District.*

In the review of the impact on women productivity, some studies assessed the influence of microcredits on business generating of income or employment but focused on rural women and entrepreneurs. These studies include Sahu et al. (2021); Datta and Sahu (2021) and Anchhangbo (2017). Others focused on independent variable like MFIs different from the current study, Fwamba et al. (2015) and Kaka (2022). Most of studies Al-Shami et al. (2016); Chitema and Chitongo (2020); Mengstie (2020) to mention a few, enumerated the impact on productive activities for women like micro- and small businesses, livestock, business exposure but focused on MFIs and ISALs as independent variables while Igihozo (2017) examined the impact on business loan, agriculture loan focusing on rural women.

Globally, Ghose et al. (2022) examined the association between microcredit membership and healthcare autonomy among Bangladeshi women. The study found that microcredit membership was positively associated with healthcare autonomy, which could enhance women's productivity by improving their health and decision-making capabilities. In Africa, the study by Adu-Okoree et al. (2020) in Ghana also found that microcredit access positively influenced women's economic activities, which could lead to increased productivity in their enterprises. In Rwanda, the research by Mukamuhoza et al. (2023) indicated that microcredit services had a

positive impact on the growth of women-led enterprises, suggesting an enhancement in productivity among the beneficiaries. Empirical studies show that access to credit can allow women to invest in better tools, stock, or services, thereby increasing productivity and efficiency in their businesses. Therefore, the hypothesis was as follow:

Hypothesis 3*: There is positive impact of microcredits on increasing women business productivity in Muhanga District.*

The analysis of literature on the impact on women business capital, the analysis indicates that some studies emphasized on the influence of MFIs on business capital. These include Anchhangbo (2017); Al-Shami et al. (2016) and Rwela (2023). Also, Haque et al. (2021) concluded that MFIs and states need to strengthen programs to increase business capital, income and asset possession. Similarly, the analysis of literature indicates that other studies related to business capital of women have focused on diverse variables considering MFIs as independent and women entrepreneurs as dependent. These studies include Wijewardana and Dedunu (2017); Mahmood et al. (2017); Fabian and Okpanaki (2022); Khursheed (2022) and Nepidimbaye et al. (2018).

Globally, the study by Al-Shami et al. (2021) found that microcredit participation was associated with increased asset values, which could contribute to the accumulation of business capital among women entrepreneurs. In Africa Fabian and Okpanaki (2022) found that microcredit enabled women entrepreneurs in Nigeria to increase their businesses, thereby contributing to the accumulation of business capital

and the sustainability of their enterprises. In Rwanda, the study by Mukamuhoza et al. (2023) highlighted that microcredit services contributed to the growth of women-led enterprises, which likely facilitated the accumulation of business capital among the beneficiaries. From the empirical review, microcredit programs are designed to increase access to working capital, which is often a major constraint for female entrepreneurs. Capital availability leads to business sustainability and scaling. The following was the hypothesis:

Hypothesis 4: *There is a positive impact of microcredits on increasing women business capital in Muhanga District.*

By investigating the impact on women health and education improvement some studies based on diverse variable like village community banks and group savings and lending schemes Rwela (2023) and Chitema and Chitongo (2020) respectively, and others focused on MFIs variable like Wondimu et al. (2023); Kaka (2022). Razith and Nihara (2022) linked micro loan and livelihood improvement through poverty, education, saving, family size. In contrast, the analysis of literature indicates that some studies like Maaitah (2019) in Jordan; Jiang et al. (2020) and Duflo et al. (2013) to mention a few found that the level of education, social status and the whole dimension of social empowerment have not been affected by the profitability policy of Microlending Institutions and microcredits respectively.

Globally, the study by Hamad and Fernald (2015) in Peru found that microcredit program participation was associated with higher odds of antenatal care, postnatal check-ups, and use of modern contraceptives, suggesting potential improvements in

women's health outcomes. In Africa, the study by Adu-Okoree et al. (2020) in Ghana found that microcredit access positively influenced women's economic activities, which could lead to improved access to health and education services for their families. In Rwanda, the research by Mukamuhoza et al. (2023) indicated that microcredit services had a positive impact on the growth of women-led enterprises, which could enhance the financial capacity of women to invest in health and education for themselves and their families. Several studies have observed that microcredit access is associated with improved spending on health and children's education due to increased disposable income and empowerment. From there, the following was the hypothesis to be tested:

Hypothesis 5: *There is a positive impact of microcredit on women health and education in Muhanga District.*

From the analysis of different studies measuring the link between microcredits and food or meals improvement among women borrowers, various studies took about the impact on women empowerment. These studies are Al-shami et al. (2021); Sahu et al. (2021); Datta and Sahu (2021) and Igihozo (2017). In addition, the analysis of literature indicates that some studies explored the influence of MFIs towards women empowerment including household expenditure. These are Kaka (2022) and Al-Shami et al. (2016). Fayyaz et al. (2016) investigated the influence of microcredit on women borrower's quality of life and Kochar et al. (2022) investigated financial access and women's role in household decisions.

Globally, the study by Hamad and Fernald (2015) in Peru found that microcredit program participation was associated with higher odds of antenatal care, postnatal check-ups, and use of modern contraceptives, suggesting potential improvements in women's health and nutrition, which could influence the number of meals they can afford. In Africa, the study by Adu-Okoree et al. (2020) in Ghana found that microcredit access positively influenced women's economic activities, which could led to increased household income and, consequently, the ability to afford more meals for their families. In Rwanda, the research by Mukamuhoza et al. (2023) indicated that microcredit services had a positive impact on the growth of women-led enterprises, which could enhance the financial capacity of women to provide more meals for their families. Improved income through microcredit can enhance food security and nutritional status by increasing the number of daily meals or meal quality as illustrated in the empirical review. Thus, the hypothesis emerged was the following:

Hypothesis 6*: There is a positive impact of microcredits on women meals in Muhanga District.*

From the analysis of different studies investigating the relationship between microcredits and house building or maintenance by women borrowers, there were different studies which focused on women empowerment Osmani et al. (2016); Datta and Sahu (2021); Al-shami et al. (2021) and Sahu et al. (2021) to mention a few. According to Johnson (2015). Kapoor (2019) linked entrepreneurship for economic and social empowerment of women with self-help credit program in Nithari Village

in India where some respondents used money for house construction among others expenditures.

In contrast, Huque (2017) in Bangladesh, with a special focus on urban poor women, concluded that micro-credit program may not be able to empower women in terms of entrepreneurship but women are feeling that they are empowered because through micro-credit program they are on the way to fulfill their basic needs. In a different setting, Johnson (2015) in the United Kingdom used qualitative interviews and financial diaries to examine how savings and credit access influence household priorities. The findings showed that women who accessed microcredit and engaged in savings groups often prioritized home improvements, including building or renovating homes. While the study was not solely focused on microcredit, it highlighted its indirect role in enabling women to improve housing conditions. In Nigeria, Osmani et al. (2016) investigated the role of microfinance in improving women's quality of life, with housing being one of the variables examined. Using structured interviews and regression analysis, the study found that women who received microloans were more likely to engage in incremental house improvements, such as roofing, flooring, and expansions. The access to credit increased their autonomy in making home-related decisions, especially in polygamous households where women often lacked control over property.

Similarly, in Ethiopia, Mengstie (2020) assessed the economic empowerment of women through microfinance. While the study's primary focus was on income and business development, it noted through survey data and regression analysis that

many women reinvested part of their profits into house maintenance and improvements. The study concluded that even without targeted housing loans, general access to microcredit enabled women to address critical household needs, including shelter and sanitation.

In Rwanda, Igihozo (2017) studied the relationship between microfinance credit and empowerment of rural women in Nyanza District. The study used descriptive statistics and regression methods to assess impacts across education, agriculture, and general empowerment. Although housing was not a primary variable, qualitative interviews indicated that some women borrowers used business loan profits to build or repair homes. However, the study acknowledged the absence of a structured analysis on house maintenance, identifying it as a gap in empirical research. Additionally, more recent local studies by Mukamuhoza et al. (2023) and Igihozo (2017) assessed how women are empowered in different aspects through microcredit programs. But, the idea of reinforcement of housing is indirect but also important benefit of microcredit programs in rural Rwanda. It was proved by the empirical studies illustrated above, microcredit supported home improvement either directly through housing loans or indirectly via increased income. Women often prioritize household improvements as income increases. Therefore, the development of hypothesis was as follow:

Hypothesis 7: *There is a positive impact of microcredits on women house building or maintenance in Muhanga District.*

2.5 Research Gap

The analysis of the empirical literature indicated that it was difficult to found out the studies exploring the impact of microcredits on women livelihood improvement. Furthermore, the reviewed studies done in the country of Rwanda emphasized on women empowerment which is very broad. Therefore, the researcher was motivated to investigate the impact of microcredits on women livelihood improvement and cover the impact on income, asset acquisition, business capital, productivity, women health and education, improvement in number of meals and house building or repair for women borrowers of CLECAM EJOHEZA in Muhanga district, Rwanda.

2.6 Conceptual Framework of the Study

The presentation of the conceptual framework (Figure 2.1) illustrates how various types of microcredits including business loans, agriculture or livestock loans, health and education loans, and housing loans serve as key drivers in enhancing different dimensions of women's livelihood. These livelihood aspects encompass income generation, asset accumulation, productivity improvement, business capital growth, better health and education outcomes, food security through improved number of meals, and house construction or maintenance. Each relationship within the framework is grounded in existing theoretical assumptions and supported by empirical literature.

For example, business and agricultural loans are expected to positively influence women's income, productivity, and working capital, thereby facilitating business sustainability and expansion. Similarly, access to health and education loans is

presumed to lead to increased investment in personal and family well-being, as women are empowered to allocate more resources toward health care and educational expenses. Moreover, as income levels rise, women are more likely to improve household food consumption, as seen in increased number and quality of meals, and channel funds toward improving their housing conditions either through targeted house loans or from reinvested business profits.

This interconnected framework served as the basis for formulating the study's hypotheses, which aimed to test the statistical significance of these relationships within the context of Muhanga District. The hypotheses were designed to capture whether microcredits significantly impact each identified livelihood outcome. By structuring the analysis around these seven dimensions, the study provides a comprehensive understanding of how microcredit initiatives contribute to women's economic and social empowerment in a localized Rwandan setting.

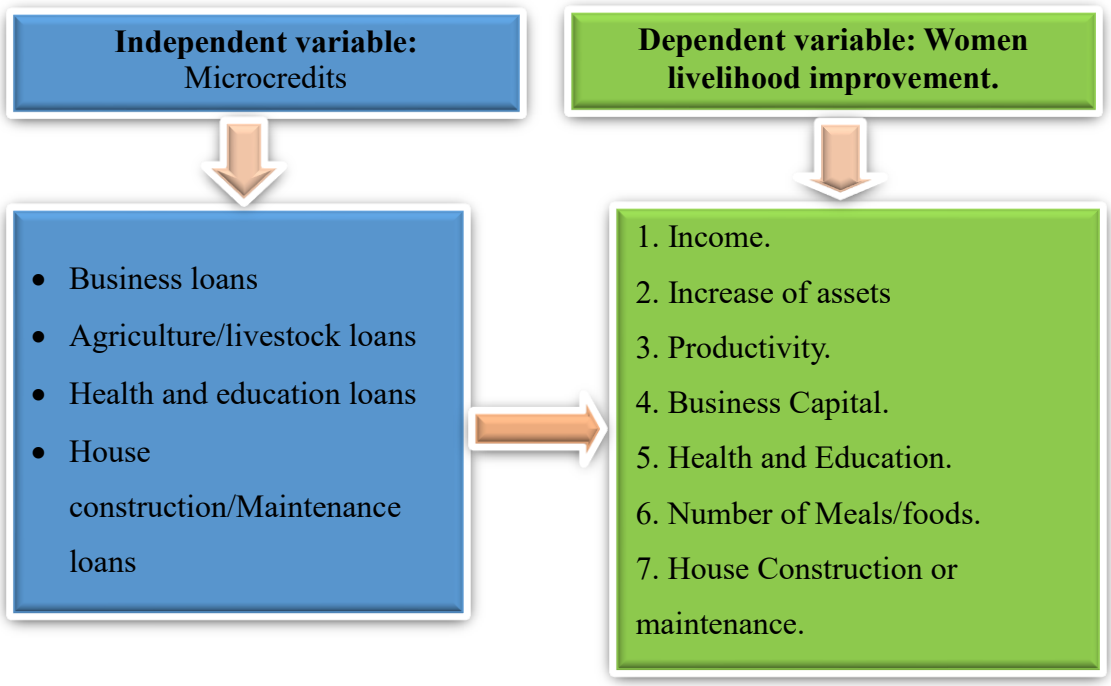

Figure 2.2: Conceptual Framework of the Study

Source: Empirical literature review

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter highlights research philosophy, research design, research approach, research methodological choice, study area, study population, sampling techniques, data collection tools and data processing and data analysis methods. Moreover, variables and measurement procedures, data validity, reliability and research ethical considerations are covered in this chapter.

3.2 Research Philosophy

Saunders et al. (2019) defined the research philosophy as system of assumptions, principles or beliefs that regulate the way particular research is conducted. Thus, as this study was chosen to be quantitative method consequently it adopted a positivism research philosophy. The positivism philosophy assumes that data can be carefully processed and measured and analyzed, particularly numerical data and interpreting results to reveal the answers (Saunders et al., 2019).

3.3 Research Design

A research design is the organization of conditions for data collection and analysis in a way that aims to consolidate relevance to the research purpose with economy in procedure (Kothari, 2004). This study utilized explanatory design because the study intends to measure at which extent women livelihood changed or improved as an outcome of microcredits provided by microfinance institution, where in this study, CLECAMEJOHEZA taken as case study. The main interest was to analyze the

characteristics related to the microcredits access and women livelihood improvement characteristics. Explanatory design was chosen because it enabled to count frequency at which a certain assessed item was observed and gives summary as the mean and standard deviation were easy to interpret. Furthermore, Explanatory design brings out results clearly to establish the relationship between microcredits and women livelihood improvement.

3.4 Research Approach

This study adopted a deductive approach which supported to develop hypotheses, compare arguments from previous studies, collect data, analyze results and interpret findings (Saunders et al., 2019).

3.5 The Study Area

Muhanga is one district among 30 districts of Rwanda country. It is located in Southern Province. It is 648.3 km² Area and consists of 87,252 population (24.3%) is located in urban areas and 271,181 population (75.7%) is in rural areas. The study targeted particularly Muhanga district which consisted of both urban and rural areas. Therefore, the researcher wanted to conduct a study in such area with the aim of capturing the clear status of livelihood improvement of women from both areas.

3.6 Study Population

The study population is known as the full set of cases or elements from which a sample is taken (Saunders et al., 2019). Population is the number of people or objects covered by the study or with which the study is concerned. To determine the study

population for this study, the researcher has selected purposively the women beneficiaries of CLECAM EJO-HEZA Plc loan in Muhanga district since 2020 to 2023. As declared by the CLECAM EJO-HEZA Plc credit manager, this is equivalent to 1,349 women in Muhanga district received loan since 2020 to 2023.

3.7 Sampling Techniques

Technically, the selected respondents are called sample while the selection process is called sampling technique (Kothari, 2004). The selection of respondents from the total target population was based on systematic sampling. Systematic sampling is a probability sampling method where researchers choose members from a population at regular intervals (or k) that are predetermined.

If the population order is random or random-like (for example, alphabetical), this method yields a representative sample that can be used to draw conclusions about the entire population. In other words, it ensures that every nth member of the population is included in the sample, making it easier to gather data from a large population without surveying every individual. The sampling interval (k) is calculated by dividing the population size by the desired sample size.

3.8 Sample Size

Based on the study objectives, 1,349 women beneficiaries of CLECAM EJO-HEZA Plc loan in Muhanga district were qualified for being the target population. As population was large 5% level of significance was used to determine a sample size where $n=N/(1+N*e^2)$ thus, sample equal 1,349/(1+1,349*(0.05)^2) =

308.519153802173 equivalent to 309 women beneficiaries of CLECAM EJO-HEZA Plc in Muhanga district.

3.9 Data type, Sources and Data Collection Instruments

Data collection depends on data sources and data type. This study is quantitative approach which only used primary data. Data collection instruments were the tools which led the study toward the meet good quality data standards. These tools are questionnaire, documentation, and observation. Sreejesh et al. (2014) defined a questionnaire as “a set of questions to be asked from respondents in an interview, with appropriate instructions indicating which questions are to be asked, and in what order.

The study used both open and closed ended questions, scaling and dichotomous questions (see Appendix 1). The questionnaire addressed to 309 women beneficiaries of CLECAM EJOHEZA Plc in their respective working place and living place. Questionnaires were distributed physically to all respondents, they filled out directly, the researcher collected all automatically and none was left. Additional existing information related to the subject matter have been collected from secondary sources like journals, research reports, books, and articles and each source for information used was recorded in reference list. The use of both open-ended and closed-ended questionnaires in this study enhances data quality by combining the strengths of both types. Closed-ended questions provide structured, quantifiable data that can be easily analyzed statistically, ensuring consistency and reliability across responses (Saunders et al., 2019). On the other hand, open-ended questions allow respondents to provide

detailed answers, capturing insights and perspectives that may not be anticipated by pre-set questions. This combination offers a balanced approach, enabling the researcher to gather both measurable data and rich qualitative insights, improving the depth and comprehensiveness of the findings.

3.10 Data Processing

This sub-part presents the systematic processing of data. In this research, data processing was made by classifying responses into meaningful categories where it consists of editing, coding and tabulation.

3.10.1 Editing

Editing was done by checking after field, if there was no writing error made on the questionnaire or no error made in data entry into the Statistical Package for Social Sciences (SPSS). And all errors were corrected to generate final raw data and proceed with analysis.

3.10.2 Coding

Codes were associated to the perception of respondents as words cannot facilitate to measure level of acceptance (frequency), mean or standard deviation or to access the minimum or maximum choice of respondents.

3.10.3 Tabulation

Tabulation in this research was referred to the part of technical process on statistical analysis of data that involves counting to determine the number cases that fall into

various categories. Thus, after eliminating errors, codes have been assigned to each answer. This stage was led to the construction of statistical tables showing frequency distribution of answers to questions addressed to respondents. The statistical tables were used to compare the number of occurrences of each answer to questions asked.

3.11 Data Analysis

This section explains several methods which were applied to ensure that, data analysis of the study is well maintained. The main methods were explanatory statistics and inferential statistics in quantitative data analysis methods.

To achieve the objectives of the study, testing the validity of study questions and find out solutions to study questions, the study needed to ensure statistical analysis. The data were coded and entered to Statistical Package for Social Scientists (SPSS) version 20 and proceed for descriptive and Bivariate Correlation analysis. Here the researcher analyzed the frequency, percentages, mean, and standard deviation of the collected data.

Bivariate Correlation analysis was used for testing the validity of research questions; this ensures test of one dependent variable to one independent variable. It is one of the simplest forms of statistical analysis, used to find out if there is a relationship between two sets of values. It usually involves the variables X and Y. Bivariate analysis is the analysis of exactly two variables. This generates Pearson Correlation (r) which ranges between ± 1, this may be positive or negative strong or weak based on the test results, and which range it fit from -1 to +1 and it takes also under

consideration Sig.(2-Tailed) which test the statistical association of tested variables. This should be less or equal to 0.05 for being statistically significant. Table 3.1 shows different levels and categories of statistical analysis.

Table 3.1: Level of Statistical Analysis and Categories

Mean	**Evaluation**
1.00-2.49	Weak
2.50-3.49	Moderate
3.50-5.00	Strong
Standard deviation	**Level spreading**
Stdv. <0.5	Homogeneity
Stdv. >0.5	Heterogeneity
Coefficient/positive or negative	**Label /positive or negative**
r=1	100% of dependency for tested variables
0.7<r<1	High dependency
0.5<r<0.7	Moderate dependency
0<r<0.5	Weak Dependency
r=0	No Dependency
Statistical Significance: Sig.(2-tailed)	**Evaluation**
Less or equal 0.05 or 5%	Existence of statistical significance
Greater than 0.05 or 5%	Non-Existence of statistical significance

Source: (Maxwell, 2021)

3.12 Variables and Measurement

The measurements of the independent and dependent variables are indicated in Table 3.2.

Table 3.2: Tables of Variables and Measurement

Variables	No of variables	CODE	Measurement indicators	Sources	Type of Scale
Microcredits **Independent variable**	1	M	M: Loan amount	Diro and Regasa, (2014)	Itemized scale
Women livelihood improvement **Dependent variables**	7	WLI	WLI: Income WLI: Asset WLI: Productivity WLI: Business capital WLI: Health and education WLI: Number of meals WLI: House building or maintenance	Masiyandima et al., (2017) Gong et al., (2020) Kaka (2022) Gong et al., (2020) Diro and Regasa, (2014) Masiyandima et al., (2017) Diro and Regasa, (2014)	Ratio Ratio Itemized scale Ratio Itemized scale Ratio Itemized scale

Source: researcher, 2024

3.13 Data Validity

According to Kothari (2004), validity is the extent to which differences found with a measuring instrument reflect true differences among those being tested. Here, the researcher consulted colleagues from same class to check the quality of the questionnaire, and the supervisor both was made the study confidence and go ahead for data collection. The pre-test study also was conducted for testing the quality of questions and validity of the questionnaire (Sreejesh et al., 2014). Pre-test study was conducted to 10 women beneficiaries of Bank of Kigali Loan doing business in Muhanga town. Data collection was made after finding that all tools (questions) are valid and finally approved by the supervisor.

3.14 Reliability

The reliability of the research tool was measured using the Cronbach alpha statistics. The Cronbach's Alpha values for the variables ranged from 0.7024 to 0.9738, indicating acceptable to excellent reliability across all variables. Specifically, the values for microcredits, income, assets, productivity, business capital, health and education, number of meals, and house building were all above the acceptable threshold of 0.7, confirming the reliability of the measurement instrument for this study.

Table 3.3: Reliability Test Results

Variable tested	Number of items assessed	Cronbach Alpha
Microcredits	2	0.7820
Women livelihood improvement		
Income	2	0.7292
Increase of assets	2	0.8519
Productivity	4	0.9738
Business Capital	4	0.8932
Health and Education	2	0.7718
Number of Meals	4	0.7024
House Building	2	0.8327

Source: Primary data, 2024

3.15 Ethical Considerations

Conducting research requires not only expertise and diligence, but also honesty and integrity (Olorunjuwon, et al., 2019). The subjects were informed on the purpose of the study, the procedure to collect the data and was assured that the data has no potential risks or costs involved (Saunders et al., 2019). Confidentiality is maintained throughout the study; no names or signed consent form was required for each respondent. The study also was conducted after being approved by CLECAM

EJOHEZA Plc Muhanga main branch. The collected questionnaires might not be distributed anywhere only remain accessible by the researcher and supervisor only. The clearance letter was sought before the actual data collection and the respondents' privacy was highly maintained. The researcher also avoided data fabrication, intended falsification and unethical plagiarism.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION, AND DISCUSSION

4.1 Overview

Chapter four gives in details data presentation, interpretation, and analysis of study results with follow respect of study main variables, indicators and research questions or hypotheses. Primary data were collected from 309 women beneficiaries of CLECAM EJO-HEZA Plc loan in Muhanga district since 2020 to 2023. Women respondents were selected based on their availability and understanding and use of microcredits toward livelihood improvement. The chapter is made with background of respondents, loan information for respondents, impact of loan and test of hypothesis validity.

4.2 Households Characteristics

Background of respondents is defined with reference to the age of household head, education level of the person who took loan from CLECAM EJO-HEZA Plc, marital status, number of people in the household and main occupation or main income generating activity for the household. The background characteristics of respondents such as age, education, and marital status are essential for understanding the differential impacts of microcredits on women's livelihoods. These factors shape loan utilization, financial literacy, business choices, decision-making power, and financial independence, all of which influence how effective microcredit was in improving livelihoods. Accurate data on these characteristics allows for more targeted and nuanced findings, which inform policy recommendations and intervention strategies in the microcredit sector.

The household characteristics of respondents, such as age, education level, marital status, household size, and main income-generating activities, significantly influence the study's findings on the impact of microcredits on women's livelihoods. For instance, the majority of respondents (72.5%) were married, which may reflect greater financial decision-making power and the collective benefit of microloans within family structures. Additionally, the education level of the household head plays a crucial role in loan utilization, with a higher percentage of respondents having completed primary education (46.0%) and secondary education (18.8%), suggesting that financial literacy and business skills may vary across the sample.

This is important as women with higher educational attainment may use microcredits more effectively to improve income, assets, and productivity. Household size also influences the findings, as larger households (58.6% had 4-6 members) may face greater financial pressure, making access to microcredit essential for meeting family needs, including food security, education, and health. Furthermore, the main income activity largely focused on crop growing (66.0%) indicates that women in rural areas were likely to use microcredits for agricultural improvements, which could affect their asset accumulation and productivity. Overall, these characteristics provide an understanding of how microcredits affected different aspects of women's livelihoods, allowing for more targeted policy recommendations.

Table 4.1: Background of Respondents

Characteristics of respondents	Frequency	Percent
Range of age for Respondents		
23-30	34	11.0
31-40	88	28.5
41-50	86	27.8
51-60	77	24.9
61-68	24	7.8
Total	***309***	***100.0***
Education of Household Head		
Degree	11	3.6
Diploma	12	3.9
Lower Secondary School	15	4.9
Non Formal	21	6.8
Primary	142	46.0
TVET	50	16.2
Upper Secondary School	58	18.8
Total	***309***	***100.0***
Marital status of Respondent		
Divorced	8	2.6
Married	224	72.5
Separated illegally	6	1.9
Single	23	7.4
Widowed	48	15.5
Total	***309***	***100.0***
Household size range		
1-3	64	20.7
4-6	181	58.6
7-9	61	19.7
10	3	1.0
Total	***309***	***100.0***
Main Income activity for HH		
Animal Husbandry	18	5.8
Business	52	16.8
Craft/technical work	18	5.8
Crops Growing	204	66.0
Salary	17	5.5
Total	***309***	***100.0***

Source: Primary data, 2024

Assessment of the impact of microcredits on livelihood improvement of women in Muhanga district, Rwanda was made on the case of women beneficiaries of

CLECAM EJOHEZA Plc microcredits product since 2020 to 2023. Among others, 309 women in Muhanga district were assessed, and found that, 88 (28.5%) were aged between 31 to 40 years old, 86 (27.8%) aged between 41 to 50 years, 77 (24.9%) aged between 51 to 60 years, 34 (11%) aged between 23 to 30 years old and 24 (7.8%) aged between 61 to 68 years old. As explained by Gasperini (2017) population aged between 41 to 50 years and around this age group or specifically in working age group (18 to 65 years old) is that with best experience and expertise, stability and reliability, health and cognitive function, diverse perspectives and impact policies in the domain there are working or living for. Bildirici and Özaksoy (2017) in Turkey also confirmed 30% women aged between 36-45 are microcredit borrowers. This is the same case in Table 4.4 that shows where most women beneficiaries of microcredits were aged between 31 to 60 years old (81.2%).

Regarding the education background of women beneficiaries of CLECAM EJOHEZA Plc microcredits, among 309 sampled women, 142 (46%) attended primary school, 58 (18.8%) attended upper secondary school, 50 (16.2%) attended TVET schools, 21 (6.8%) were none formal education respondents, 15 (4.9%) attended lower secondary school, 12 (3.9%) attended university at diploma level, and 11 (3.6%) completed university at degree level. Bildirici and Özaksoy (2017) in Turkey confirmed that 45 % of women microcredit beneficiary were educated from primary school. Kochar et, al. (2022) in India confirmed that, most educated (at least completed primary education) population were easily be trained and mobilized to use microcredits. Referring to the marital status of respondents, among 309 sampled women 224 (72.5%) were married, 48 (15.5%) widowed, 23 (7.4%) single, 8 (2.6%)

divorced and 6 (1.9%) separated illegally. By the household's size, among 309 sampled women which were equivalent to 309 households sampled, findings confirm that 181 (58.6%) of households have 4 to 6 people, 64 (20.7%) have 1 to 3 people, 61 (19.7%) have 7 to 9 people and 3 (1%) have 10 people in the same household, the average mean size of household is 5.2 people in a single household based on the assessment.

This was also explained by Mengstie (2022) in Ethiopia and Bagudu (2018) in Nigeria, that Marital status and household size significantly influence women's promotion and use of microcredits. Married women often benefit from greater support and stability, which makes them more attractive candidates for microcredit. This support comes from their spouses or extended family members, enhancing their ability to utilize loans effectively for business or personal growth. Additionally, married women have more decision-making power within the household, allowing them to leverage loans more strategically. On the other hand, household size also plays a crucial role. Larger households may create more economic pressure, motivating women to seek microcredits to support their families. This drives entrepreneurial activities and the effective use of loans. Furthermore, larger households have more family members available to help with business activities, enhancing productivity and success. Managing a larger household often requires efficient resource allocation, skills that translate well into managing microcredit-funded projects. These factors highlight the importance of considering both marital status and household size when promoting microcredits to women, as they

significantly impact the success and empowerment outcomes of such financial interventions (Mengstie, 2022; Bagudu, 2018).

Households living conditions mainly depends on the main income generating activity and also opportunities used and how used for development. It is in such context women in Muhanga district also have main income generating activities in respective households where 204 (66%) relay on crops growing, 52 (16.8%) relays on businesses, 18 (5.8%) relays on animal husbandry, 18 (5.8%) relays on craft/technical works and 17 (5.5%) relays on salary of specific job remunerating regular and non-regular salary.

As defined by Kuwayama (2022), main income generating activity for a household determine the capacity of borrowing and use of microcredits, where most households in productive activities, remain these willing to increase the capital or investments. Abuto et al. (2022) also revealed that local customs often restrict women from engaging in high-income earning activities, as they are typically considered housewives. They emphasized that factors influencing women's participation in microcredit include age, husband's education, women's education, family size, land ownership, proximity to markets, livestock ownership, and access to credit. But also, Hossain et al. (2017) demonstrated that main source of income is agriculture at 69.47% in rural area of Rangpur.

4.3 Loans Information for Women Beneficiaries of CLECAM EJOHEZA Plc in Muhanga District

In this section, the study evaluate the main reason or main activity made the women for borrowing, nature of activity at which loan was taken for, loan maturity (months in total) and which year loan was taken and month, experience of borrowers in loan use (not counted from the current loan), loan size, interest rate, value of collateral used to get loan, whether loan taken is being paid correctly as signed from the bank or not, amount of loan taken and loan outstanding including the interests. Effective loan utilization for women microcredits beneficiaries can be influenced by several factors:

Table 4.2: Main Activity which made Women to Borrow from CLECAM EJOHEZA Plc in Muhanga District

Main activity women invested money borrowed	Frequency	Percent
Animal Husbandry	42	13.6
Business	59	19.1
Buy a Car	6	1.9
Buy a House	3	1.0
Buy Plot of Land	5	1.6
Carpentry	3	1.0
Crops growing	153	48.8
Tailoring	3	1.0
Health	6	1.9
House Construction	11	3.6
Mining	3	1.0
House maintenance	11	3.6
Studying	6	1.9
Total	**309**	**100.0**

Source: Primary data, 2024

Table 4.5 show that, among 309 sampled women beneficiaries of CLECAM EJOHEZA Plc microcredits in Muhanga District, 153 (48.8%) have borrowed money for investing in crops growing, 59 (19.1%) for business, 42 (13.6%) for animal husbandry, 11 (3.6%) for house construction, 11 (3.6%) for house maintenance, 6 (1.9%) for buy a car, 6 (1.9%) for health, 5 (1.6%) for buying plot of land, 3 (1%) for buying a house, 3 (1%) to invest in carpentry, 3 (1%) in tailoring, and 3 (1%) in mining and quarrying. This was also applicable in Rangpur where Hossain et al. (2017) explained how money borrowed was mostly invested in agriculture and forestry. Morduch (2010) explained that, through economic activity of the household representatives, the policies and regulations set by the House of Representatives can significantly impact the availability and terms of microcredits. Supportive policies can lead to better loan conditions and increased access to credit for women (Morduch, 2010).

Table 4.3: Nature of the Business/ Activity taken for Loan by Women Loan Beneficiaries

Nature of the business/ activity taken for loan	Frequency	Percent
Full time	303	98.1
Part time	6	1.9
Total	**309**	**100.0**

Source: Primary data, 2024

Among 309 women beneficiaries of CLECAM EJOHEZA Plc microcredits in Muhanga District, 303 (98.1%) worked full time in the activity where invested the loan, and 6 (1.9%) worked part time in the activity which generated income for them, the last number correspond to the number of women borrowed money for health

investments (medical expenses). Samad (2014) explained that favorable working conditions, such as fair wages and job security, can enhance a woman's ability to repay loans. Stable employment provides a reliable income stream, which is crucial for meeting loan repayment schedules. And allocate full or part time to the loan consuming activity (Samad, 2014).

Table 4.4: Loan Maturity for Women Loan Beneficiaries

Months of loan maturity	Frequency	Percent
1	3	1.0
2	6	1.9
3	3	1.0
5	3	1.0
6	6	1.9
8	83	26.9
9	3	1.0
12	77	24.9
18	16	5.2
22	3	1.0
24	74	23.9
30	3	1.0
36	23	7.4
48	6	1.9
Total	**309**	**100.0**
Analysis		**Value**
Mode		**8**
Maximum		**48**
Minimum		**1**
Average		**16.3**

Source: Primary data, 2024

Loan maturity has marked as total duration in month the loan takes based on the needs of loan beneficiary. Thus, among 309 women who borrowed money, 83 (26.9%) took loan to be paid back in 8 months, 77 (24.9%) to be paid in 12 months

or one year, 74 (23.9%) in two years or 24 months, 23 (7.4%) in 36 months or 3 years, 16 (5.2%) in 18 months or 1 year and 6 months, 6 (1.9%) in 2 months and same number of respondents in 6 months and also in 48 months or 4 years, 3 (1%) differently for 1 month, 3 months, 5 months, 9 months, 22 months, 30 months, and for 30 months. Karlan (2014) explained that the length of the loan term affected repayment performance. Longer durations may reduce the monthly repayment burden, making it easier for beneficiaries to manage their finances. However, it can also increase the total interest paid over time (Karlan, 2014).

Table 4.5: The Year Women has signed Loan Contract

The year loan was taken	Frequency	Percent
2020	8	2.6
2021	25	8.1
2022	31	10.0
2023	245	79.3
Total	**309**	**100.0**

Source: Primary data, 2024

The assessment found that among 309 assessed 245 (79.3) took their loan in 2023, 31 (10%) took their loan in 2022, 25 (8.1%) took their loan in 2021 and 8 (2.6%) took their loan in 2020.

Table 4.6: Years Women involved in Loan Borrowing

Years involved in loan borrowing	Frequency	Percent
1-3	152	49.2
4-6	78	25.2
7-9	17	5.5
10-12	50	16.2
13-15	9	2.9
20	3	1.0
Total	**309**	**100**
Analysis		**Value**

Years involved in loan borrowing	Frequency	Percent
Mode		**2**
Maximum		**20**
Minimum		**1**
Average		**4.9**

Source: Primary data, 2024

Among 309 assessed women beneficiaries of CLECAM EJOHEZA Plc microcredits in Muhanga District, some of them are already engaged in loan use for 20 years ago. The study found that 152 (49.2%) have experience of 1 to 3 years in use of loan, 78 (25.2%) experienced 4 to 6 years, 50 (16.2%) experienced 10 to 12 years, 17 (5.5%) experienced 7 to 9 years, 9 (2.9%) experienced 13 to 15 years and only 3 (1%) experienced 20 years using loan from any (non-defined) loan offering institution including CLECAM EJOHEZA Plc, in Muhanga district. Morduch (2009) asserted that, the economic environment during the year the loan is taken influences loan utilization. For example, loans taken during economic downturns might be harder to repay due to reduced income opportunities (Morduch, 2009).

Table 4.7: Activity which made Women to Borrow Money Versus Loan Size taken

Activity women borrowed for versus loan size (Rwf)			Grouped_Loan_Size				Total
			1_"25,000-500,000"	2_"500,001-1,000,000"	3_"1,000,001-5,000,000"	4_"5,000,001-15,000,000"	
Type of activity women borrow loans for.	Animal Husbandry	Count	27	6	6	0	39
		% within activity	69.2%	15.4%	15.4%	0.0%	100.0%
		% within Loan_Size	19.0%	9.8%	6.6%	0.0%	12.6%
		% of Total	8.7%	1.9%	1.9%	0.0%	12.6%
	Business	Count	9	15	35	0	59
		% within activity	15.3%	25.4%	59.3%	0.0%	100.0%
		% within Loan_Size	6.3%	24.6%	38.5%	0.0%	19.1%
		% of Total	2.9%	4.9%	11.3%	0.0%	19.1%
	Buy a Car	Count	0	0	3	3	6
		% within activity	0.0%	0.0%	50.0%	50.0%	100.0%
		% within Loan_Size	0.0%	0.0%	3.3%	20.0%	1.9%
		% of Total	0.0%	0.0%	1.0%	1.0%	1.9%
	Buy a House	Count	0	0	3	0	3
		% within activity	0.0%	0.0%	100.0%	0.0%	100.0%
		% within Loan_Size	0.0%	0.0%	3.3%	0.0%	1.0%
		% of Total	0.0%	0.0%	1.0%	0.0%	1.0%

Activity women borrowed for versus loan size (Rwf)		Grouped_Loan_Size				Total
		1_"25,000-500,000"	2_"500,001-1,000,000"	3_"1,000,001-5,000,000"	4_"5,000,001-15,000,000"	
Buy Plot of Land	Count	0	0	5	0	5
	% within activity	0.0%	0.0%	100.0%	0.0%	100.0%
	% within Loan_Size	0.0%	0.0%	5.5%	0.0%	1.6%
	% of Total	0.0%	0.0%	1.6%	0.0%	1.6%
Carpentry	Count	0	0	3	0	3
	% within activity	0.0%	0.0%	100.0%	0.0%	100.0%
	% within Loan_Size	0.0%	0.0%	3.3%	0.0%	1.0%
	% of Total	0.0%	0.0%	1.0%	0.0%	1.0%
Crops growing	Count	98	20	27	6	151
	% within activity	64.9%	13.2%	17.9%	4.0%	100.0%
	% within Loan_Size	69.0%	32.8%	29.7%	40.0%	48.9%
	% of Total	31.7%	6.5%	8.7%	1.9%	48.9%
Tailoring	Count	0	3	0	0	3
	% within activity	0.0%	100.0%	0.0%	0.0%	100.0%
	% within Loan_Size	0.0%	4.9%	0.0%	0.0%	1.0%
	% of Total	0.0%	1.0%	0.0%	0.0%	1.0%
Health	Count	0	3	3	0	6
	% within	0.0%	50.0%	50.0%	0.0%	100.0%

Activity women borrowed for versus loan size (Rwf)		Grouped_Loan_Size				Total
		1_"25,000-500,000"	2_"500,001-1,000,000"	3_"1,000,001-5,000,000"	4_"5,000,001-15,000,000"	
	activity					
	% within Loan_Size	0.0%	4.9%	3.3%	0.0%	1.9%
	% of Total	0.0%	1.0%	1.0%	0.0%	1.9%
House Construction	Count	0	5	3	3	11
	% within activity	0.0%	45.5%	27.3%	27.3%	100.0%
	% within Loan_Size	0.0%	8.2%	3.3%	20.0%	3.6%
	% of Total	0.0%	1.6%	1.0%	1.0%	3.6%
House maintenance	Count	2	6	3	0	11
	% within activity	18.2%	54.5%	27.3%	0.0%	100.0%
	% within Loan_Size	1.4%	9.8%	3.3%	0.0%	3.6%
	% of Total	.6%	1.9%	1.0%	0.0%	3.6%
Livestock	Count	3	0	0	0	3
	% within activity	100.0%	0.0%	0.0%	0.0%	100.0%
	% within Loan_Size	2.1%	0.0%	0.0%	0.0%	1.0%
	% of Total	1.0%	0.0%	0.0%	0.0%	1.0%
Mining	Count	0	0	0	3	3
	% within activity	0.0%	0.0%	0.0%	100.0%	100.0%
	% within	0.0%	0.0%	0.0%	20.0%	1.0%

Activity women borrowed for versus loan size (Rwf)			Grouped_Loan_Size				Total
			1_"25,000-500,000"	2_"500,001-1,000,000"	3_"1,000,001-5,000,000"	4_"5,000,001-15,000,000"	
		Loan_Size % of Total	0.0%	0.0%	0.0%	1.0%	1.0%
	Studying	Count	3	3	0	0	6
		% within activity	50.0%	50.0%	0.0%	0.0%	100.0%
		% within Loan_Size	2.1%	4.9%	0.0%	0.0%	1.9%
		% of Total	1.0%	1.0%	0.0%	0.0%	1.9%
Total		**Count**	**142**	**61**	**91**	**15**	**309**
		% within activity	**46.0%**	**19.7%**	**29.4%**	**4.9%**	**100.0%**
		% within Loan_Size	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
		% of Total	**46.0%**	**19.7%**	**29.4%**	**4.9%**	**100.0%**

Source: Primary data, 2024

Analysis on loan size and activity invested in, show that crops growing is that made more borrowers (48.9%) and it is the same which occupy a large share of total loan borrowed by women in Muhanga district (48.9%). Crops growing activity was followed by businesses (19.1%), animal husbandry (12.6%), and all other remaining activities occupied less than 5% share of total loan borrowed by women in Muhanga district.

Generally, among 309 assessed women beneficiaries of CLECAM EJOHEZA Plc microcredits in Muhanga District, 142 (46%) each has borrowed loan between 25,000 to 500,000 Rwandan francs, 61 (19.7%) borrowed between 500,000 to 1,000,000 Rwandan francs, 91 (29.4%) borrowed between 1,000,000 to 5,000,000 Rwfs and 15 (4.9%) borrowed loan between 5,000,000 Rwf to 15,000,000 Rwf). Kinnan (2015) mean that the amount of the loan can determine its effectiveness (Loan Size). Smaller loans might be insufficient for significant business investments, while larger loans could be harder to repay if not managed properly (Kinnan, 2015).

Table 4.8: Significance of Loan Activity and Loan Size

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	237.137[a]	39	0
Likelihood Ratio	188.165	39	0
N of Valid Cases	309		
Loan size analysis	**Value (Rwf)**		
Range	14,975,000		
Minimum	25,000		
Maximum	15,000,000		
Mean	1,550,825		
Std. Deviation	2,562,002		

a. 44 cells (78.6%) have expected count less than 5. The minimum expected count is .15.

Source: Primary data, 2024

Analysis of loan size, vis a vis the activity where loan used was made after evaluating all 309 women beneficiaries of CLECAM EJOHEZA Plc microcredits in Muhanga District, results indicate a Pearson Chi-Square equal to 237.137 with 39 degrees of freedom at 95% level of significance or 0.05 probability of large value of X square is 55.76<237.137. This means there is evidence to reject the null hypothesis starting that "there is no significant association between loan size change and loan activity". Loan size descriptive analysis has shown that the average loan taken by the women beneficiaries of CLECAM EJOHEZA Plc microcredits in Muhanga District is around 1,550,825 Rwandan francs, the minimum loan taken was 25,000 Rwf and the maximum observed among loan taken was 15,000,000 Rwandan Francs. Loan was in proportional of activity used for, where the main loan big size activities was mining where 15,000,000 Rwf loan taken, followed by buying cars, land, house and crops growing.

Table 4.9: Loan Interests versus Loan Type

Interest rates of the loan	Frequency	Percent	Period/ per:	Type of loan/ Secondary data review
12.00%	3	1.0	Year	Loan for CLECAM EJOHEZA Employees
18.00%	124	40.1		Loan for crops growing and livestock (agriculture)
24.00%	182	59.0		Loan for individuals for different activities (business, by car, mining, by land, …)
Total	**309**	**100**	**N/A**	**Livelihood Changing**

Source: Primary data, 2024

Loan interest is an important indicator for borrowers and lenders (microfinance: microcredits lenders) as it showed what value women have paid for loan acquired

and what CLECAM EJOHEZA Plc has received. Among 309 assessed women beneficiaries of CLECAM EJOHEZA Plc microcredits in Muhanga District, 182 (59%) used loan at 24% annual interest or 2% monthly interests, 124 (40.1%) used loan at 18% annual interest or 1.5% monthly interest rate, and 3 (1%) used loan at 12% annual interests or 1% monthly interest. Zinman, (2009) explained that, higher interest rates increase the cost of borrowing (Loan Interest Rate), which can strain repayment capacity. Lower interest rates make loans more affordable and improve repayment performance (Zinman, 2009).

Table 4.40: Loan Size versus Loan Collateral

Loan size versus Loan Collateral (Rwf)			Collateral Group						Total
			1_"200,000-500,000"	2_"500,001-1,000,000"	3_"1,000,001-5,000,000"	3_"5,000,001-10,000,000"	3_"10,000,001-100,000,000"	Cooperative	
Loan_size_group	1_"25,000-500,000"	Count	11	15	19	9	0	88	**142**
		% within Loan size	7.7%	10.6%	13.4%	6.3%	0.0%	62.0%	**100.0%**
		% of Total	3.6%	4.9%	6.1%	2.9%	0.0%	28.5%	**46.0%**
	2_"500,001-1,000,000"	Count	3	0	37	3	15	3	**61**
		% within Loan size	4.9%	0.0%	60.7%	4.9%	24.6%	4.9%	**100.0%**
		% of Total	1.0%	0.0%	12.0%	1.0%	4.9%	1.0%	**19.7%**
	3_"1,000,001-5,000,000"	Count	3	0	21	20	35	12	**91**
		% within Loan size	3.3%	0.0%	23.1%	22.0%	38.5%	13.2%	**100.0%**
		% of Total	1.0%	0.0%	6.8%	6.5%	11.3%	3.9%	**29.4%**
	4_"5,000,001-15,000,000"	Count	0	0	0	0	12	3	**15**
		% within Loan size	0.0%	0.0%	0.0%	0.0%	80.0%	20.0%	**100.0%**
		% of Total	0.0%	0.0%	0.0%	0.0%	3.9%	1.0%	**4.9%**
Total		**Count**	**17**	**15**	**77**	**32**	**62**	**106**	**309**
		% within Loan size	**5.5%**	**4.9%**	**24.9%**	**10.4%**	**20.1%**	**34.3%**	**100.0%**
		% of Total	**5.5%**	**4.9%**	**24.9%**	**10.4%**	**20.1%**	**34.3%**	**100.0%**

Source: Primary data, 2024

CLECAM EJOHEZA Plc microcredits in Muhanga District was also defined by the size of collaterals where beneficiary with collaterals of large values valued to get large loan and vice versa. Among 309 sampled women CLECAM EJOHEZA Plc microcredits in Muhanga District 106 (34.3%) used cooperative as collateral to get loan, 77 (24.9%) used collateral valued between one million to five million, 62 (20.1%) used collateral valued between 10 million to 100 million Rwandan francs (this include these taken loan between 5 million to 15 million Rwandan francs, 32 (10.4%) used loan collateral between 5 million to 10 million, 17 (5.5%) used loan between 200 thousands to 500 thousands Rwandan francs and 15 (4.9%) used loan collateral equivalent to 500 thousands to 1 million Rwandan Francs.

Table 4.51: Significance between Loan Size and Collateral Size

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	211.784[a]	15	.000
Likelihood Ratio	233.970	15	.000
Linear-by-Linear Association	.643	1	.423
N of Valid Cases	**309**		
Loan Collateral	**Value (Rwf)**		
Range	99,800,000		
Minimum	200,000		
Maximum	100,000,000		
Mean	7,143,366		
Std. Deviation	13,281,285		

a. 8 cells (33.3%) have expected count less than 5. The minimum expected count is .73.

Source: Primary data, 2024

Assessing the association between loan size and loan collateral show that, the Pearson Chi-Square calculated is 211.784 greater than the Pearson Chi-Square tabulated which was 25 for 95% level of significance and 15 df. This is the

significance also (Sig.2-tailed was 0.000 less than 0.05) which means that, once women beneficiaries of CLECAM EJOHEZA microcredits needed to increase loan size, was demanded to deposit the higher loan collateral. Coate (1995) explained that collateral requirements can affect access to loans (microcredits collateral). Women who lack collateral might struggle to obtain loans, limiting their ability to invest in income-generating activities (Coate, 1995).

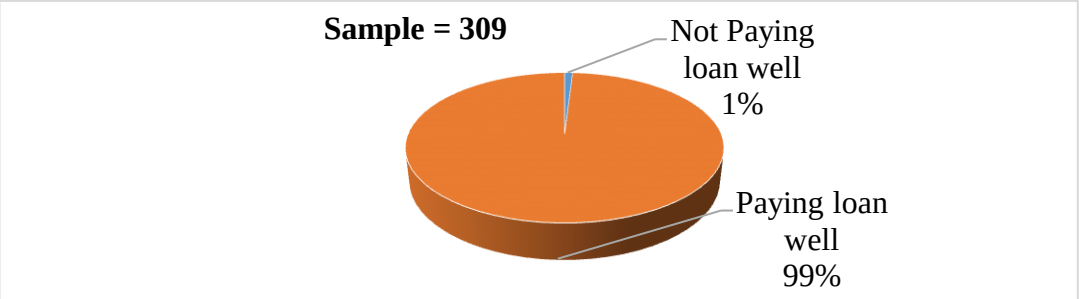

Figure 4.1: Percentage of Women Beneficiaries of CLECAM EJOHEZA Microcredits by status at which Loan is well paid or not

Source: Primary data, 2024

Assessment of 309 women beneficiaries of CLECAM EJOHEZA microcredits confirmed that 99% were complying with loan repayment procedure and 1% were failing due to illness reasons and they agree to proceed the agreements after being recovered. The reason of not paying loan correctly was illness for both 3 respondents (1%) over 309 total women beneficiaries of CLECAM EJOHEZA microcredits in Muhanga district.

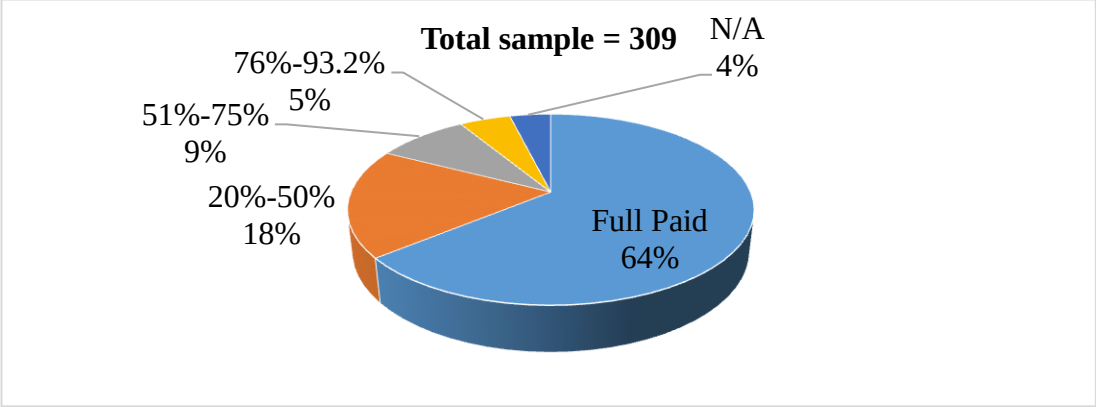

Figure 4.2: Share of Loan paid to the Overall Loan Size

Source: Primary data, 2024

Based on the total loan paid and loan needed to be paid by any women beneficiaries of CLECAM EJOHEZA microcredits assessed (total 309 assessed), the level of loan payment was calculated in form of percentages. This was referred to the condition that; any sampled women are that with loan taken (signed contract) in any of the years ranged from 2020 to 2023 either full paid or still valid during the period of the assessment (July 2024). The findings show that 64% of 309 women have fully paid the loan taken, 4% did not specified (include two who are poorly paying loan due to the illness), 18% have paid 20% to 50% of total payment required, 9% paid between 51 to 75% of total loan required and 5% paid between 76% to 93.2% of loan required.

Shariff (2012) confirmed that, effective loan utilization was closely tied to repayment performance. Timely repayments build creditworthiness, enabling access to future loans. Factors like financial literacy, business acumen, and support systems play a role in ensuring good repayment performance (Shariff, 2012).

4.4 Impact of Loan on Women Livelihood case of CLECAM EJOHEZA Microcredits Beneficiaries in Muhanga District

Assessing the impact of microcredits on women livelihood improvement was made with a case study to 309 sampled women beneficiaries of CLECAM EJOHEZA Plc microcredits in Muhanga district. The study specifically focuses on the extent to which microcredits improved women's income, crop productivity, animal production, increased assets, overall productivity, business capital, improved health and education, improved nutrition, and improved housing. All these considerations were summarized as hypotheses of the study, where 7 hypotheses formulated and findings are in the upcoming sub section and this section named 4.4.

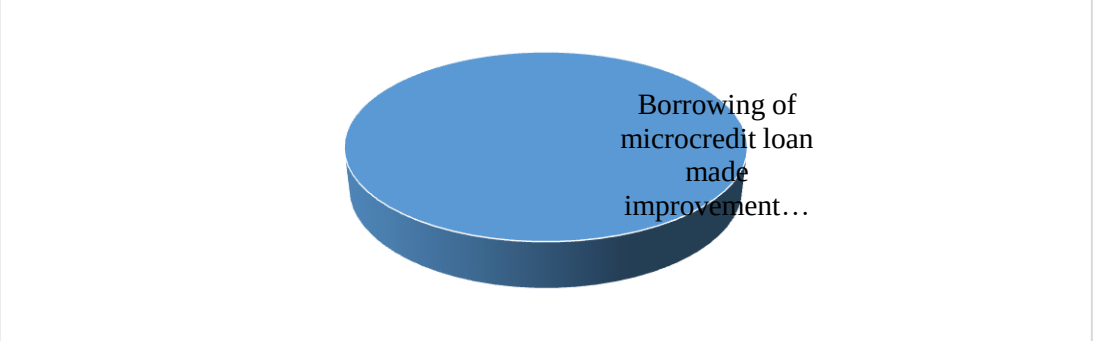

Figure 4.3: Extent to which Women Beneficiaries of CLECAM EJOHEZA Plc Microcredits made Improvement of Livelihood

Source: Primary data, 2024

The study shows that, 100% of 309 assessed women beneficiaries of CLECAM EJOHEZA Plc microcredits in Muhanga district confirmed that, livelihood conditions were improved as an outcome of use of microcredits. Microcredit enabled women in Muhanga district to start or expand small businesses. They invested in

income-generating activities such as tailoring, food vending, or handicrafts, crops growing, bought assets, livestock, and other businesses as well as house maintenance and construction. This additional income contributes to household well-being and financial stability. Increased income allows women to invest in healthcare and education for themselves and their families. They can afford better nutrition, healthcare services, and school fees. Microcredit acts as a safety net during emergencies. Women can borrow to cover unexpected expenses, reducing vulnerability to shocks.

Masona et al. (2022) in Zimbabwe, Razith and Nihara (2022) Sri Lanka and Akhter and Cheng (2020) in Bangladesh revealed that, microcredits can significantly improve women's livelihoods by providing them with the capital needed to start or expand small businesses. This often leads to increased income, greater financial independence, and enhanced social status. Additionally, it can foster job creation within communities and improve overall economic stability.

Meanwhile Rathnayaka and Silva (2023) in Sri Lanka contrasted the findings by explaining that microcredits didn't increase the monthly income, investment, and living conditions of women in rural areas, consequently, livelihood not improved; instead, debts have been increased.

4.4.1 Test of Specific Hypothesis One

H_1: There is a positive impact of microcredits on women income in Muhanga District.

Table 4.62: Women Annual Income Changes as an outcome of using CLECAM EJOHEZA Microcredits

Income Change	N/ Sample	Range	Minimum	Maximum	Mean	Std. Deviation
Increase of family annual income (Before loan)	137	1,997,000	3,000	2,000,000	251,927	352,389
Increase of family annual income (After loan)	158	1,890,000	10,000	1,900,000	284,342	353,095
Valid N (listwise)/ Difference	21	-107,000	7,000	- 100,000	32,415	352,742

Source: Primary data, 2024

Table 4.15 indicate that, there was clear variation after comparing the women income before using loan and after using the loan. Before loan only 137 women were able to get any annual income while after getting loan access 158 women were getting annual income. Here the annual income was measured as saving per year, because it was difficult to measure income for women living with substance agriculture where the grow what they consume. Thus, after access to microcredits, women were increased saving with an additional annual income equivalent to 32,415 Rwandan francs (difference between mean of annual income before access to the loan and after access to the loan). Women income also were reduced as a saving obtained was reinvested in business or other economic activities.

Table 4.73: Correlation between Women Loan taken and Income after Use of Loan

		Amount of the loan borrowed (Loan which was active in the years between 2020-2023)	**Increase of family annual income (After loan)**
Amount of the loan borrowed (Loan which was active in the years between 2020-2023)	Pearson Correlation	1	.285**
	Sig. (2-tailed)		.000
	N	**309**	**158**
Increase of family annual income (After loan)	Pearson Correlation	.285**	1
	Sig. (2-tailed)	.000	
	N	**158**	**158**
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary data, 2024

Table 4.16 show that, the bivariate correlation analysis results indicate Pearson correlation or "r" which was equal to 0.285 and Sig. (2-tailed) equal to 0.000. This means that, there was a positive correlation between loan size borrowed and increase of women's family income. The correlation was also statistically significant as p-value of 0.000 is less than 0.01 level of significance. In other words, the hypothesis one or "H_1: There is positive impact of microcredits on women income in Muhanga District" was accepted. Similarly, Fwamba et al. (2015) in developing countries, Hadidi (2020) in Egypt, Datta and Sahu (2021) in India and Kaka (2022) in Nigeria, stressed that, MFIs boost women's income by enabling them to start or expand businesses, leading to increased earnings and financial stability. Therefore, this test

was crucial. Its finding informed how effect of microcredit on women's income contributed positively to the interpretation of conclusion for this general study.

4.4.2 Test of Specific Hypothesis Two

H_2: There is a positive impact of microcredits on women assets in Muhanga District. The tables below demonstrate how this hypothesis was tested.

Table 4.84: Access of Assets by Women Beneficiaries of CLECAM EJOHEZA Microcredits in Muhanga District

Women acquired assets as effect of loan use	Frequency	Percent
Agriculture machine	9	2.9
Animal shelter	6	1.9
Car	9	2.9
Hoe	15	4.9
House	6	1.9
Land	21	6.8
Moto	3	1.0
Pumping material	3	1.0
Students' materials	3	1.0
Warehouse	3	1.0
N/A	***231***	***74.8***
Total	**309**	**100**

Source: Primary data, 2024

The assessment of 309 women beneficiaries of CLECAM EJOHEZA microcredits in Muhanga District, results indicate that 78 women use loan to acquire different forms of assets such as, land (6.6%), hoe (4.9%), agriculture machine (2.9%), car (2.9%), animal shelter (2.9%), house (1.9%) moto (1%), pumping materials (1%), student's materials (1%), warehouse (1%) and 74.8% women did not buy any asset, but invested in production. As seen from the findings, there were different assets bought

by the women beneficiaries of CLECAM EJOHEZA microcredits in Muhanga District.

Table 4.95: Correlation between Loan Size and Value of Assets acquired for Women Beneficiaries of CLECAM EJOHEZA Microcredits in Muhanga District

Loan size versus assets acquired after loan		**Amount of the loan borrowed (Loan which was active in the years between 2020-2023)**	**Assets bought (value of assets in Rwf)/ After Loan**
Amount of the loan borrowed (Loan which was active in the years between 2020-2023)	Pearson Correlation	1	.041
	Sig. (2-tailed)		.022
	N	**309**	**78**
Assets bought (value of assets in Rwf)/ After Loan	Pearson Correlation	.041	1
	Sig. (2-tailed)	.022	
	N	**78**	**78**

Source: Primary data, 2024

Table 4.18 show that, the bivariate correlation analysis results indicate Pearson correlation or "r" which is equal to 0.041 and Sig. (2-tailed) equal to 0.022. This means that, there was a positive correlation between loan size borrowed and value of assets received (using either total received loan or partial loan). The correlation was also statistically significant as p-value of 0.022 was less than 0.05 level of significance. In other words, the null hypothesis four or "H_4: There is a positive impact of microcredits on women assets in Muhanga district was accepted. This is behind the idea that, once women got access to microcredits, invested it by buying different assets necessary for investments or for personal use.

In Ethiopia, Hanur and Goshu (2023) also argued that once women got access to finance also it increase the ownership of household assets. For Fadhl (2019) in Lebanon, women were more empowered in purchasing decisions for household items than home repair and asset acquisition. Differently, Muharremi and Madani (2021) in Albania revealed that the impact of microcredits on long-term asset for women is low. Therefore, test of this specific hypothesis was crucial for this study. It contributed positively in the elaboration of the conclusion for this study.

4.4.3 Test of Specific Hypothesis Three

H_3: There is a positive impact of microcredits on women productivity in Muhanga District. The tables below demonstrate how this hypothesis was tested.

Table 4.106: Change of Production for Women Economic Activities after Access to Loan versus before Loan

Production Change before and after loan	N	Range	Minimum	Maximum	Mean	Std. Deviation
Increase of Production (based on type of activity of activity where loan used) (RWF)/ Before loan	255	17,995,000	5,000	18,000,000	1,908,569	3,911,288
Increase of Production (based on type of activity of activity where loan used) (RWF)/ After loan	294	29,970,000	30,000	30,000,000	3,137,214	5,985,328

Valid N (listwise)/ Average	**255**	**23,982,500**	**17,500**	**24,000,000**	**2,522,891**	**4,948,308**

Source: Primary data, 2024

Among 309 women's beneficiaries of CLECAMEJOHEZA microcredits in Muhanga district assessed 255 or (82.5%) shown they have production before access to the loan and this number has increased to 294 or (95.1%) after that women get loan. The production has changed and increased in very clear way, where 2,522,891 change from the average value of production in Rwanda francs for the period before loan to the period after loan. The minimum production change from 5 thousand Rwandan francs to 30 thousand Rwandan francs and maximum production change from 18 million Rwandan francs to 30 million after loan.

Table 4.17: Correlation between Loan Size and Women Activity Production for Women Beneficiaries of CLECAM EJOHEZA Microcredits

Correlations			
Loan size versus production after loan use		**Amount of the loan borrowed (Loan which was active in the years between 2020-2023)**	**Increase of Production (based on type of activity of activity where loan used) (RWFS)/ After loan**
Amount of the loan borrowed (Loan which was active in the years between 2020-2023)	Pearson Correlation	1	.392**
	Sig. (2-tailed)		.000
	N	**309**	**294**
Increase of Production (based on type of activity of activity where loan used) (RWFS)/ After loan	Pearson Correlation	.392**	1
	Sig. (2-tailed)	.000	
	N	**294**	**294**
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary data, 2024

Table 4.20 show that, the bivariate correlation analysis results indicate Pearson correlation or “r” which was equal to 0.392 and Sig. (2-tailed) equal to 0.000. This means that, there was a positive correlation between loan size borrowed and increase of overall production (by based on the activity used loan). The correlation was also statistically significant as p-value of 0.000 was less than 0.01 level of significance. In other words, the null hypothesis three or “H_3: There is a positive impact of microcredits on women productivity in Muhanga District” was accepted. This was behind the idea that, once women got access to microcredits, invest in productive activity and increased overall production compared to the previous capacity before using the loan.

Anchhangbo (2017) in Nepal confirmed that, microcredits was a tool for increasing women access to capital allows women to invest in better tools and resources, boosting their productivity. But unlikely, Namayengo et al. (2023) in Uganda concluded that women borrow for education of children than agriculture. Therefore, test of this hypothesis was necessary. Its finding of how microcredits affect women’s production contributed positively to the interpretation of conclusion for this study.

Table 4.18: Change of Crops Production (in kgs by type of crops) after Women Access on CLECAM EJOHEZA Microcredits

Type of crops and change of yields in Kgs before and after loan		Crop production change (before versus after loan) in Kgs									
		1_"10-50"		2_"51-100"		3_"101-500"		4_"501-1,000"		Count/ Sample	
		Before Loan	After Loan	Before Loan	After Loan	Before Loan	After Loan	Before Loan	After Loan	Before Loan	After Loan
Increase of crops Production (Type and quantity in Kgs)	Avoka	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	3	3
	Bananas	50.0%	0.0%	0.0%	0.0%	50.0%	100.0%	0.0%	0.0%	6	3
	Beens	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6	0
	Cassava	17.6%	0.0%	47.1%	30.0%	35.3%	70.0%	0.0%	0.0%	17	20
	Maize	39.6%	18.0%	28.3%	12.0%	32.1%	60.0%	0.0%	10.0%	53	50
	Potatoes	50.0%	50.0%	50.0%	25.0%	0.0%	25.0%	0.0%	0.0%	12	12
	Rice	41.4%	31.0%	10.3%	10.3%	37.9%	48.3%	10.3%	10.3%	29	29
	Vegetables	23.1%	20.0%	42.3%	12.0%	34.6%	56.0%	0.0%	12.0%	26	25
Total		**37.5%**	**20.4%**	**30.3%**	**14.8%**	**30.3%**	**57.0%**	**2.0%**	**7.7%**	**152**	**142**

Source: Primary data, 2024

Crop production is not a common activity for women beneficiaries of CLECAMEJOHEZA microcredits in Muhanga district and it is also the sole activity for the same population. The study highlighted 142 women loan beneficiaries are able to measure changes in crop growing as an impact of microcredits use. Among

crops, maize remain on top and after loan receiving none was able to produce yield between 501 to 1,000 Kgs of maize and after receiving loan 10% are able to generate this quantity. Only 32.1% were able to produce yield between 101 to 500 kgs per season and after loan this was made by 60% of women's beneficiaries of CLECAMEJOHEZA microcredits in Muhanga district. At second level, rice was produced by women loan beneficiaries where 29 women remain produced rice after receiving loan (number did not change) and 37.9% changed to 48.3% of women produced rice yield ranged between 101 to 500 kg of rice per a season. Due to the loan access, the number of women focusing on crops growing has changed from 152 to 142 and this balance went for other greater income generating activities mainly businesses.

Table 4.19: Correlation between Loan Size and Crops Production after Loan Access for Women Beneficiaries of CLECAM EJOHEZA Microcredits

Correlations			
Loan size versus crops production		**Amount of the loan borrowed (Loan which was active in the years between 2020-2023).**	**Increase of crops Production (mention the type of the crop (kgs/acre)/ After Loan.**
Amount of the loan borrowed (Loan which was active in the years between 2020-2023).	Pearson Correlation	1	-.155
	Sig. (2-tailed)		.066
	N	**309**	**142**
Increase of crops Production (mention the type of the crop (kgs/acre)/ After Loan.	Pearson Correlation	-.155	1
	Sig. (2-tailed)	.066	
	N	**142**	**142**

Source: Primary data, 2024

Table 4.22 show that, the bivariate correlation analysis results indicate Pearson correlation or "r" which is equal to -0.155 and Sig. (2-tailed) equal to 0.066. This means that, there was a negative correlation between loan size borrowed and increase of crops production (by type of crops in kgs per season). The correlation was also being not statistically significant as p-value of 0.066 is greater than 0.05 level of significance. In other words, the null hypothesis two or "H_2: There is a positive impact of microcredits on women production in Muhanga District" was not accepted. This is behind the idea that, once women get access to microcredits, failed to keep growing crops but change to other income generating activities. Unlikely, as reported by Women's global empowerment (2023), that with microcredit, women purchased quality seeds and fertilizers, leading to higher crop yields.

4.4.4 Test of Specific Hypothesis Four

H_4: There is a positive impact of microcredits on women business capital in Muhanga district. The tables below demonstrate how this hypothesis was tested.

Table 4.20: Changes of Business Values as an Outcome of Loan gained by Women from CLECAM EJOHEZA Microcredits in Muhanga District

Changes pf house and business values	N	Range	Minimum	Maximum	Mean	Std. Deviation
Expand of business value (Rwf)/ Before Loan	226	24,999,000	1,000	25,000,000	1,909,571	4,727,063
Expand of business value (Rwf)/	293	49,990,000	10,000	50,000,000	2,934,761	7,357,230

Changes pf house and business values	N	Range	Minimum	Maximum	Mean	Std. Deviation
After Loan						

Source: Primary data, 2024

Table 4.23 show that there was a change in business capital when women beneficiaries of CLECAM EJOHEZA microcredits borrowed loans in Muhanga District. The findings indicated that the business capital changed from 1.9 million Rwandan francs to 2.9 million Rwandan francs and number of businesses developers changed from 226 women to 293 women among 309 sampled. The businesses were not only in a single activity but any activity where loan reinforced to generate income including livestock, crops growing, mining, motorcycles, etc.

Table 4.111: Correlation between Loan Size and Business Expansion

Correlations		
Loan size versus business expansion		**Expand of business value/ capital (Rwf)/ After Loan**
Amount of the loan borrowed (Loan which was active in the years between 2020-2023)	Pearson Correlation	.472**
	Sig. (2-tailed)	.000
	N	293
**. Correlation is significant at the 0.01 level (2-tailed).		

Source: Primary data, 2024

Table 4.24 indicate that, there was a positive correlation between loan received by women beneficiaries of CLECAM EJOHEZA microcredits in Muhanga District and business capital value after loan, as Pearson correlation or r is 0.472 and expand of

business value (Rwf)/ After Loan and this correlation is statistically significant at 1% as the p-value was 0.000 less than 0.01. On one hand, Banto and Monsia (2020) aligned that, in developing countries, women use their loans for consumption rather than investment. On the other hand, Tundui and Tundui (2020) in Tanzania revealed that microcredit amount has a significant impact on business capital, while the Report of Economics Justice Fund (2023) explained that, microloans enable women to start or expand businesses, increasing their business value and profitability. Many entrepreneurs rely on loans to start their businesses. This means that lenders who make it easier for women to access these resources were making an investment that can have outsized positive impacts for both parties.

4.4.5 Test of Specific Hypothesis Five

H_5: There is a positive impact of microcredit on women health and education in Muhanga district. The tables below demonstrate how this hypothesis was tested.

Table 4.122: Health and Education to the Women Family Improved after Loan use

Improved health and education to the family/ Before Loan	Before Loan		After Loan	
	Frequency	**Percent**	**Frequency**	**Percent**
Yes	264	85.4	309	100.0
No	45	14.6	0	0
Total	**309**	**100.0**	**309**	**100.0**

Source: Primary data, 2024

Table 4.25 show that, among 309 sampled and assessed women beneficiaries of CLECAM EJOHEZA microcredits in Muhanga District, microcredits empowered

women economically, leading to improved health, education, and overall well-being for themselves and their families. This was confirmed that before loan access to education and health it was difficult to 45 or 14.6% families struggled to pay for education or health facilities. However, after accessing loans, none of women struggled to pay for education and health facilities since all 100% of women clients were able to cover family's member education requirements and health costs (mainly health insurance costs and extra costs to the insurance coverage once and member is sick). This shows the improvement or women livelihood as an outcome of microcredits to use outputs of investments and satisfy the family educational and health needs.

Based on the study results, there is evidence to confirm that there is a significant impact of microcredit on women health and education in Muhanga district, led the researcher to accept hypothesis five "H_5: There is a positive impact of microcredit on women health and education in Muhanga district". According to Magali and Kevela (2022), women-headed households in Njombe region in Tanzania were able to meet health costs and children's education after accessing the microcredits from the SACCOS. Similarly, Razith and Nihara (2022) in Sri Lanka supported the relationship and strength between microcredit and women livelihood namely poverty alleviation, education, saving, family size, and Kaka (2022) in Nigeria also argued the influence of MFIs towards business income and assets generation, decision making, household expenditure, group solidarity and continuity in microfinance, decision making and education. Therefore, this finding contributed positively to the

conclusion for this study on how microcredits affect significantly women livelihoods in the aspects of health and education.

4.4.6 Test of Specific Hypothesis Six

H_6: There is a positive impact of microcredits on women number of meals in Muhanga district. The tables below demonstrate how this hypothesis was tested.

Table 4.133: Improvement of Household meals per day as an Outcome of Microcredits use by Women Beneficiaries of CLECAM EJOHEZA Microcredits in Muhanga District

Number of meals per day	Before Loan		After Loan	
	Frequency	Percent	Frequency	Percent
1	6	1.9	0	0.0
2	286	92.6	256	82.8
3	17	5.5	53	17.2
Total	**309**	**100.0**	**309**	**100.0**

Source: Primary data, 2024

The table 4.26 show that, among 309 sampled women beneficiaries of CLECAM EJOHEZA microcredits in Muhanga District, 1.9% were not able to afford to have two meals per day. Before loan only 5.5% were able to afford three meals per day and after loan the number changed to 17.2% access to three meals per day. This explains the impact of microcredits to women changed their living conditions.

Table 4.144: Improvement of Household Quality of Meals per Day as an Outcome of Microcredits use by Women Beneficiaries of CLECAM EJOHEZA Microcredits in Muhanga District

Quality of meals per day	Before Loan		After Loan	
	Frequency	Percent	Frequency	Percent
Bad	3	1.0	0	0.0
Normal	219	70.9	122	39.5
Good	87	28.2	187	60.5
Total	**309**	**100.0**	**309**	**100.0**

Source: Primary data, 2024

Within the assessment of quality of meals accessed to women families in the scope assessed, the findings indicate that, before loan access 1% of women families were having bad quality of meals per day and after loan access none with access to bad meal, and after loan access women with access to good meal change from 28.2% to 60.5% and this marked the improved livelihood of women beneficiaries of CLECAM EJOHEZA microcredits in Muhanga District.

Table 4.155: Correlation between Loan Size taken and Change of Number of Meals per Day

Correlations			
Loan size versus change in number of meals per day after loan		**Loan size group**	**Improved of meal intake (the number of meal)/ After Loan**
Loan size group	Pearson Correlation	1	.323**
	Sig. (2-tailed)		.000
	N	**309**	**309**
Improved of meal intake (the number of meal)/ After Loan.	Pearson Correlation	.323**	1
	Sig. (2-tailed)	.000	
	N	**309**	**309**
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Primary data, 2024

Table 4.28 show that, the bivariate correlation analysis results indicate Pearson correlation or "r" which is equal to 0.323 and Sig. (2-tailed) equal to 0.000. This means that, there is a positive correlation between loan size borrowed and improved of meal intake (the number of meal)/ After Loan. The correlation is also statistically significant as p-value of 0.000 is less than 0.01 level of significance. In other words, the null hypothesis six or "H_6: There is a positive impact of microcredits on women number of meals in Muhanga district was accepted". This is behind the idea that, once women got access to microcredits, invested by in living conditions of the families including quality of meal the household's members were receiving. Magali and Kevela (2022), in Tanzania, reported that the loan from SACCOS had improved women headed households' economic empowerment in a manner they improved their number of meals. Likewise, report of women global empowerment fund (2023) indicated that improved financial stability allowed women to provide more nutritious meals for their families and this was generated form access to microcredits. In diverse, Namayengo et al. (2023) in Uganda concluded that microcredit was thus unlikely increased of agriculture production and also negatively affected food security. Therefore, these results contributed positively to the interpretation of conclusion for this study on how microcredits changed the livelihood of women taking into account number and quality of meals.

4.4.7 Test of Specific Hypothesis Seven

H_7: There is a positive impact of microcredits on women house building in Muhanga district. The tables below demonstrate how this hypothesis was tested.

Table 4.166: Women constructed or maintained House as an Outcome of Loan gained from CLECAM EJOHEZA Microcredits in Muhanga District

Construction of a house or maintenance of existing	Before Loan		After Loan	
	Frequency	Percent	Frequency	Percent
Yes	92	29.8	132	42.7
No	217	70.2	177	57.3
Total	**309**	**100.0**	**309**	**100.0**

Source: Primary data, 2024

Assessment of 309 women of beneficiaries of CLECAM EJOHEZA microcredits in Muhanga District, show that, 29.8% were able to buy, construct or maintain house and after loan access the number changed and reached 42.7%. This gives significance of loan for the capacity of family shelter access.

Table 4.27: Changes of House as an Outcome of Loan gained by Women from CLECAM EJOHEZA Microcredits in Muhanga District

Changes pf house and business values	N	Range	Minimum	Maximum	Mean	Std. Deviation
Construction / Maintenance of a house (Amount/Rwf)/ Before Loan	95	28,800,000	200,000	29,000,000	7,661,158	7,794,579
Construction / Maintenance of a house (Amount/Rwf)/ After Loan	129	49,950,000	50,000	50,000,000	6,863,721	11,470,765

Source: Primary data, 2024

Table 4.30 show the changes taken place while accessing to the loan by women beneficiaries of CLECAM EJOHEZA microcredits in Muhanga District where the maximum invested in house construction shifted from 29 million Rwandan francs to 50 million Rwandan francs and the average was reduced as the number of women constructed and maintained houses increased from 95 to 129 after access to the loan.

Table 4.28: Correlation between loan size and House Construction or Maintenance

Correlations		
Loan size versus house construction and maintenance and business expansion		**Construction/ Maintenance of a house (Amount/Rwf)/ After Loan**
Amount of the loan borrowed (Loan which was active in the years between 2020-2023)	Pearson Correlation	.298**
	Sig. (2-tailed)	0.001
	N	129
**. Correlation is significant at the 0.01 level (2-tailed).		

Source: Primary data, 2024

Table 4.31 indicate that, there was a positive correlation between loan received by women beneficiaries of CLECAM EJOHEZA microcredits in Muhanga District and house construction or maintenance value after loan, as Pearson correlation or r is 0.298 and construction/ Maintenance of a house (Amount/Rwf)/ After Loan and this correlation was statically significant at 5% as p-value is 0.001 which is less than 0.01. Hushmat and Basri (2023) in Pakistan revealed the relationship between

Microfinance and housing conditions such as floor type, ventilation, the ownership of house and the number of windows. Report of Women global empowerment fund (2023) again stated that women used microloans to improve or build homes, enhancing their living conditions.

CHAPTER FIVE

SUMMARY OF MAJOR FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Overview

Chapter five starts with this overview, summary of major findings in line with study objectives, conclusion, and recommendations. All are about the impact of microcredits on livelihood improvement of women in Muhanga district, Rwanda.

5.2 Summary of Major Findings

The summary of major findings is arranged following on the results from research objectives which also correspond to the research hypotheses. The findings are more detailed below.

5.2.1 The Impact of Microcredits on Women Income in Muhanga District

The study hypotheses test has resulted that loan size contributes 28.5% in increasing women family's income after receiving loan. Before loan only 137 women were able to get any annual income while after getting loan access 158 women were getting annual income. Bivariate correlation analysis indicates a positive correlation between loan size borrowed and increase of women's family income. The correlation was also statistically positive and significant.

5.2.2 The Impact of Microcredits on Increasing Women Assets in Muhanga District

The results from analysis found that microcredits acquired increased value of assets at 4.1%. Bivariate correlation analysis indicated a positive correlation between loan

size borrowed and value of assets received (using either total received loan or partial loan). The correlation analysis also showed the positive and significant influence.

5.2.3 The Impact of Microcredits on Increasing Women Productivity in Muhanga District

The results indicates that loans borrowed reduced at the level of 15.5% of the crops production because once women got loans tended to swap from agriculture to businesses and other lucrative income generating activities. This means that, there was a negative correlation between loan size borrowed and increase of crops production. The correlation analysis also indicated a negative and non-significant influence. This is behind the idea that, once women got access to microcredits, invested in production activities and hence the influence of the microcredit in production activities did not indicate the positive and significant effects.

5.2.4 The Impact of Microcredits on Women Business Capital in Muhanga District

The study findings shows that loans contributed by increasing businesses values of women after loan by 47.2%. The findings from Pearson correlation analysis indicates that microcredits affect significantly and statistically positive the business capital accessibility for women.

5.2.5 The Impact of Microcredits on Women Health and Education in Muhanga District

The findings from the study indicate that 100% were able to cover family's member education requirements and health costs (mainly health insurance costs and extra

costs to the insurance coverage once and member is sick). The results confirmed that before loan access to education and health it was difficult to 45 or 14.6% families (assume that one women loan beneficiary represents a single family) and after access to loan, none of the women struggled to pay for education and health facilities. Based on the study results, the researcher confirm that there was a positive and significant impact of microcredit on women health and education service accessibility in Muhanga district.

5.2.6 The Impact of Microcredits on Women Number of Meals in Muhanga District

The study findings disclosed that microcredits contribute 32.3% to the improved family meals number and quality. Bivariate correlation analysis results reported a positive correlation and a statistical significance between loan size borrowed and improved of meal intake (the number of meal)/ After Loan.

5.2.7 The Impact of Microcredits on Women House Building/Maintenance in Muhanga District

Finaly, the study findings declared that microcredits contributed 29.8 % on house building or maintenance for women borrowers. The results from Pearson correlation analysis indicated that microcredits affected positively and statistically significantly house building or maintenance for women in Muhanga district.

5.3 Conclusion

The impact of microcredits on the livelihood improvement of women in Muhanga District, Rwanda, has been studied extensively. Here are some key findings:

Microfinancing positively and significantly influenced women's income, asset, productivity, business capital, education and health, number and quality of meals and house building, especially within their households. However, the findings indicated that the influence of microcredits on crop production was negative and insignificant.

5.4 Recommendations

Due to the study findings, the researcher recommends the following to the management of CLECAMEJOHEZA Plc, women and other loan users in Rwanda, policy makers and other researchers.

5.4.1 To the Management of CLECAMEJOHEZA Plc.

Study findings have shown that, CLECAMEJOHEZA Plc issued loans equivalent to 25,000 Rwandan francs but among 309 women borrowers none borrowed more than 15,000,000 Rwandan francs. Thus, CLECAMEJOHEZA Plc should increase and motivate women to borrow more than 15,000,000 Rwf as 99% of borrowers ensured best payment compliance.

5.4.2 To the Women Borrowers or other Microcredits user

As shown in the study findings, few women have failed to comply with loan repayment due to the illness, thus, the study recommend women to ensure provision. In other case, the study has found that different women did not invested loan taken in productive activities by buying cars for personnel use not for business use. This is dangerous to the process of loan repayment, as the loan should be used for production necessary to cover the loan and additional interests.

5.4.3 Policy Implications

To enhance the impact of microcredits on the livelihood improvement of women in Muhanga District, Rwanda, policy makers should focus on several key areas. First, there should be reinforcement of policies to set boundaries and ceilings of reasonable amount required in respective of loan requested by women borrowers. Despite this study found one borrower who failed to repay loan on time, the policy should also set loans provisions with suitable conditions. Improving loan terms and conditions, such as offering flexible repayment plans and lower interest rates, can make loans more affordable and reduce financial stress on borrowers.

Increasing accessibility and awareness through targeted outreach programs and simplifying application processes can ensure more women are informed and able to apply for loans. Providing comprehensive financial literacy and training, along with continuous support and mentorship, will equip women with the necessary skills to manage their finances and grow their businesses effectively. Finally, fostering collaboration and partnerships between the government, microfinance institutions, NGOs, and the private sector can pool resources and expertise, enhancing the effectiveness of microcredit programs.

5.5 Theoretical Contribution

The current study has adopted Theory of Change Framework to assess at which extent microcredits had the impact on livelihood improvement of women, case of Muhanga district, Rwanda. This study considered women income, asset possession or acquisition, productivity, business capital, health and education, number of meals

and house building or maintenance illustrated by Mayoux in 2011 as indicators of livelihood improvement women of Muhanga district.

Therefore, this study is contributing to apply this theory of change framework on microcredits considering that previous ones have done in sectors of healthcare, discipline based-education, management strategies, sense of urgency in change efforts, context and alignment, documentation of how and why work is done, program activities and long-term goals and financial services in general whereas his study has taken microcredits which has some specific characteristics different from other general financial services which are usually commercial. The study was quantitative and used correlation analysis of data from 309 respondents to measure the extent to which 7 indicators of women livelihood have improved by taking small loan. The study interconnected how microcredits can be used as the pathway to improve livelihood of women.

5.6 Limitations of the Study

While planning to conduct a scientific study, better the researcher thought about possible limitations or challenges which might hinder the access to quality data, good report and minimum time use. Thus, for this study the researcher planned to respect time allocated and planned to work in weekends and holidays as well as to use advanced tools to ensure that data collected meet quality standards and time was maximized, moderated budget to meet good report. The research thought to meet the respondents would be simple as women beneficiaries of CLECAM-EJOHEZA Plc from different places would be invited by the branch managers, and via this

opportunity the questionnaires distributed as well as filled. Therefore, encountered limitations are linked to the respondent's availability. In most cases respondents were available in separate working places and living places mainly in rural areas of Muhanga district which engaged additional funds and time. The researcher accessed them at CLECAM EJOHEZA Plc office and also those in cooperatives met the researcher at the cooperative location and others were visited at home. All questionnaires had been distributed and filled-in physically.

Another challenge was limited funds which led to limited coverage and others were linked to the respondents' financial literacy. Some of them had doubt in comparing the quantity of crop production before taking and after utilization of loan. Data collected through self-reporting can be subject to biases, such as over-reporting positive outcomes or under-reporting challenges, affecting the accuracy of the results. The absence of a control group makes it difficult to attribute observed changes solely to the microcredit intervention, as other external factors might also influence the outcomes.

Additionally, the study may have focused on short-term impacts rather than long-term sustainability, which is crucial for understanding the extended effects of microcredit on women's livelihoods. Again, the scope of impact measurement might have been limited to economic indicators, without fully capturing social and psychological impacts such as changes in self-esteem and social status.

The variability in how women utilize microcredits, from business investments to household expenses, complicates the analysis of the loans' impact. External

economic factors, including inflation and market access, might not have been also fully accounted for, affecting the interpretation of results. Cultural norms and social barriers that affect women's economic participation might not have been adequately addressed, limiting the effectiveness of microcredit programs.

Finally, the study might not have sufficiently evaluated the role of accompanying training and support services, which are crucial for the effective utilization of microcredits. Acknowledging these limitations helps in understanding the constraints of the study and identifying areas for future research to provide a more comprehensive understanding of the impact of microcredits on women's livelihoods in Muhanga District, Rwanda.

5.7 Direction for Further Studies

This study was limited on the impact of microcredits on livelihood improvement of women in Muhanga district, Rwanda. While factors determining women livelihood change are more in the space and community, for future studies, it is recommended to expand the scope and going beyond microcredits and look on large loan and skills capacity to use loan in productive activities. In addition, for the sake of national economy development the future researchers are encouraged to access both men and women livelihood changes as an outcome of large loan use and skills associated to the loan use.

Future studies investigating the impact of microcredits on the livelihood improvement of women in Muhanga District, Rwanda, should consider several key

approaches. Conducting longitudinal studies can also provide insights into the long-term effects of microcredit on income, business growth, and overall quality of life. Utilizing mixed-methods approaches, combining quantitative and qualitative data, can offer a comprehensive understanding of the impact, capturing both trends and personal experiences. It's important to focus on diverse metrics, including social and psychological impacts, to fully understand the benefits of microcredits. Investigating barriers to access, such as socio-cultural, economic, and institutional factors, can help identify why some women may be excluded from these programs.

Evaluating the effectiveness of financial literacy and business training programs provided alongside microcredits can inform the design of more effective support mechanisms. Exploring the role of technology, such as digital financial services and mobile banking, can enhance the accessibility and efficiency of microcredit programs, especially in rural areas. Comparative studies between different regions or countries can identify best practices and successful models of microcredits implementation.

Analyzing the impact of existing policies on the effectiveness of microcredit programs can help advocate for policy changes that support the growth and sustainability of these initiatives. Collaborating with local universities, NGOs, and microfinance institutions can leverage local knowledge and resources, enhancing the relevance and applicability of findings. Finally, ensuring that research findings are widely disseminated through academic publications, policy briefs, workshops, and

community meetings can inform policy makers, practitioners, and the community, ultimately leading to greater economic empowerment and poverty reduction.

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APPENDICES

Appendix 1: Questionnaire

Dear respondent,

I, **NDAYAMBAJE Felix** and I am a student doing research entitled "The impact of microcredits on livelihood improvement of women in Muhanga district, in Rwanda". All students in last year are required to do a research project to complete the master's degree program. You have been therefore selected to participate in this important study and your contribution and support will be highly appreciated. The information that you will provide shall be treated as confidential as possible, kept anonymous and used solely for academic purposes.

Thank you for your support.

Yours sincerely,

Felix Ndayambaje

PART I:

A. Personal Identification

Tick (**V**) on the number or cell that corresponds to your opinion/option.

Do you agree to provide the information needed for the study?

i. Yes ( )

ii. No ( )

If the response is No, please do not continue filling out the questionnaire.

B. Household characteristics

1. Age of household head (Years) ____

2. Education level of the borrower indicate by putting tick)

None	Primary	Ordinary	Certificate	Advanced	Diploma	Degree

		secondary		**secondary**		
Number of years	7	11	12	13	15	18 and above

3. Marital status of CLECAM EJOHEZA PLC female members

Single	**Married**	**Widowed**	**Divorced**	**Separated**

4. Number of household members _____ people

5. What is the main occupation of your household? (i) Agriculture_____

(ii) Livestock _____ (iii) business _____ (iv) Wages/employment _____ (v)craft/technical work _____ vi. Others (please specify) _____

Part II:

C. LOANS INFORMATION

6. What type of activity you borrow loans for? (i) Agriculture_____ ii. Livestock (ii) business_____(iv) Education_____(v)Health_____ vi Others specify _____

7. Nature of the business/ activity taken for loan (i) Full time_____ (ii) Part time_____

9. What is the maturity of loan? _____months

10. How long have you been involved in loan borrowing? _____ years

11. What is the amount of the loan borrowed last year? _____RWF

12. What is the interest rates of the loan?_____%

13. What is the value of collateral **used** for loan?

14. If No, what were the reasons for not paying loan on time_____

_____

15. What is the amount of loans paid? _____RWF

16.What is the amount of outstanding (remaining) loan and interests? _____RWF

D. IMPACTS ON LOANS

17. Did borrowing of credit made improvement of your livelihood? (Yes/No) …….

18. Please give the details how borrowing of credits improved the following items:

Item (s)	**Before project**	**After the project**
Increase of family annual income	RWF	RWF
Increase of crops Production (mention the type of the crop..... (kgs/acre)		
Assets bought (list the type of assets)		
Improved of meal intake (the number and quality of meal)	Number of meals.....	Number of meals.....
Improved health and education to the family	Ability to meet health and education costs (Yes or No)…..	Ability to meet health and education costs (Yes or No).....
Construction of a house	Yes or No... Amount used.....RWF	Yes or No..... Amount used.....RWF
Expand of business value	capital.....(RWF)	capital .....(RWF)

THANK YOU VERY MUCH FOR YOUR COOPERATION

Umugereka 1: Urupapuro rw'ibibazo bihinduye mu Kinyarwanda

Urupapuro rw'ibibazo bigenewe abagore n'abakobwa bafite inguzanyo muri CLECAM EJOHEZA Plc mu Karere ka Muhanga district.

Munyamuryango wa CLECAM EJOHEZA Plc,

Nitwa, **NDAYAMBAJE Felix** ndimo gukora ubushakashatsi bufite insanganyamatsiko igira iti: Umumaro w'inguzanyo zicirirtse ku ihinduramibereho y'abagore n'abakobwa mu karere ka Muhanga district, "The impact of microcredits on livelihood improvement of women in Muhanga district, Rwanda". Abanyeshuri bose basoza amasomo yabo, basabwa gukora ubushakashatsi kugira ngo basoze ikiciro cya gatatu cya Kaminuza.

Ni muri urwo rwego watoranyijwe kugira uruhare muri ubu bushakashatsi, kandi uruhare rwawe ni ingenzi cyane. Amakuru atangwa hano azagirwa ibanga kandi azakoreshwa gusa mu nyungu zo kwiga (amasomo) gusa.

Urakoze kwemera kugira uruhare.

Felix Ndayambaje

IGICE I: **IBIRANGA UBAZWA**

Shyira akamenyetso (**V**) aho ubona hari igisubizo gihwanye n'ibyo ubona aribyo neza.

Uremera kugira uruhare muri ubu bushakashatsi utanga amakuru akenewe?

i. Yego (____)

ii. Oya (____)

(Niba ari oya, mushimire uhagarike ubushakashatsi ujye kuwundi, niba ari Yego komeza ku bibazo bikurikira).

IGICE II. IMITERERE Y'UMURYANGO W'UBAZWA

1. Imyaka y'uhagarariye urugo (Imyaka) ____

2. Amashuri (amasomo) y'uwafashe inguzanyo (shyira akamenyetso aho bihura)

Ntayo	**Abanza**	**Icyiciro cya 1 cy'Ayisumbuye**	**TVET**	**Icyiciro cya 2 cy'Ayisumbuye**	**Icyiciro cya 1 cya Kaminuza (A1)**	**Icyiciro cya 2 cya Kaminuza (A0) Kuzamura**
……	……	…….	……	…….	……..	……..
Number of years 0	7-13	13-16	N/A	16-19	19-21	21 Kuzamura

3. Irangamimerere y'ubazwa (Umugore cg umukobwa ukoresha inguzanyo icirirtse ya CLECAM EJOHEZA Plc).

Ingaragu	**Yarashatse**	**Yarapfakaye**	**Yatandukanye n'uwo bashakanye byemewe n'amategeko**	**Yatandukanye n'uwo bashakanye bitemewe n'amategeko**
……..	……..	……..	……..	……..

4. Umubare w'ababa mu rugo bose _____ abantu (nibura bahamaze amezi 3)

5. Ni ikihe gikorwa cy'ibanze ku rugo rwanyu? (i) Ubuhinzi_____

(ii) Ubworozi _____ (iii) Ubushabitsi _____ (iv) Umushahara ukomoka ku kazi___

(v) Ubukorikori _____ vi. Ibindi (Bivuge) _____

IGICE III. AMAKURU KU NGUZANYO YAFASHE

6. Ni ikihe gikorwa washoyemo amafaranga wagujije (y'inguzanyo wafashe)? (i) Ubuhinzi_____ ii Ubworozi_____ (ii) Ubushabitsi_____(iv)

Kwiga_____ (v)Ubuzima_____

vi Ibindi (Bivuge) _____

7. Imikorere y'igikorwa wafatiye inguzanyo (igihe umara wita kuri icyo gikorwa): (i) Dukora igihe cyose_____ (ii) Dukora igice cy'umunsi cg mu gihe runaka_____

9. Inguzanyo wafashe igenewe kumara igihe kingana iki? _____mu mezi. Inguzanyo bayiguhaye mu kuhe kwezi, no mu wuhe mwaka ……Ukwezi/……Umwaka?

10. Umaze Imyaka ingahe ukoresha inguzanyo? _____ Imyaka

11. Inguzanyo wafashe ingana iki (cg yanganaga iki niba warayirangije ntiwake indi) (aha tubara inguzanyo afite cg yari afite hagati ya 2020 kugeza 2023)? _____RWFS.

12. Vuga ijanisha ku nyungu? _____%.

13. Ingwate watanze yari ifite agaciro kangana iki? _____ RWFS.

14. Waba wishyura inguzanyo neza uko bikwiriye? Yego……Oya….. Niba ari oya ni iyihe mpamvu ituma utishyura uko bikwiriye ku gihe (naho byaba byarabaye ukwezi kumwe mu gihe cyose inguzanyo yamaze cyangwa igomba kumara)?

_____

_____

_____

15. Kugeza ubu umaze kwishyura amafaranga angahe yose hamwe harimo n'inyungu? _____RWFS

16. Usigaje kwishyura amafaranga angahe yose harimo n'inyungu? _____RWFS

IGICE IV. UMUMARO W'INGUZANYO ICIRIRITSE WAFASHE

17. Ese ubona inguzanyo wahawe hari impinduka yagize mu mibereho yawe? (Yego……/Oya……)

18. Vuga uburyo inguzanyo wafashe yagiye igira impinduka muri ibi bikurikira:

Ikibarwaho impinduka	**Mbere y'inguzanyo**	**Nyuma y'inguzanyo**
Amafaranga umuryango winjiza (RWFs)		
Kwiyongera kw'ingano y'umusaruro ukomoka ku buhinzi (Ibiro kuri Are imwe). Vuga igihingwa icyo ari cyo …… …….		
Kwiyongera kw'ingano y'ibikomoka ku gikorwa cyashowemo inguzanyo yafashwe muri rusange mu mafaranga y' u Rwanda (RWFS)		
Ibikoresho byaguzwe nyuma yo gufata inguzanyo/Assets (Amazina y'ibikoresho)		
Imiterere n'ingano y'amafunguro agenewe urugo	Umubare w'amafunguro ku munsi……. Ubwiza bw'amafunguro (Mabi, Aringaniye, Mwiza) ……. / …… / …….	Umubare w'amafunguro ku munsi…….. Ubwiza bw'amafunguro (Mabi, Uringaniye, Mwiza) ……. / …… / …….
Impinduka mu myigire n'ubuzima bw'umuryango	Umuryango ubasha kubona ubushobozi bwo kwishyura amashuri n'ubuvuzi (Yego cg oya) …....	Umuryango ubasha kubona ubushobozi bwo kwishyura amashuri n'ubuvuzi (Yego cg oya) ….....
Kubaka cg gusana inzu	Yego cg Oya (……..). Niba byarabaye amafaranga yakoreshejwe ni angahe	Yego cg Oya (……..). Niba byarabaye amafaranga yakoreshejwe ni angahe

	.... RWFS.	.... RWFS.
Kongera agaciro mu bushabitsi (Ishoramari)	Igishoro **mbere** yo gufata inguzanyo..... (RWFS)	Igishoro **nyuma** yo gufata inguzanyo..... (RWFS)

URAKOZE CYANE KU RUHARE RWAWE!

Appendix 2: Codebook

Full Variable Name	SPSS Variable Name	Coding Instruction
Agree to participate	PARTI	1=Yes, 2=No
Age of household head	PARTII.1	In years
Education of Household Head	PARTII.2.a	1=None, 2=Primary, 3=Ordinary secondary, 4=Certificate, 5=Advanced secondary, 6=Diploma, 7=Degree
Years Studied	PARTII.2.b	Range between: 7-13, 13-16, N/A, 16-19, 19-21, 21 and above
Marital status of Respondent	PARTII.3	1=Single, 2=Married, 3=Widowed, 4=Illegally Separated, 5=Divorced
Number of people in a House	PARTII.4	Numbers
Main Income activity for HH	PARTII.5	1=Crops Growing, 2=Craft/technical work, 3=Business, 4=Salary, 5=Animal Husbandry
Main Income activity for HH (Other…)	PARTII.5.Others	Specify
What type of activity you borrow loans for?	PARTIII.6	1=Crops growing, 2=Business, 3=Livestock, 4=Studying, 5=Animal Husbandry, 6=Health, 7=Buy a Car, 8=Buy a House, 9=Carpentry, 10=Tailoring, 11=Buy Plot of Land, 12=House Construction, 13=House mentainance
What type of activity you borrow loans for? (Others)	PARTIII.6. Others	Specify
Nature of the business/ activity taken for loan	PARTIII.7	1=Full time, 2=Part time
What is the maturity of loan (Months)	PARTIII.9.a	Mention the number in months
What is the maturity of loan (Month it was taken)	PARTIII.9.b	Mention the month
What is the maturity of loan (The year taken)	PARTIII.9.c	1=2020, 2=2021, 3=2022, 4=2023
How long have you been involved in loan borrowing (Years)	PARTIII.10	In years
What is the amount of the loan borrowed (Loan which was active in the years between 2020-	PARTIII.11	Amount of money

2023)		
What is the interest rate of the loan?	PARTIII.12	1=12%, 2=18%, 3=24%
What is the value of collateral used for loan	PARTIII.13	Amount of money
Are you paying the loan as defined with the lender? (Yes…..No……)	PARTIII.14.a	1=Yes, 2=No
If No, what were the reasons for not paying loan on time	PARTIII.14.b	Specify
What is the amount of loans paid? (Frws)	PARTIII.15	Amount of money
What is the amount of outstanding (remaining) loan and interests? (Frws)	PARTIII.16	Amount of money
Did borrowing of credit made improvement of your livelihood? (Yes/No)	PARTIV.17	1=Yes, 2=No
Increase of family annual income (Before loan)	PARTIV.18.1.before_Frws	Amount of money
Increase of family annual income (After loan)	PARTIV.18.1.after_Frws	Amount of money
2. Increase of crops Production (mention the type of the crop.....	PARTIV.18.2.a.Crop_Name	Name
2. Increase of crops Production (mention the type of the crop..... (kgs/acre)/ Before loan	PARTIV.18.2.before_Kgs	In Kgs
2. Increase of crops Production (mention the type of the crop..... (kgs/acre)/ After Loan	PARTIV.18.2.after	In Kgs
3. Increase of Production (based on type of activity of activity where loan used) (RWFS)/ Before loan	PARTIV.18.3.before	Amount of money
3. Increase of Production (based on	PARTIV.18.3.after	Amount of money

type of activity of activity where loan used) (RWFS)/ After loan		
4. Assets bought (list the type of assets)/ Before Loan	PARTIV.18.4.Names	Specify
4. Assets bought (list the type of assets)/ Before Loan	PARTIV.18.4.before	Specify
4. Assets bought (list the type of assets)/ After Loan	PARTIV.18.4.after	Specify
5. Improved of meal intake (the number and quality of meal) (Number)/ Before Loan	PARTIV.18.5.before_Meals_N	Specify
5. Improved of meal intake (the number and quality of meal) (Number)/ After Loan	PARTIV.18.5.After_Meals_N	Mention the number
5. Improved of meal intake (the number and quality of meal) (Quality)/ Before Loan	PARTIV.18.5.before_Meals_Q	1=Normal, 2=Good, 3=Bad
5. Improved of meal intake (the number and quality of meal) (Quality)/ After Loan	PARTIV.18.5.After_Meals_Q	1=Normal, 2=Good, 3=Bad
6. Improved health and education to the family/ Before Loan (Yes or No)	PARTIV.18.6.before	1=Yes, 2=No
6. Improved health and education to the family/ After Loan (Yes or No)	PARTIV.18.6.after	1=Yes, 2=No
7. Construction of a house (Yes or No)/ Before Loan	PARTIV.18.7.before_Yes_No	1=Yes, 2=No
7. Construction of a house (Yes or No)/ After Loan	PARTIV.18.7.after_Yes_No	1=Yes, 2=No
7. Construction of a house (Amount/Frws)/ Before Loan	PARTIV.18.7.before_Amount	Amount of money
7. Construction of a	PARTIV.18.	Amount of money

house (Amount/Frws)/ After Loan	7.after_Amount	
8. Expand of business value (Frws)/ Before Loan	PARTIV.18.8.before_Capital	Amount of money
8. Expand of business value (Frws)/ After Loan	PARTIV.18.8.after_Capital	Amount of money

Appendix 3: Research clearance letters

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

THE OPEN UNIVERSITY OF TANZANIA

Ref. No OUT/PG201507942 **21st May, 2024**

Managing Director,
CLECAM EJOHEZA Plc,
P. O. Box 88,
GITARAMA, RWANDA.

Dear Director,

RE: RESEARCH CLEARANCE FOR MR. FELIX NDAYAMBAJE, REG NO: PG201507942

2. The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007.In line with the Charter, the Open University of Tanzania mission is to generate and apply knowledge through research.

3. To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Mr. Felix Ndayambaje, Reg. No: PG201507942),** pursuing **Master of Business Administration (MBA).** We here by

grant this clearance to conduct a research titled **"The Impact of Microcredit Loans on Livelihood Improvement of Women in Muhanga District, Rwanda"**. He will collect his data at your office from 22nd May to 30th June 2024.

4. In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

THE OPEN UNIVERSITY OF TANZANIA

Prof.Gwahula Raphael Kimamala

For: VICE CHANCELLOR

CLECAM EJO HEZA Plc
Muhanga District
Southern Province
P.O. Box: 88 MUHANGA
E-mail: uniclecam@gmail.com
Website: www.clecamejoheza.co.rw

Muhanga, 24th May 2024
No: 068'/CE/05/DM

FELIX NDAYAMBAJE
Reg No PG201507942
The Open University of Tanzania

RE: RESEARCH CLEARANCE FOR MR. FELIX NDAYAMBAJE, REG NO: PG201507942

Dear Felix,

Reference is made to the letter from The Open University of Tanzania, where you are pursuing Master of Business Administration, introducing you to conduct your research titled "The impact of microcredit on livelihood improvement of women in Muhanga district, Rwanda".

This letter serves to allow you to collect data from our office from 24th May to 30th June 2024. The information that you will access must be treated as confidential as possible and kept anonymous.

Sincerely Yours,

CLECAM - EJO HEZA Plc P.O.Box 88 MUHANGA HEAD OFFICE

DUSABUMUREMYI Merchias
Managing Director