EFFECT OF AGRICULTURAL CREDIT ON RURAL LIVELIHOOD DIVERSIFICATION AMONG CASSAVA FARMERS IN ORHIONWON LOCAL GOVERNMENT AREA, EDO STATE, NIGERIA

BY

Osasenaga Michelle OGBEMUDIA
AGR2000028

DEPARTMENT OF AGRICULTURAL ECONOMICS AND RESOURCE MANAGEMENT
FACULTY OF AGRICULTURE
UNIVERSITY OF BENIN, BENIN CITY

NOVEMBER, 2025

EFFECT OF AGRICULTURAL CREDIT ON RURAL LIVELIHOOD DIVERSIFICATION AMONG CASSAVA FARMERS IN ORHIONWON LOCAL GOVERNMENT AREA, EDO STATE, NIGERIA

BY

Osasenaga Michelle OGBEMUDIA (Miss)
AGR2000028

A PROJECT SUBMITTED TO THE DEPARTMENT OF AGRICULTURAL ECONOMICS AND RESOURCE MANAGEMENT, FACULTY OF AGRICULTURE, UNIVERSITY OF BENIN, BENIN CITY IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS FOR THE AWARD OF BACHELOR'S DEGREE IN AGRICULTURE (OPTION: AGRICULTURAL ECONOMICS AND EXTENSION SERVICES)

NOVEMBER, 2025

CERTIFICATION

This is to certify that the research work on the Effect of Agricultural Credit on Rural Livelihood Diversification Among Cassava Farmers in Orhionwon Local Government Area, Edo State, Nigeria was carried out by Ogbemudia Michelle Osasenaga with the Mat. No AGR2000028 under the supervision of the department of Agricultural Economics and Resource Management, Faculty of Agriculture, University of Benin, Benin City, Edo State, Nigeria.

Prof. J. Ahmadu **(Project Supervisor)**	**Date**
Prof. J. Egbodion **(Head of Department)**	**Date**

DEDICATION

I dedicate this research work to God Almighty, the source of wisdom and strength, for His provision and guidance that enabled me through this programme. His infinite grace, strength, and provision sustained me through every challenge. To Him be all the glory.

ACKNOWLEDGEMENTS

I wish to express my profound appreciation to my project supervisor Professor. J. Ahmadu for the corrections and accessibility throughout the duration of this work and to the Head of Department Dr. J. Egbodion, thank you.

My hearty thanks goes to the amiable lecturers of the departments of Agricultural Economics and Resource Management and Agricultural Extension and Rural Development, University of Benin without whom, this degree will only be a myth.

I also want to sincerely express my profound gratitude to my Father and Mother, Mr. and Mrs. OGBEMUDIA for their parenthood, prayer, financial, and moral support. The value you instilled in me has formed the bedrock of my work ethic, perseverance and passion. This project's completion is a testament to the enduring love and guidance you've provided throughout my journey.

My sincere gratitude goes to my lovely sister Uyi. As we celebrate the completion of this milestone, I am profoundly grateful for your endless encouragement, understanding, patience and support. This achievement is as much yours as it is mine, and I am excited to witness the impact our unity can create in future endeavours.

To my uncle, Mr. Awoyo Ayodele. Thank you for your financial support and encouragement throughout this phase.

I wish to acknowledge my course mates and friends who provided academic assistance and moments of relief.

Special thanks goes to Donald Osarogiagbon, Badru Halima, Ohiro Blessing, Njokwu Chioma, Itoro Christian, Onosedeba Jonathan, Akhihiero Sarah, Orewa Matthew, Omonlumhen Ejemen, Osunde Osayi, Ochei Destiny, Okoh Paula for their valuable companionship and encouragement that made the burden of this journey much lighter.

I sincerely appreciate myself for the discipline, perseverance and commitment demonstrated throughout this demanding research and writing process.

Finally, thank you to everyone who has contributed one way or the other into the fulfilment of this journey. God bless you.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

This study examined the effect of agricultural credit on rural livelihood diversification among cassava farmers in Orhionwon Local Government Area, Edo State, Nigeria. A structured questionnaire was used to collect primary data from a sample of 80 cassava farmers through a multi-stage sampling technique. Data were analyzed using descriptive statistics (frequency, percentage, and mean scores) and inferential statistics (Independent Samples T-test).

The socio-economic analysis revealed that the majority (56.25%) of the farmers were female, with a mean age of 43 years and a mean farm size of 1.6 hectares. Cooperative societies were identified as the most frequent source of credit (33.75%), while friends and government sources also played significant roles (30% each). The primary purposes for seeking credit were the acquisition of farm inputs for cassava production (50.67%) and the payment of farm labor (26.67%). Despite access, 51.25% of respondents indicated that the credit received was insufficient for their needs.

Livelihood diversification was found to be a prevalent survival strategy, with 92.31% of farmers engaging in other activities such as poultry farming, petty trading, and cassava processing. The results of the t-test analysis showed a statistically significant increase in mean income from ₦554,000 before accessing credit to ₦736,500 after accessing credit ($P < 0.05$), confirming that agricultural credit positively impacts financial leverage and diversification capacity. However, high interest rates (Mean = 2.586) and strict collateral requirements (Mean = 2.525) were identified as the leading constraints to credit access. The study recommends that financial institutions and government agencies should lower interest rates and simplify collateral requirements to enhance credit accessibility, thereby fostering sustainable rural livelihoods and economic resilience among smallholder farmers.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Agriculture is an ancient and most significant occupation of man. It comprises of; soil cultivation for planting crops and rearing animals to offer food, wool and other items for personal or general consumption and to generate revenue through sales of the products (Mosinmileoluwa *et al.,* 2021). Agriculture is an important industry in Nigeria's economy and the primary source of income for the majority of Nigerian households (Udoh, 2000; Obisesan, 2013). It accounts for around 45% of the GDP, employs two-third of total labour force and supports more than 90% of the rural population. Small holder farmers dominate the industry accounting for more than 90% of the total output. while more than half of the farmers cultivate only food crops including roots and tubers like cassava (IFAD, 2001; Obisesan 2013). In the southwest of Nigeria, smallholder farmers rely on root and tuber crops, particularly cassava, as a dietary supplement and a significant source of revenue, energy and nutritional needs (SARRNET, 1993; Obisesan, 2013). Famogbiele (2013) stressed that sustained agrarian growth is crucial to ending hunger and poverty because it promotes reasonable price stability and food availability, guarantees high capacity national industrial growth through even processing of raw materials and output, frees up labour, and eventually leads to full employment. The Nigerian agrarian sector has

continued to raise comparatively less than the government's proportionate amount of funds. (Mosinmileoluwa *et al.,* 2021).

Credit according to Mosinmileoluwa *et al.* (2021) is a required tool for agricultural development as it enables farmers to purchase essential inputs through loans which is vital for overall development to take place. According to Adeoti and Raji (2010), it is crucial to pbtain loan in agriculture and other assets like land, labour, equipment and raw materials (Mosinmileoluwa *et al.,* 2021).

Diversification opportunities are important to the livelihoods of rural households in sub-Saharan Africa, and diversification away from cropping into other activities, such as livestock and non-farm activities can increase income and improve food security (Barrett *et al.,* 2001; Block & Webb,2001; Ellis & Mdoe, 2003; Frelat et al.,2016; Reardon *et al.,* 1992; Musumba *et al.,* 2021).

Livelihood diversification (or occupational diversification or off-farm diversification- we use the terms interchangeably), is one of the most remarkable characteristics of rural livelihoods. It is defined as “the process by which rural families construct a diverse portfolio of activities and social support capabilities in order to survive and to improve their standards of living” (Ellis, 1998; Guatam *et al.,* 2016). Livelihood diversification can also be defined as the ability of an individual to generate cash, invest in assets to increase their income levels and engage in several activities (Ellis,2000). This implies diversifying income sources, occupation and assets (Barret et al.2001; Kimathi *et al.,* 2022). In most rural households, people are

involved in different activities such as crop growing, livestock rearing, hiring out their labour in the neighbourhood, running their own businesses, enterprises or migrating to other areas to look for employment (Khai and Ngoc, 2010; Mathebula et al.2011; Kimathi *et al.,* 2002). All these activities help cushion families against risks. (Kimathi *et al.,* 2022). Diversification is a common livelihood strategy for rural households in developing countries, with diversification being either a choice or necessity depending on individual household contexts. The reason for the diversification is complex, but in general decisions to diversify are either 'opportunity-led' and driven by pull factors or 'survival-led' and driven by push factors (Barrett *et al.,* 2001; Ellis, 2000; Musumba *et al.,* 2021).

Cassava (*Manihot esculenta)* is a perennial woody shrub of the euphorbiaceous family (Owoeye and Toluwase, 2018; Ashiko *et al.,* 2022) Cassava is one of the most important crops in Nigeria, playing a dominant role in the rural economy in the southern agro-ecological zones and is increasingly gaining importance in other parts of Nigeria. It is important, not just as a food crop but even more so as a major source of income for producing households. (Kawano 2003; Obisesan, 2013). Currently, cassava root and leaves do not only serve as an essential source of calories but as a major source of income for rural households in Nigeria (Adeboye, 2018). Cassava provides food and income to over 30 million farmers and large numbers of processors and traders in Nigeria (Abdoulaye *et al.,* 2014; Adeboye, 2018). As agriculture is important to the Nigerian economy so is the root and tuber (which are

mainly cassava and yam) crops sector in Nigeria. Tuber and root crops, including cassava, yam, potato and sweet potato are the most important food crops for human consumption in Nigeria (IITA, 2015). These crops are cultivated in varied agro ecologies and production systems contributing to more than 240 million tonnes annually, covering up to 23 million hectares. The aggregate value of yam, cassava, potato and sweet potato surpasses all other staples grown in Nigeria (IITA, 2015; Timileyin *et al.,* 2023). Apart from its contribution to about 40% of the Gross Domestic Product (GDP) in Ghana, the agricultural sector is the leading foreign exchange earner for the country (Nair and Faissha, 2010; Owusu,2017). Workers in the agricultural sector are poor and live in the rural areas of the country (World Bank, 1995). "Tefera (2004) has indicated lack of access to agricultural credit as one of the major factors which breed rural poverty" (Owusu, 2017).

1.2. Problem Statement

Despite the unique roles that the cassava subsector plays, it is still constrained by a number of factors such as pests and diseases, poor/traditional processing facilities, risks and uncertainty and declining farm sizes due to high population growth rate (Stephen *et al.,* 2013). These constraints which may have resulted in low income have caused many of the cassava farmers to diversify into other livelihood activities as a thought way out of their poor income (Okoror *et al.,* 2019). Another reason for diversifying livelihood by cassava farmers is to secure sufficient resources to meet fundamental needs such as food security, education for children, healthcare, clothing

and personal items, energy for household use, savings and investments, social and cultural needs.

“Agriculture as a source of income is fraught with dangers and uncertainties, exposing farming households to low living standards, poverty, and lowering their country's food security position. The consequence of unanticipated shocks and unpredicted natural problems in agriculture drives farming household towards alternative methods of income generation” (Afodu *et al.,* 2019). Studies have shown that agricultural-based livelihood in rural Nigeria has a higher level of poverty than other occupational groups. Rural agriculture is subjected to local variations in weather conditions, and thus expected variations in income levels and access to food (Omonona, 2009). Therefore, there is need to diversify sources of income into multiple agricultural and/or non-agricultural income-based livelihood systems. Depending on the economic opportunities and constraints, Iraoya and Isinnika (2020) classified rural households' diversification into three categories: (i) agricultural intensification (using productivity-enhancing inputs, mixed cropping, and rearing different kinds of livestock), (ii) non-farm diversification (skill acquisition, self-employment, and wage labour), and (iii) migration (Akintunde *et al.,* 2022).

Researches have shown that both agricultural credit and rural livelihood diversification are crucial strategies for enhancing the well-being of farmers. The specific impact of agricultural credit on the extent and nature of livelihood diversification among cassava farmers remains unclear in Orhionmwon, Edo State,

Nigeria. This gap hinders the formulation of effective policies aimed at improving rural livelihoods through financial inclusion. This research seeks to investigate the extent to which access to and utilization of agricultural credit influences the adoption of diverse livelihood strategies by cassava farming households, thereby contributing to a better understanding of how financial interventions can promote rural resilience and economic well-being.

This study seeks to answer the following questions:

1. What is the socio-economic characteristics of the cassava farmers in Orhionmwon?
2. What is the level of access to and utilisation of agricultural credit among cassava farmers in Orhionmwon?
3. To what extent have cassava farmers diversified their livelihoods?
4. How does access to agricultural credit influence livelihood diversification among cassava farmers?
5. What are the constraints faced by the cassava farmers in assessing and using agricultural credit?

1.3. Objectives of the Study

The general objective of this study is to examine the effect of agricultural credit on rural livelihood diversification among cassava farmers in Orhionmwon Local Government Area, Edo State.

The specific objectives of the study are to;

1. describe the socio-economic characteristics of the cassava farmers in Orhionmwon.
2. examine the level of access to agricultural credit among cassava farmers in Orhionmwon.
3. assess the extent of livelihood diversification among cassava farmers.
4. analyse the effect of agricultural credit on livelihood diversification among cassava farmers.
5. identify the constraints affecting access to and utilization of agricultural credit.

1.4. Justification

Rural livelihood diversification has become a critical strategy for reducing poverty, enhancing food security, and improving household resilience in many developing countries, including Nigeria. Cassava farmers in Orhionmwon LGA of Edo State, like many rural dwellers, often face economic vulnerability due to their reliance on a single income source-agriculture. Diversifying into non-farm and off-farm activities can help stabilize income, but this often require capital investment, which is typically beyond the reach of smallholder farmers without access to credit.

Previous studies have shown mixed results. For instance, Ellis (2000) noted that access to financial capital is a significant determinant of rural livelihood strategies. Adebayo and Adeola (2008) also found that credit use among Nigerian farmers are positively impacted their capacity to diversify into other income sources. Conversely,

Adugna and Heidhues (2000) observed that credit access alone does not guarantee diversification unless it is accompanied by supportive infrastructure and marker access.

Given the local economic reliance on cassava production and the need for poverty reduction in Orhionmwon, this study is justified in its aim to bridge the knowledge gap on how agricultural credit impacts rural livelihood diversification. Findings will help policymakers and development practitioners design more effective credit schemes tailored to support not just increased agricultural productivity, but holistic livelihood improvement.

Findings will help farmers by providing significant information on whether and how access to agricultural credits influences cassava farmers livelihood in rural areas. Farmers can also make decisions to invest in other income generating activities or not.

Researchers can use the findings from this study as a foundation for their own research in the study area which is Orhionwon. Findings can be used in comparative studies across different regions, crops, or socio-economic contexts, allowing for a broader understanding of livelihood diversification.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Theoretical Framework

The theoretical framework used is the Sustainable Livelihood Framework (SLF), supplemented by the Theory of the Farm Household.

2.1.1 Sustainable Livelihood Framework (SLF)

The SLF is a widely used conceptual and analytical tool for understanding the factors that shape and constraint the livelihood choices of people, particularly the rural poor in developing countries. It provides a holistic view of poverty by moving beyond a narrow focus on income to consider the complex reality of how people construct a life for themselves.

Components of the SLF

The framework is typically visualised as a pentagon of assets (the livelihood pentagon) interacting within a vulnerable context, mediated by structures and processes. These are the four main interconnected components:

1. The Vulnerability Context: This component captures the external environment that dictates the conditions under which people live and defines the risks they face such as shocks (e.g. natural disasters, health crises), trends (e.g. population

growth, economic shifts, resource degradation), and seasonality (cyclical variations in prices, employment, or food availability).

The study acknowledges that the agricultural sector is “fraught with dangers and uncertainties” and subjected to local variations in weather conditions, exposing farming households to low standard of living and poverty. This concept drives the need for alternative method of income generation.

2. Livelihood Assets (The Pentagon): These are the foundational resources that households draw upon to achieve their desired outcomes. Access to these capital assets is crucial for determining their range of choices. The capital assets are the human capital, social, natural, physical and financial capital.

   The human capital includes skills, knowledge, good health, and the ability to work, that together enable people to pursue different livelihood strategies.

   The social capital includes networks, membership in groups, and relationships of trust (e.g. membership in a corporative), upon which people draw in pursuit of livelihood.

   The natural capital assets include land, water, forests, and other environmental resources (e.g. farm size).

   The physical assets include infrastructure (transport, shelter) and productive tools/equipment (e.g. processing facilities).

   Financial capital includes stocks of money, savings, and access to credit (loans).

The core independent variable of this study, Agricultural Credit, is a critical element of the financial capital asset.

3. Structures and Processes: These mediates the relationship between assets and strategies:

   Structures includes organisations, both public (government) and private (firms, financial institutions) and Processes such as policies, laws, and institutions (e.g. market behaviour, high interest rates, complex application procedures) that affect the access and use of assets.

4. Livelihood Strategies and Outcomes: The strategies are the activities people undertake to use their assets, which lead to certain outcomes.

2.1.2 Livelihood Diversification as a Strategy

Livelihood diversification is the process by which rural families construct a diverse portfolio of activities and social support capabilities in order to survive and improve their standard of living. It is an indispensable livelihood strategy for rural households in developing countries.

Diversification involves generating cash, investing in assets, and engaging in several income-earning activities outside of or alongside the primary farming activity.

The Role of Credit in Driving Diversification

Within the SLF, diversification is often categorised based on the following underlying motivation:

1. Survival-Led Diversification (Push Factors): This is driven by necessity when households face low income and high risks from farming. They are pushed to find any activity to cushion the family against risks and meet fundamental needs like food security, education, and healthcare. (Barrett *et al.,* 2001; Ellis, 2000; Musumba *et al.,* 2021).
2. Opportunity-Led Diversification (Pull Factors): This is driven by choice and aspiration, where households are pulled by the potential for high returns in other activities.

Agricultural Credit (Financial Capital) is the critical link that can transform survival-led diversification into opportunity-led diversification. Access to credit allows farmers to overcome liquidity constraints and be able to achieve the following:

- Invest in Off/Non-Farm Activities: Capital is often required to start business, acquire skills, or purchase equipment for diversification activities like petty trading, processing, or handicrafts.
- Increase Capacity: Credit can positively impact farmer's capacity to diversify into other income sources.

The goal of the study therefore is to analyse how access to this crucial credit influences the extent and nature of livelihood diversification among cassava farmers.

2.1.3 Theory of the Farm Household

The Theory of the Farm Household (TofH), also known as the Agricultural Household Model (AHM), provides the essential economic logic for analysing how a

farming family makes decisions regarding production (farming) and consumption (livelihood) simultaneously. This explains the economic mechanism through which agricultural credit influences the decision to pursue livelihood diversification.

- The Core Economic Assumption: The Unified Household

The TofH is built on the fundamental premise that the farm and the household are a single unified decision-making unit. Unlike conventional microeconomics theory that treats the firm (farm) and the consumer (household) separately, the TofH recognises that the cassava farming household in Orhionmwon aims to maximise its overall utility (satisfaction or well-being) subject to a set of constraints.

This utility maximisation requires the household to make joint decisions on the following:

-Production: How much output (cassava) to produce and which inputs to use.

-Consumption: How much food to consume, how much non-food items to purchase, and how much to save.

-Resource Allocation: How to allocate its fixed resources (time, labour, and capital) between farm work, non-farm work and leisure.

- Resource Allocation Before Credit

Farm households operate under the constraints of limited resources, which include land, labour, capital, and time. The economic logic of resource allocation in this context can be explained through several key concepts:

- Production Decisions: Households choose which crops to plant and how much land to allocate to each based on expected returns, market prices, and the cost of inputs. Decisions are influenced by factors such as soil fertility, climate conditions, and personal preferences or traditions.
- Labour Allocation: Families often engage in multiple activities (e.g., farming, livestock, off-farm employment). The allocation of labour is based on the marginal productivity of labour in each activity. Households may prioritize activities that provide the highest return on labour, adjusting based on seasonal demands and market opportunities.
- Capital Utilization: Investments in equipment, seeds, and fertilizers are made based on expected future returns. Households evaluate the cost of capital against potential income from increased productivity. Decisions about capital allocation are often influenced by risk perceptions and the availability of resources.

Credit Utilization

Credit plays a crucial role in enabling farm households to optimize their resource allocation. The economic logic of credit utilization involves:

- Access to Capital: Credit allows households to overcome liquidity constraints, enabling them to invest in higher-value crops or necessary equipment that they could not afford outright. Households often use credit to smooth consumption during lean periods or to take advantage of profitable opportunities when they arise.

- Investment in Productivity: Borrowing can finance inputs that enhance productivity, such as improved seeds, fertilizers, or irrigation systems. Households assess the trade-off between the cost of borrowing and the expected increase in output. The decision to take on debt depends on the expected returns from the investment and the household's ability to repay.
- Risk Management: Credit can serve as a risk management tool. Households may borrow to cover unexpected losses due to poor weather or pest infestations, helping them maintain stable income levels. The willingness to take on debt often correlates with the household's risk tolerance and access to insurance or other safety nets.

Decision-Making Process

The decision-making process in farm households involves Utility Maximization where households aim to maximize utility by balancing consumption and production. They consider both current consumption needs and future income potential when making decisions about resource allocation and credit use. Secondly, Budget Constraints where households operate under budget constraints, they must consider their total available resources, including any loans or credit they have taken on. Lastly, Intertemporal Choices where decisions often involve trade-offs between present and future consumption. Households must evaluate how current investments impact future income and the ability to repay loans.

2.2 Empirical Review

Ellis (1998) explores the relationship between agricultural diversification and access to financial capital, examining how it affects household decisions. He employed the use of quantitative and qualitative methods of data collection to analyse the role of financial capital on agricultural diversification. His work emphasized two things. One that households with better access to financial services can diversify their income sources more effectively, secondly that the link between financial capital and diversification is particularly strong in contexts where agricultural markets are volatile.

Ellis (2000) also discusses on livelihood and rural development, the broader implications of livelihoods approaches, including the role of financial capital/credit in supporting diversification strategies. It was noted in the study that Financial services (credit, savings, insurance) are essential for enabling households to take risks associated with diversification and the ability to invest in non-farm activities is closely tied to the availability of financial resources.

Arowolo *et al.,* (2022) examined the effect of financial inclusion on livelihood diversification among the small holder farming households in Oyo State, Nigeria. A stage sampling technique was employed to collect primary data from 400 respondents who were randomly selected. Simpson index with the ordered logit regression model were used for the analysis. The result showed that 91.7% of the sampled farming households diversified their livelihood activities to mitigate the risks of agriculture and earned income from multiple sources. The result also showed

that livelihood diversification was positively influenced by having access to credit and owning a bank account.

Ahmed *et al.,* (2018) investigated the patterns and extent of livelihood diversification in rural Bangladesh. The study also identified major factors affecting extent of livelihood diversification which agricultural credit was mentioned. A random sampling method was used to collect primary data through a semi-structured questionnaire and was analysed using the descriptive statistics and statistical techniques. The ordered logit regression shows that the probability of the smallholder farming households diversifying their livelihood activities is strongly influenced by age, gender, marital status, and education of the household head, household size, total area of land cultivated, main livelihood activity, access to credit, and ownership of bank account. Access to credit and owning a bank account positively influenced livelihood diversification.

Vihi *et al.,* (2021) conducted a study in the Vandeikya Local Government Area of Benue State, Nigeria, using a sample of 192 respondents. The study analysed the livelihood diversification among rural farming households in Vandeikya Local Government Area of Benue State, Nigeria. The mean age of farmers was 40 years, with males constituting 84% of respondents. The majority (76%) were married with an average household size of 8 persons and an average farm size of 2.5 hectares. Most respondents (62%) had only a primary education, and the average farming experience was 9 years. Farmers earned a mean annual farm income of N33,518. A

significant majority (93%) reported having no access to credit to finance production activities. Farmlands were primarily acquired through inheritance (68%). The main non-farm livelihood strategies adopted by households included trading (62%), sales of cooked food and local drinks (33%), casual labour supply (30%), and civil service/private salary jobs (28%). The level of livelihood diversification was found to be moderate, with the majority of respondents (74%) diversifying into only two income sources. Logit regression results indicated that the decision to diversify was influenced by age, educational status, membership of cooperatives, access to credit, and annual farm income. The primary constraints to livelihood diversification were lack of capital (31%), lack of non-farm livelihood enterprises (20.3%), infrastructural problems (17%), government policies on the use of some natural resources (14.5%), and gender issues (11%).

Kairos *et al.,* (2021) examined the effect of credit access to both agricultural and off-farm activities. The study used a household survey of 371 rural farmer respondents in Ethiopia to collect primary data. The data was analysed using a logistic regression model and statistical description methods. Demographic factors (gender, age, level of education, and family size) had a positive and significant effect on credit access. A negative relationship was found between credit access and non-farm economic activities. Credit access significantly affects agricultural intensification and specialization rather than diversification.

Siyoum *et al.,* (2012) analysed the impact of credit by investigating its differential effects on rural Ethiopian households based on their existing wealth status. The study discovered credit's impact is not universal; it affects households differently depending on their wealth level. It was based on ethnographic research conducted in the Ebinat district of northern Ethiopia over an 18-month period (February 2009 to July 2010). A survey of 106 households and a series of monthly in-depth interviews with a focus group of 15 households was carried out. For poor households, the limited benefit of consumption smoothing came with a significant risk: they were prone to being trapped in a cycle of indebtedness instead of achieving long-term livelihood improvements. The study found that participation in a safety net programme could partially break this negative cycle. Participation in such programs enhanced the creditworthiness of poor households, suggesting that a foundational level of support is necessary for credit to become a productive tool rather than a source of debt. The findings emphasize that for credit to be effective for the poor, it must be paired with other forms of support, such as safety net programmes, to establish a stable foundation and improve their financial viability.

Sanka *et al.,* (2021) analysed the access to agricultural credit for smallholder rice farmers in the Shinyanga Region, Tanzania, focusing on the available credit sources and the factors that determine access. The study area was Shinyanga Region, Tanzania. Multistage random sampling was used. Two major rice-producing district councils, Shinyanga and Msalala, were purposively selected. A total of 180

smallholder rice farming households were then selected using a simple random sampling technique. Demographic, socioeconomic characteristics, and factors influencing the decision to take out agricultural credit were gathered using a semi-structured questionnaire. Descriptive statistics and the Logit model were employed to analyse the data. The study identified the Cooperative Institutions, personal Savings, individual money lenders, relatives/friends, microfinance institutions, commercial banks, sources of agricultural credit available to the rural farmers. The positive influence of membership in cooperative institutions, household income, land size, and asset value aligns with typical lender preferences for characteristics that reduce risk and enhance collateral or repayment capacity. Conversely, the negative influence of age and livestock ownership suggests that older farmers and those relying on easily liquidable but sometimes less secure assets (livestock) may face higher hurdles in accessing formal credit.

CHAPTER THREE

3.0 METHODOLOGY

3.1. Study Area and Scope

This study will be carried out in Orhionmwon which is located in Edo State (The Heartbeat of the Nation). Edo State is one of the 36 states in Nigeria and it is located in the South-South geographical zone. The capital city of Edo State is Benin City, which is known as the 4th largest city in Nigeria population-wise. Edo State was created from the defunct Bendel State on August 27, 1991. The population of the state is approximately five million as of 2025.

Orhionmwon is the largest Local Government Area (LGA) in Edo South Senatorial district. It's headquarter is in the town of Abudu and was created during the days of the defunct Bendel State and Uhunmwode local government was cut out of it in 1991. It has an area of 2,382 km squared and a population of 206,717 at the 2006 census. The postal code of the area is 301.

Orhionmwon lies on a latitude of 4°N and 4° 30'N and longitude of 6°E and 6° 5'E respectively. It is located in the rain forest zone, has an annual rainfall of 1500-3000mm spread over about 200 days in the year (Gbigbi *et al.,* 2017).

The study area comprises towns and communities such as Idumodin, Ottah, Okuor, Edummungba, Ologbo Nugu, Egbokor, Ute - Oheze, Ugo, Urhonigbe, Igbanke, Iru egbede, Evbobanosa, Oza, Ogan, Uson, Oloten, Obagie N Oheze, Idumiru, Idumwebo, Numagbae, Ugokoniro, Ukpato, Igbekhue, iguehanza, Obozogbe-niro.

The people of Orhionmwon Area Council are primarily engaged in agricultural activities, with farming being the mainstay of their economy. They cultivate various crops such as yam,

cassava, maize and oil palm. In addition to agriculture, trading and small-scale businesses also contribute to the local economy.

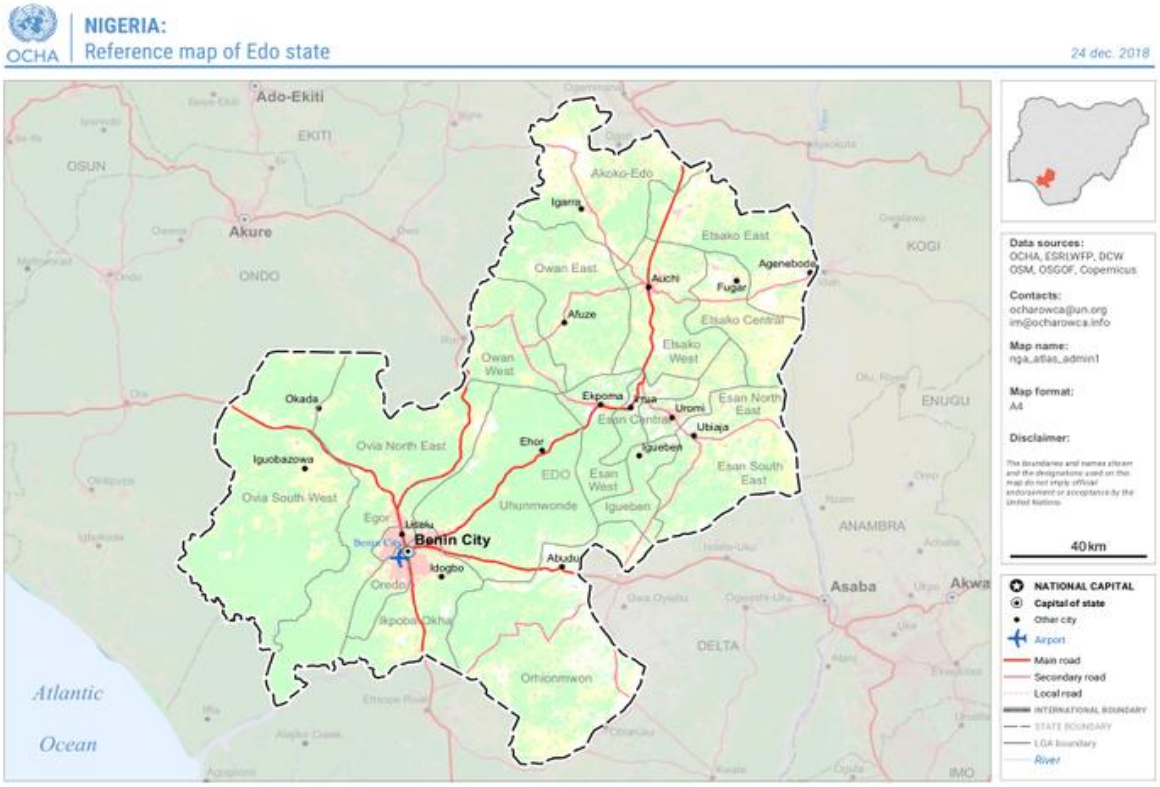

Fig. 1: Map of Edo State showing the local government areas

Fig. 2: Map of Orhionwon

3.2. Sampling procedure and sample size

Edo South ADP Zone has a registered number of 84 cassava farmers .(Ehilenboadiaye *et al.,*2021)

A simple random selection of 20 respondents each from 4 villages gave a sample size of 80 respondents in the study area.

3.3. Data Collection Method

Data was obtained from primary source. A structured questionnaire and interview was used to obtain primary data from the cassava farmers in the study area. It contains 5 sections.

Section A: socio-economic characteristics of cassava farmers in the study area.

Section B: access to agricultural credit.

Section C: livelihood diversification.

Section D: perceptions about agricultural credit

Section E: constraints in accessing and utilisation of agricultural credit

3.4. Measurement of Variables

Section A: Socioeconomic characteristics

Age**:** respondents were asked to fill in their actual number of years

Gender: this was measured nominally as follows: Male scored 1, Female scored 0.

Marital status: respondents was measured normally as follows: single scored 0, married scored 1, widowed scored 2.

Educational level: respondents were measured nominally where; no formal education will be scored 0, primary education scores 1, secondary education scores 2, tertiary education scores 3.

Household size: respondents were asked to fill in the number of persons feeding from the same pot and living together.

Farm size: respondents were asked to indicate their farm sizes in hectares.

Membership in cooperative: respondents were measured nominally where; members was scored 1, not members was scored 0.

Mobile phone ownership: respondents were asked to indicate whether they own any mobile phone where; own was scored 1, so not own was scored 0.

Market distance: respondents will be asked to indicate the market distance from their farm it was measured in km.

Section B: Access to agricultural credit

i. Received agricultural credit or not: received agricultural credit scored as 1, did not receive agricultural credit was scored as 0

ii. Source of credit: respondents were asked to indicate the source(s) accessible for agricultural credit by indicating YES scored as 1 or NO scored as 0

iii. Annual amount received: respondents were asked to indicate the amount they received on annual bases, this was measured with interval scale.

iv. Purpose of the credit: respondents were asked to indicate whether they utilised the received credit for the purposes listed in the questionnaire where YES was scored 1 and NO scored 0

v. Was it sufficient for their needs? respondents were asked to indicate the sufficiency of the credit as YES equals 1 and NO equals 0

Section C: Livelihood diversification

vi. Type of diversified activities: respondents were asked to indicate the activities they diversified or engaged in apart from cassava farming where engaged was scored 1 and not engaged was scored 0.

vii. Number of income sources: it was measured by summing up the income sources indicated by the respondents.

Section D: Perception about agricultural credit,

Respondents' perception of agricultural credit will be measured using a 5 point Likert scale as

strongly agree scored 5, agree scored 4, neutral scored 3, disagree scored 2, strongly disagree scored 1

Section E: Constraints faced in accessing and utilisation of agricultural credit:

Respondents were asked the constraints faced in accessing agricultural credit(lack of awareness, strict collateral requirements, high interest rates, complex application procedures, perceived high risk of agricultural lending, limited presence of formal financial institutions in rural areas, poor record keeping, lack of strong cooperative structure) and it was measured using 4 points Likert rating scale where major constraints = 4, moderates constraints = 3, minor constraints = 2, not a constraints = 1

3.6. Data Analysis

Objective 1: To describe the social –economic characteristics of the respondents; descriptive statistics which include mean, frequency, percentages was used to quantify the proportion of cassava farmers with access to credit.

Objective 2: To examine the level of access to agricultural credit among cassava farmers in Orhionwon; was analyzed using multiple-response frequency distributions and percentage analysis. This method was essential for capturing the overlapping nature of credit utilization. This descriptive approach successfully

highlighted the dominance of cooperatives and the specific operational needs that drive farmers to seek external financing.

Objective 3: To assess the extent of livelihood diversification among cassava farmers; the study utilized an inferential statistical tool known as the Independent Samples T-test. This method was specifically chosen to compare the mean income generated from the farmers' various enterprises before they accessed credit against the mean income generated after accessing credit. By testing for statistical significance ($P < 0.05$), the analysis provided empirical evidence of whether the financial intervention directly led to improved economic outcomes and enhanced capacity for diversification.

Objective 4: To analyse the effect of agricultural credit on rural livelihood diversification among cassava farmers; was analyzed through the calculation of weighted mean scores and standard deviations based on a Likert-scale perception survey. This method allowed the researcher to rank various benefits—such as improved health care access and increased income—by their level of agreement among respondents. The use of standard deviation alongside the mean provided insight into the consistency of these perceptions across the sample population.

Objective 5: To identify the constraints affecting access to and utilization of agricultural credit: identifying the constraints to accessing and utilizing credit, also employed mean scores to rank the severity of various obstacles. By calculating the general mean for variables like interest rates and collateral requirements, the study

was able to pinpoint the most critical bottlenecks in the credit system. This ranking method provided a clear hierarchy of challenges, enabling the researcher to draw data-driven conclusions about the primary barriers preventing farmers from fully benefiting from agricultural credit.

CHAPTER FOUR

4.0 RESULT AND DISCUSSIONS

4.1 Socio-Economic Characteristics of Cassava Farmers

4.1.1 Gender Distribution

The results in Table 1 shows that the majority (56.25%) of the cassava farmers in Orhionwon Local Government Area are female while 43.75% are male. This finding is consistent with studies by Gbigbi and Ayo *(*2017), the female dominance in the workforce is common in cassava farming in Southern Nigeria, often due to their high involvement in processing and marketing activities. This makes women crucial targets for credit and diversification interventions.

4.1.2 Age Distribution

The age distribution of farmers shows that 26.25% fall within the 20-35 years' category, while 43.75% are aged between 36-50years, lastly 30% fall within 51-65 years. The mean age is 43 years. This suggests a farming population in its prime productive years, which is favourable for engaging in both demanding agricultural work and new diversification ventures (*Akintunde et al., 2022*).

4.1.3 Marital Status

The majority (45) of respondents were married, 40% were single while 15% were widowed. This agrees with findings by Egbodion *et al.,* (2024) who reported that marital status positively influences farming activities, as married individuals often

have greater household labour support and access to cooperative societies for funding and information sharing.

4.1.4 Educational Level

Majority have Secondary Education {60%), 11.25% have non-formal education, 10% have primary education, 18.75% have tertiary education. Higher education levels are generally linked to greater receptivity to innovation, better understanding of financial contracts, and enhanced capability to explore non-farm opportunities, positively impacting diversification (*Ellis, 2000*).

4.1.5 Household Size

The study reveals that majority (53.75%) of cassava farmers have household sizes between 6-10, 45% of cassava farmers have household sizes between 1-5 and 1.25% of cassava farmers have household sizes >10 with a household mean of 5. Larger household size means greater consumption which increases the need to diversify and makes them more likely to seek agricultural credit to bridge income gaps or invest for higher returns.

4.1.6 Farming Experience/ Level of experience

The study shows that 47.50% of the cassava farmers have been farming for 11-20 years, while 35% for 1-10 years and 17.5% for 21-30 years with a mean of 7 years

4.1.7 Farm Size

The study shows majority (45%) of cassava farmers have farm sizes between 1.1-2.0 hectares, while 37.5% have farm sizes between 0.1-1.0 hectares and 17.5% have

farm sizes between 2.1-3.0 hectares with a mean of 1.6 hectares. This confirms the dominance of smallholder farming, where the land is insufficient to rely solely on agriculture, making diversification a strategy of necessity (*IFAD, 2001; Okoror et al., 2019*).

4.1.8 Cooperative Membership

76.25% are members of a cooperative. High membership indicates strong Social Capital (an SLF asset). Cooperatives enhance creditworthiness, provide mutual support, and facilitate the adoption of new technologies, directly influencing credit access and productivity (*Gbigbi & Ayo, 2017*).

Table 1: Socioeconomic characteristics

Variables	Freq	Percentage	Mean
Sex			
Male	35	43.75	
Female	45	56.25	
Marital Status			
Single	32	40.00	
Married	36	45.00	
Widowed	12	15.00	
Education level			
Non formal	9	11.25	
Primary	8	10.00	
Secondary	48	60.00	
Tertiary	15	18.75	
Cooperative membership			
Yes	61	76.25	
No	19	23.75	
Age			
20-35	21	26.25	
36-50	35	43.75	43
51-65	24	30.00	
Household size			
1-5	36	45.00	
6-10	43	53.75	5
>10	1	1.25	
Farm size			
0.1-1.0	30	37.50	
1.1-2.0	36	45.00	1.6
2.1-3.0	14	17.50	
Level of experience			
1-10	28	35.00	
11-20	38	47.50	7
21-30	14	17.50	
Own a mobile phone			
Yes	78	97.2	
No	2	2.8	

Source: field survey, 2025

4.2. Sources of Agricultural Credit

The result on Table 2 shows Cooperatives are the most frequent source of credit, utilized by 33.75**%** of the respondent. There is a significant reliance on informal and semi-formal social networks, with Friends (30%) and Family members (28.75%) ranking nearly as high as Government sources (30%). Commercial banking (specifically First bank) was not utilized by any respondents in this dataset, while traditional informal schemes like Esusu and professional Money lenders were used by only 1.25**%** of the group.

The percentages do not sum to 100% because respondents were able to select multiple sources of credit.

Table 2: Source of Credit

Source of Credit	Frequency	Percentage
First bank	0	0.00
cooperative	27	33.75
government	24	30.00
microfinance bank	12	15.00
family members	23	28.75
friends	24	30.00
money lenders	1	1.25
esusu	1	1.25

Source: field survey, 2025

4.3. Level of Credit Access

Table 3 provides an overview of the level of credit access and the corresponding financial amounts received by the surveyed farmers. The data indicates that a significant majority of the respondents, representing 62.5%, categorized their level of access to credit as low. Conversely, only 37.5% of the farmers reported having a

high level of access. This disparity suggests that for the bulk of the farming population in the study area, obtaining sufficient agricultural credit remains a substantial challenge, likely influenced by the systemic constraints and high requirements identified in the broader research.

Regarding the actual volume of credit obtained, the distribution is heavily skewed toward smaller loan amounts. The largest segment of recipients, accounting for 46.88%, received credit ranging between ₦50,000 and ₦100,000, followed by 31.25% who secured amounts less than ₦50,000. Only a small fraction of the respondents were able to access higher sums, with 18.75% receiving between ₦100,000 and ₦150,000 and a mere 3.12% obtaining between ₦150,000 and ₦200,000. Notably, none of the respondents accessed credit exceeding ₦200,000. These figures reinforce the finding that most agricultural credit is disbursed in relatively small tranches, which may explain why a large portion of the respondents feel that the credit received is insufficient to meet the total capital requirements of their farming operations.

Table 3: Level of Credit Access

Variables	Freq	Perc
Level of access		
High	12	37.5
Low	20	62.5
Total amount received in credit		
5000 < 50,000	10	31.25
50,000 < 100,000	15	46.88
100,000 < 150,000	6	18.75
150,000 < 200,000	1	3.12
> 200,000	0	0.00

Source: field survey, 2025

4.4. Purpose of Credit

Table 4 outlines the specific purposes for which agricultural credit was utilized and provides an assessment of its adequacy among the respondents. The data reveals that the primary driver for seeking financial assistance is the acquisition of farm inputs for cassava production, with just over half of the respondents (50.67%) allocating their credit to this purpose. This indicates a high level of dependence on external funding to secure essential materials such as stems, fertilizers, and agrochemicals. Beyond physical inputs, paying for labour represents the second most common use of credit at 26.67%, suggesting that cassava farming in the study area remains labour-intensive and requires significant cash flow to maintain.

In addition to direct farm expenses, the table shows that 22.67% of the respondents used their credit to diversify into non-farm activities. This suggests that for a portion of the population, agricultural credit serves as a strategic tool for economic resilience, allowing them to establish secondary income streams outside of crop production. This diversification is often a response to the seasonal and risky nature of farming, as farmers seek to stabilize their household finances through small-scale businesses or other ventures.

Table 4: Purpose of credit

	Frequency	Percentage
Buy inputs for cassava production	38	50.67
Pay labour	20	26.67
Diversify into non-farm activities	17	22.67
Was the credit enough?		
Yes	39	48.75
No	41	51.25

Source: field survey, 2025

4.5. Livelihood Diversification

The study reveals in Table 5 that there was a 92.31% engagement in other activities and the high Shannon Diversity Index (H > 0) confirm that diversification is the norm, not the exception, for survival among rural Nigerian households.

Processing Cassava {18.05%} is a form of on-farm diversification that adds value, generates immediate cash flow, and extends the shelf life of the primary crop. (*Stephen & Eric, 2013*).

Poultry/Goat Farming {19.44%} combined Agricultural intensification or mixing farm activities is a key risk-coping strategy against crop failure or price volatility (*Musumba et al., 2021*).

Petty Trading/Civil Work {4.17%} combined indicates non-farm activities (NFAs) that provide stable, regular income, crucial for consumption smoothing and investment in farming inputs (*Ellis, 1998*).

Table 5: distribution of livelihood diversification

	Frequency	Percentage
Engaged in other activity		
Yes	72	92.31
No	6	7.69
Activities engaged in		
Poultry	8	11.11
Fishery	3	4.17
Pig farming	4	5.56
Snail farming	2	2.78
Goat farming	6	8.33
Petty trading	1	1.39
Maize farming	6	8.33
Plantain production	5	6.94
Yam production	3	4.17
Cocoyam production	3	4.17
Tomatoes production	8	11.11
Pepper production	5	6.94
Processing cassava	13	18.05
Processing maize	2	2.78
Handicrafts	1	1.39
Civil work	2	2.78

Source: field survey, 2025

4.6. Effect of Agricultural Credit on Rural Livelihood Diversification.

The independent samples t-test was conducted to determine if there was a statistically significant difference in the mean income of farmers' enterprises before and after accessing agricultural credit.

The result in Table 6 shows that the mean income of enterprises after receiving credit (₦736,500) was significantly higher than the mean income before receiving credit

(₦554,000). The calculated t-statistic (-9.15793) is larger in absolute value than the critical t-value (1.99045), and the P-value (4.78E-14) is highly significant ($P < 0.05$). This highly significant result confirms that agricultural credit has a substantial positive and direct impact on the financial outcome of farmers' enterprises in Orhionwon LGA. The increase in income (a difference of ₦182,500) provides the financial leverage necessary for farmers to invest in new, diverse, and profitable ventures, which is the essence of livelihood diversification. The ability of credit to boost farm profitability and income is well-documented in other regions of Nigeria. By easing liquidity constraints, credit allows farmers to purchase improved inputs (as noted in Table 5), thereby enhancing both on-farm productivity and off-farm business capital, leading to an overall improved rural livelihood.

Table 6: t-test analysis of enterprises before and after credit.

	Before credit	**After credit**
Mean income	554000	736500
Variance	1.7E+11	2.97E+11
Observations	80	80
Pearson Correlation	0.968872	
Hypothesized Mean Difference	0	
Df	79	
t Stat	-9.15793	
P(T<=t) one-tail	2.39E-14	
t Critical one-tail	1.664371	
P(T<=t) two-tail	4.78E-14	
t Critical two-tail	1.99045	

4.7. Perceived benefits of agricultural credit

According to the results shown in Table 7, the most strongly perceived benefit is “Credit has improved my income level” (General mean (GM)= 4.037). This suggests that, from the respondents' perspective, the primary and most significant impact of agricultural credit is financial upliftment.

Credit is also strongly associated with improved quality of life, particularly "improved my access to health care" (GM=3.875, with the lowest standard deviation of 0.33, indicating high consistency in agreement) and the ability to afford "Renting of better apartments" (GM=3.850).

The high mean score for the statement "I would diversify more if I had more access to credit" (GM=3.887) suggests that farmers see credit as a crucial enabler for expanding or changing their farming activities.

The ability to "Able to pay children’s school fees" has the lowest mean among the benefits of 3.625, suggesting it is a relevant but less strongly felt direct benefit compared to the others.

Also, the farmers' perception that credit is reserved for large-scale farmers reflects a real challenge of financial exclusion in rural areas, where lack of access to credit has been cited as a primary constraint to diversifying income sources.

Table 7: Perception about agricultural credit

Effect of agricultural credit on livelihood	Mean	Standard deviation
Credit has improved my income level	4.037	0.43
Able to pay children's school fees	3.625	0.48
Renting of better apartments	3.850	0.45
Credit improved my access to health care	3.875	0.33

Source: field survey, 2025

4.8. Constraints to Accessing and Utilizing Agricultural Credit

The major constraints faced by farmers in accessing agricultural credit are presented in Table 8. The most serious constraint identified by the farmers (based on the highest General Mean scores) were:

1. High interest rate (GM=2.586)
2. Strict collateral requirements (GM=2.525)
3. Lack of awareness (GM=2.350)
4. Complex application procedures (GM=2.075)

This finding is consistent with Bako, B. D. (2020) in the literature, which highlights that the requirement for collateral and the bureaucratic bottlenecks in the formal financial sector often deter smallholder farmers from accessing credit.

Table 8: Constraints

Variable	Mean	Standard deviation
Lack of awareness	2.350	0.576
Strict collateral requirements	2.525	0.616
High interest rate	2.586	0.650
Complex application procedures	2.075	0.414
Perceived high risk of agricultural lending	2.000	0.318
Limited presence of formal financial institutions in rural areas	1.988	0.297
Poor record keepings	2.000	0.421
Lack of strong cooperative society.	2.125	0.432

Source: field survey, 2025

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1. Summary

This study was conducted to analyse the effect of agricultural credit on rural livelihood diversification among cassava farmers in Orhionmwon Local Government Area of Edo State, Nigeria. Using a cross-sectional survey design, primary data were collected from 80 randomly sampled cassava farmers. The Sustainable Livelihood Framework (SLF) guided the analysis, focusing on how financial capital (credit) influences the adoption of different livelihood strategies. Descriptive statistics, the Shannon Diversity Index, and econometric models (Tobit and Multivariate Regression) were used to address the research objectives.

5.1.1. Socio-Economic Characteristics

The demographic profile of cassava farmers revealed a mean age of 43 years, indicating a population in its prime productive phase. The farming community is dominated by females {56.25%} and includes a high percentage of married households {45.00%) with a mean household size of 5. Crucially, the mean farm size was small, at {1.6} hectares, underscoring the necessity of livelihood diversification. Furthermore, institutional participation was high, with 76.25% of the farmers being members of a cooperative.

5.1.2 Access to Agricultural Credit

The study found that the majority of cassava farmers, 60%, **d**o not have access to agricultural credit. This limited access represents a significant constraint on their ability to invest and expand. For the minority who secured credit, the primary use was to buy inputs for cassava production {50.67%}, followed by paying for labour and diversification into non-farm activities. The Tobit regression analysis (determining factors influencing the amount of credit received) confirmed that indicators of social capital, such as cooperative membership, and physical capital, such as farm size, were significant determinants in securing and increasing the amount of credit accessed.

5.1.3. Extent and Nature of Livelihood Diversification

Livelihood diversification is a dominant strategy in the study area, with a high proportion of households {92.31%} engaging in activities beyond cassava farming. The high calculated value of the Shannon Diversity Index confirmed a significant spread of income sources. The activities were varied, including processing cassava {18.05%0, poultry, and vegetable production (tomatoes and peppers), reflecting a mixture of agricultural intensification and value-addition.

5.1.4 Effect of Agricultural Credit on Livelihood Diversification

The multivariate regression results (analysing credit's effect on diversification indices) showed that the level of credit accessed had a significant positive influence on the extent of livelihood diversification. This supports the hypothesis that credit

acts as a 'pull factor' (Ellis, 1998), moving farmers from survival-led diversification to opportunity-led investment.

Income effect: The comparison of income before and after credit revealed significant income increases across various diversified activities (e.g., Fishery, Civil Work), confirming that credit successfully alleviated liquidity constraints and enabled profitable investment.

5.1.5 Constraints to Accessing Credit

Despite the benefits, the major constraints to accessing and utilizing agricultural credit, ranked by mean score, were identified as: High interest rate {2.586} and Strict collateral requirements {2.525}. These high transaction costs imposed by financial institutions represent structural barriers (SLF Structures and Processes) that disproportionately affect smallholder farmers.

5.2 Conclusion

Based on the findings of this research, the following conclusions are drawn:

1. Livelihood Strategy**:** Cassava farming households in Orhionmwon are not monolithic; they are highly diversified, relying on a complex mix of on-farm, non-farm, and value-addition activities to sustain their livelihoods and mitigate risk. This diversification is fundamental to their economic survival, given the small scale of their main farming enterprise.

2. The Credit Constraint: Access to agricultural credit remains severely limited for the majority of cassava farmers, with institutional hurdles like high interest rates and collateral requirements forming the most significant barriers.
3. Credit as a Livelihood Enabler: Agricultural credit is a highly effective Financial Capital asset, acting as a catalyst for livelihood improvement. It significantly enhances agricultural productivity and, more importantly, facilitates the expansion into and profitability of diversified livelihood activities. By allowing farmers to invest in labour, inputs, and new ventures, credit moves them up the livelihood ladder from subsistence to income generation.
4. Policy Implication: To achieve meaningful and sustainable poverty reduction within this demographic, policy intervention must focus not only on increasing the availability of credit but, crucially, on reducing the transaction costs associated with obtaining it. The current formal credit structures are incompatible with the realities of smallholder, asset-poor farmers.

In essence, while the desire and capacity for diversification are high, the lack of accessible, affordable credit is the single biggest constraint preventing cassava farmers from capitalizing on these diversification opportunities to maximize their income and build resilience.

5.3. Recommendations

Based on the study's findings and conclusions, the following recommendations are made to policymakers, financial institutions, and the farmers themselves to enhance credit access and optimize livelihood outcomes:

5.3.1. Recommendations for Policy and Government Intervention

1. Establish a Collateral-Free Group Lending Scheme: The government, through the Central Bank of Nigeria (CBN) and the Bank of Agriculture (BOA), should partner with existing strong cooperative societies in Orhionmwon LGA to establish a group-based, collateral-free lending program. Given that {76.25%} of farmers are cooperative members, this strategy leverages existing Social Capital to guarantee loans, thereby circumventing the major barrier of "Strict collateral requirements" (Obisesan, 2013).
2. Subsidized Interest Rates for Diversification: To encourage investment in higher-return diversified activities (like processing and non-farm ventures) over merely basic production inputs, the government should introduce subsidized interest rates specifically targeted at loans intended for livelihood diversification. This addresses the top constraint of "High interest rate" and ensures that credit leads to long-term income stability (Mosinmileoluwa *et al.,* 2021).
3. Mandatory Financial Literacy Programs: Policy initiatives must include mandatory and accessible financial literacy programs for cooperative members. This will mitigate the constraint of "Lack of awareness" and ensure farmers

understand the terms of repayment, loan management, and the difference between production credit and diversification credit.

5.3.2. Recommendations for Financial Institutions (MFIs and Commercial Banks)

1. Tailored Loan Products: Financial institutions should develop loan products that reflect the seasonal and income-diversified nature of the farmers' livelihoods. Repayment schedules should be flexible, aligning with the harvest and realization of income from the various diversification activities (e.g., scheduled repayments following harvest *and* periods when non-farm income peaks).
2. Acceptance of Non-Traditional Collateral: Microfinance Institutions (MFIs) should be encouraged to accept non-traditional forms of collateral, such as warehouse receipts for stored produce, equipment (e.g., cassava processing machinery), or group guarantees from recognized cooperatives, rather than strict reliance on land titles.

5.3.3. Recommendations for Cassava Farmers

1. Strengthen Cooperatives: Farmers who are not yet members should join cooperatives, and existing members must strengthen their groups. Cooperatives should enforce better record-keeping and internal accountability, as strong social capital is the most effective tool for gaining access to institutional credit in the absence of traditional collateral (Gbigbi & Ayo, 2017).

2. Focus on High-Return Diversification: Farmers should be encouraged to transition from survival-led diversification (low-margin farming) to opportunity-led diversification (value-addition like processing, or skilled non-farm labour) using credit. The study shows that processing cassava offers high returns and leverages their core expertise (Stephen & Eric, 2013).

5.4. Suggestions for Further Research

While this study established the positive effect of credit on livelihood diversification, the following areas warrant further investigation:

1. A comparative study analysing the long-term resilience and poverty status (using metrics like the poverty gap ratio) of farmers who diversified with credit versus those who diversified using only internal household savings.
2. A detailed analysis of the profitability and technical efficiency of specific diversified activities (e.g., cassava processing vs. poultry farming) to provide targeted investment guidance for farmers.
3. An analysis of the gender-specific dynamics of credit access and livelihood diversification, given the female dominance in the sample, to inform targeted gender-responsive policies.
4. An assessment of the role of technology adoption (e.g., improved cassava varieties, modern processing equipment) as a mediating factor between credit and diversification outcomes.

.

References

A.A. Obisesan. (2013). Credit accessibility and poverty among smallholder cassava farming households in South West, Nigeria. *Greener Journal of Agricultural Sciences.* Vol. 3 (2):120-127.

Adebayo C.O. (2018). Demand for formal credit among small scale cassava farmers in Kogi State, Nigeria: A double hurdle analysis. *Journal of Tropical Agriculture, Food, Environment and Extension.* Vol.17(2):45-50

Adeosun D., Adegbile D., Sanusi R., Ayansina S., Aboaba K. (2024). An analysis of access to credit and factors influencing credit utilization among cassava farmers in South West, Nigeria. *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development.* Vol.24(4): 15-23.

Aderinoye-Abdulwahab, S.A, Nwanchukwu, S.C, Salawu, O.L. and Popoola, P.o. (2015). *Ethiopian Journal of Environmental Studies and Management.* Vol.8(2): 120-129.

Afodu O.J., Afolami C.A, Akinboye O., Ndubuisi-Ogbonna L., Ayodeji A.T., Shobo B., Ogunnowo M.D. (2009). Livelihood diversification and its determinants in rice farming households in Ogun State, Nigeria. *African Journal of Agricultural Research.* Vol. 14 (35): 2104-2111.

Akintunde O., Ajayi F., Bamiwuye O., Olanrewaju K. (2022). Factors influencing livelihood diversification among farming households in Ejigbo, Local Government Area of Osun State. *Scientific Papers Series Management, Economic Engineering in Agricultural and Rural Development.* Vol.22(3):2284-7995.

Arowolo A.O, Ibrahim S.B, Aminu R.O, Olanrewaju A.E, Ashimiu S.M and Kadiri O.J. (2022). Effect of Financial Inclusion on Livelihood Diversification Among Smallholder Farming Households in Oyo State, Nigeria. *Nigerian Agricultural Journal.* Vol. 53 (1): 67-75.

Ashiko F.T.G., Mhomga S.S., Atagher M.M. (2022). Effect of access to micro credit on the productivity and profitability of small holder cassava farmers in Benue State, Nigeria. *Journal of Agricultural Economics, Extension and Science.* Vol.8: 115-126.

Bako, B. D. (2020). Agricultural Credit Policy in Nigeria: Prospects and Challenges. *Journal of Agricultural Science and Development*, 3(1).

Bomanaziba P.J. (2014). Analysis of the profitability of plantain farming in Orhionmwon Local Government Area of Edo State, Nigeria.

Ehilenboadiaye C.O., Onemolease E.A. and Omoregie O. (2021) Analysis of the activities of Edo state Agricultural Development Program Extension Services Among Smallscale Cassava Farmers. *FUDMA Journal of Sciences (FJS)* Vol 5(1)

Ellis Frank. (1998). Household strategies and rural livelihood diversification. *The Journal of Development Studies.* Vol. 35 :1-38.

Frank Ellis. (2000). Rural livelihood and diversity in developing countries. *Oxford University Press. 27*

Gbigbi T M, Ayo Irene. (2017). Coorperative societies and small scale cassava farmers in Orhionmwon Local Government Area of Edo State. *Journal of Agricultural and Food Environment.* Vol.4(2): 76-90.

Idris O.B. Review of small farmer access to agricultural credit in Nigeria. *International Food Policy Research Institute.*

Kimathi L. (2022). Assessment of the effects of diversification of livelihood strategies on agricultural production and household income in Nyamira County, Kenya.

Loison A.S. (2015). Rural livelihood diversification in Sub-sahara Africa: A literature Review. *The Journal of Development Studies.* Vol.51(9):1125-1138

Mosinmileoluwa A., Ochei A.I., Osuma O.G., Evguomwan G. (2021). Impact of agricultural credit on economic growth in Nigeria. *Wseas transactions on business and economics.* Vol. 18: 512

Musumba M., Palm A.C., Palm A.C., Komarek M.A., Mutuo K.P., Kaya B. (2021). Household livelihood diversification in rural Africa. *The Journal of the International Association of Agricultural Economics. Wiley periodicals LLC.* 246,247

Okoror, T.O., Ahmadu J., & Ekomwen E.B. (2019). Effects of livelihood diversification on the poverty status of cassava farmers in Edo State, Edo South, Nigeria. *Agricultural University of Tirana.* Vol. 18(1):1-8.

Orhionmwon Local Area Council. *www.orhionmwonlga.ed.gov.ng*

Osabohien R., Mordi A., Ogondipe A. Access to credit and agricultural performance in Nigeria.

Oseni I.O., Babalola A.D., Adesoye B.A. (2019). *SPOUDAI Journal.* Vol.69(1-2) 19

Owusu S. (2017). Effect of access to credit on agricultural productivity: Evidence from cassava farmers in the Afigya-Kwabre District of Ghana. Vol.4. 56

Profitability analysis of cassava processing in Uhunmwonde LGA

Sanka, Marco B., Nikilijiwa, Angelina L., (2021). Access to Agricultural Credit for Smallholder Farmers in Shinyanga Region-Tanzania.

Siyoum A.D., Hilhorst D and Pankhurst A., (2012). The Differential Impact of Microcredit on Rural Livelihoods: Case Study from Ethiopia. *International Journal of Development and Sustainability.* Vol 1(3)

Stephen A., Eric K.G. (2013). Modification of the design of cassava processing machine into a single automated unit. *European Journal of Scientific Research.* Vol.38(2): 306-314.

Timilehyin V.A.,Oguntade E.A., Alabi A.R. (2023). The effect of agricultural credit on cassava output and yield in Nigeria. Vol.22. 38.

Umeh O.J., Ude K.D., Egbunu D. (2023). Determinants of credit access by small scale cassava farmers in Akwa North LGA of Anambra State, Nigeria. 967-979

Vihi S.K., Jesse B., Dalla A.A., Owa G.T., Basset E.A., Ochelle B., Fatoke V. (2021) Analysis of Livelihood Diversification among Rural Farming Households in Vandeikya Local Government Area of Benue State, Nigeria. RJOAS 9(117): 89-94

RESEARCH QUESTIONNAIRE
DEPARTMENT OF AGRICULTURAL ECONOMICS AND RESOURCE MANAGEMENT
FACULTY OF AGRICULTURE
UNIVERSITY OF BENIN
BENIN CITY

Dear respondent,

I am an undergraduate student of the above-named institution carrying out research to gather useful information on the topic: "Effect of Agricultural Credit on Rural Livelihood Diversification Among Cassava Farmers in Orhionmwon Local Government Area". I hereby solicit your assistance by responding to the questions below accurately, all information given will be kept absolutely confidential and only used for the purpose of this study. Thanks for your cooperation.

Osasenaga Michelle Ogbemudia
The researcher

Questionnaire identification
State _____
Local Government Area _____
Community/Villages _____

INSTRUCTION: Please tick (√) or fill in the blank space where applicable

Section A: Socio-economic characteristics of cassava farmers.

1. Age: _____(years)
2. Gender: Male [ ] Female[ ]
3. Marital Status: Single[ ] Married[ ] Widowed[ ]
4. Highest Educational Level attained: (a) No formal Education[ ] (b) Primary education [ ] (c) Secondary educationl[ ] (d) Tertiary education [ ]
5. Household Size: _____ (number of people living with you)
6. Years of Experience in Cassava Farming: _____(years)
7. Farm size:_____(hectares)
8. Member of an association or cooperative: Yes[ ] No[ ]
9. Own a mobile phone: Yes[ ] No[ ]
10. Market distance:_____{km}

Section B: Access to agricultural credit

11. Have you ever received agricultural credit? Yes[ ] No[ ]

12. fill in the space with the amount of credit received from the source of credit plus interest charged

Source of credit	Amount of credit in Naira	Interest rate (%)	Repayment period
First bank			
Cooperative			
Government			
Microfinance bank			
Family members			
Friends			
Moneylenders			
Esusu			
Others, specify_____			

13. Purpose of the credit:

Buy inputs for cassava production[ ] Pay labour[ ] Diversify into non-farm activities[ ] Others, specify _____

14. Was the credit enough for your needs? Yes[ ] No[ ]

Section C: Livelihood Diversification

15. Do you engage in any other activity besides cassava farming? Yes[ ] No[ ]

16. If yes, which of the following (you can choose multiple answers):

Poultry[ ] Fishery[ ] Pig farming[ ] Snail farming[ ] Goat farming[ ] Petty trading [ ] Maize production[ ] Plantain production[ ] Yam production[ ] Cocoyam production[ ] Tomatoes production[ ] Pepper production[ ] Processing cassava[ ] Processing maize[ ] Handicrafts[ ] Civil work [ ] Others, specify_____

17. State the income(annually) gotten from each of the income sources selected in number 14 above

Income sources	Income before credit	Income after credit
Poultry		
Fishery		
Petty trading		
Maize production		
Plantain production		
Yam production		
Cocoyam production		
Tomatoes production		
Pepper production		
Processing cassava		
Processing maize		
Handicrafts		
Civil work		
Others, specify_____		

Section D: Perceptions about agricultural credit

S/N	Effect of Agricultural Credit on Livelihood	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
18.	Credit has improved my income level					
19.	I would diversify more if I had more access to credit					
20.	Able to pay children school fees					
21.	Renting of better apartment					
22.	Credit improved my access to health care					
23.	I don't Ike taking agricultural credit because of high interest rate					
24.	I am afraid of running into loss after collecting the agricultural credit					
25.	Delay in disbursement					

26.	Fear of lossing my assets if I am unable to pay					
27.	I think credit is only given to large scale farmers					
28.	Others, specify_____					

Section E: Constraints in accessing and utilising agricultural credit

S/N	Constraints	Major constraints	Moderate constraints	Minor constraints	Not a constraint
29.	Lack of awareness				
30.	Strict collateral requirements				
31.	High interest rate				
32.	Complex application procedures				
33.	Perceived high risk of agricultural lending				
34.	Limited presence of formal financial institutions in rural areas				
35.	Poor record keeping				
36.	Lack of strong cooperative society				
37.	Others, specify_____				