

**FINANCIAL INCLUSION AND WELFARE OUTCOMES AMONG
RURAL WOMEN IN EDO NORTH, EDO STATE, NIGERIA**

BY

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BENIN CITY**

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**A PROJECT SUBMITTED TO THE DEPARTMENT OF AGRICULTURAL
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CERTIFICATION

This is to certify that the research work on **“FINANCIAL INCLUSION AND WELFARE
OUTCOME AMONG RURAL WOMEN IN EDO NORTH, EDO STATE, NIGERIA”** was
carried out by Joshua Oshokhai FRANCIS with the Mat. No AGR2000016 under the supervision
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DEDICATION

This study is dedicated first to God Almighty for his never-ending mercy and grace, and to my parents, and finally to all the rural women in Edo North, Edo State, Nigeria.

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With immense joy and gratefulness in my heart, I extend my sincere appreciation and adoration to God Almighty for granting me the strength and fortitude to successfully carry out this research work and for the successful completion of my undergraduate program in the evergreen Faculty of Agriculture in the prestigious University of Benin. A special “thank you” to my Project Supervisor Miss. O. Anozie for her unwavering guidance, correction, support and endless commitment and indispensable contributions without which it would have been impossible to achieve this milestone. I also want to offer my appreciation to the Dean of Faculty of Agriculture, Prof. C. O. Emokaro, the Heads of Departments; Agricultural Extension and Rural Development and Agricultural Economics and Resource Management; Dr. J.I. Osabuohien Prof. (Mrs.). and Prof. J. Egbodion respectively and also to my course advisor Dr. O. Igbinidu whose fatherly presence and insightful support facilitated the smooth completion of my undergraduate program. I wish to express my heartfelt gratitude Prof. K.O. Ilavbare, Prof. J. Ahmadu, Prof. C. O. Egonmwan, Prof. D.U. Okoedo – Okojie, M. J. Koyenikan, Prof. F. E. Omoregbee, Prof. O. Ojogho, Dr. S.O. Konkwo, Dr. G. F. Koledoye, Dr. K. I. Eweka, Dr. (Mrs.) O.B. Izekor, Dr. (Mrs.) J. E. Oboh, Dr. (Mrs.) A. I. Kenneth, Mr. A. Eghigie, Mr. G. Uwana, Mrs. S.R. Okundaye, Miss. A. A. Dickson and Miss. O. Emokpae,

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ABSTRACT

This study examined financial inclusion and welfare outcomes among rural women in the Edo North Agricultural Zone of Edo State, Nigeria. The specific objectives were to describe the socio-economic characteristics of respondents; assess their awareness, access, and utilization of financial services; evaluate their welfare status; and identify structural, institutional, and socio-cultural barriers affecting financial inclusion. A three-stage sampling procedure was used to select 180 women for the study. Data were analyzed using descriptive and inferential statistics at the 5% level of significance.

Results showed that respondents' mean age was 46 years, with an average household size of five persons, nine years of formal education, and a mean monthly income of ₦64,298.83. The religious distribution revealed that 48.9% were Christians and 46.7% were Muslims, while 36.8% engaged in farming and 33.5% in trading as major occupations. More than half of the respondents demonstrated high levels of awareness (62.1%) and access (55.5%) to financial services, and exactly half (50%) exhibited a high level of financial service utilization. Garrett's ranking indicated that irregular income (structural), distance to financial institutions (institutional), and lack of trust in financial institutions (socio-cultural) were the most severe constraints to inclusion. The Household Food Insecurity Access Scale (HFIAS) revealed that 46.2% of respondents were severely food insecure. Multiple linear regression analysis identified four statistically significant predictors of welfare at the 5% level: age ($\beta = 0.106$, $p = 0.038$) showed a positive relationship with welfare (implying that food insecurity increases as respondents grow older), while awareness ($\beta = -0.8213$, $p = 0.002$), access ($\beta = -0.6944$, $p = 0.018$), and utilization ($\beta = -0.4160$, $p = 0.001$) had a negative relationship (suggesting that food insecurity decreases with higher levels of financial inclusion).

The study therefore concluded that despite the fairly high level of awareness, access and utilization of financial services, this did not translate to highly improved welfare outcome for respondents in the study area. This could be attributed to the barriers encountered by respondent in accessing and utilizing these financial services. This study recommends that government, NGOs, financial institutions and other key stakeholders actively try to promote financial illiteracy and provide infrastructures that will help to boost financial inclusion in the study area.

Keywords: Financial Inclusion, Welfare Outcomes, Household Food Insecurity Access Score (HFIAS), Rural Women, Financial Services

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial inclusion has emerged as a critical factor in driving socio-economic development globally, particularly in developing countries like Nigeria. The concept refers to the ability of individuals and households to access affordable financial services, such as savings accounts, loans, insurance, and payment systems, which are essential for improving their economic welfare and overall quality of life (Demirgüç-Kunt, Klapper, Singer, Ansar, and Hess, 2018). Despite the global push for financial inclusion, rural households in Nigeria, face significant barriers to accessing these services. These barriers often result in limited financial participation and reduced economic opportunities for these rural communities (Akotey and Adjasi, 2020).

Rural areas in Nigeria are characterized by lower levels of financial literacy, limited access to formal financial institutions, and geographical isolation, which exacerbate the challenges of financial inclusion. Women, in particular, are disproportionately affected by these barriers. Gender disparities in financial inclusion are widespread, with women in rural areas having less access to financial services compared to their male counterparts. This inequality (financial exclusion) is driven by factors such as limited education, cultural norms, and lack of collateral for loans (Chauhan, Rani, and Sharma, 2021).

The consequences of financial exclusion extend beyond economic stagnation; they also contribute to poor welfare outcomes, particularly for rural women. Access to financial services is closely tied to improved welfare outcomes such as better health, education, and social mobility (Karlan, Ratan and Zinman, 2018). Women who have access to financial services are more likely to invest in their families' education and health, leading to long-term improvements in household welfare (UN Women, 2019). Conversely, financial exclusion limits rural households' ability to cope with economic shocks, which can lead to further poverty and deprivation.

Financial inclusion has emerged as a pivotal mechanism for improving the welfare of rural women, particularly in developing countries like Nigeria. The concept goes beyond merely owning a bank account, it encompasses the ability to effectively use financial tools to manage risks, smooth consumption, invest in health and education, and create sustainable livelihoods (Demirgüç-Kunt *et al.*, 2018).

One of the primary channels through which financial inclusion improves welfare is access to credit which allows rural women to invest in small-scale farming or non-farm enterprises, thereby diversifying income sources and reducing vulnerability to shocks caused by factors such as poor harvests or price fluctuations (Babajide, Adegboye, and Omankhanlen, 2020). Additionally, the availability of savings mechanisms helps women build financial buffers that are crucial during emergencies, reducing their reliance on informal or exploitative lending systems (Karlan *et al.*, 2018).

Financial inclusion also contributes to educational attainment, particularly for children in rural households. When families have access to credit and savings, they are more likely to afford school fees, purchase educational materials, and reduce the need for child labour (Nguyen, 2020). In addition, micro insurance schemes can help protect women in rural areas from health shocks that might otherwise force children out of school (World Bank, 2020).

Health-related welfare outcomes improve when households can access health insurance or have the financial resources to afford quality medical care. Financially included households are better positioned to pay for preventive and curative healthcare, thus improving overall health indicators in rural communities (Demirgüç-Kunt, Klapper, Singer, and Ansar, 2022).

Financial inclusion also goes a long way in ensuring food security as households with access to financial services are more capable of purchasing food in times of scarcity, investing in agricultural inputs that enhance productivity, and avoiding distress sales of assets during lean seasons (Adegbite and Machethe, 2020). This improved access stabilizes consumption patterns and contributes to better nutritional outcomes.

Most importantly, the welfare effects of financial inclusion are often more pronounced for women. Female-headed households with access to financial services tend to allocate more resources toward family welfare, including children's education, health, and nutrition (Doss, einzen-Dick, Quisumbing, and Theis, 2020). Hence, empowering

women through financial tools not only improves their individual autonomy but also has multiplier effects on household and community development.

1.2 Statement of Problem

Despite increasing efforts by the Nigerian government and development partners to promote financial inclusion, significant gaps persist, especially among rural populations and between genders. While urban access has improved, rural areas remain underserved due to infrastructural deficits, low financial literacy, and entrenched gender norms (Demirgüç-Kunt *et al.*, 2022). Consequently, many rural women depend on informal systems such as savings groups and local moneylenders, which are costly and insecure (Demirgüç-Kunt *et al.*, 2018).

Structural barriers, including low literacy, lack of collateral, and gender discrimination, restrict women's access to credit, savings, and insurance, worsening welfare outcomes like food insecurity, poor health, and limited educational opportunities for children (Adegbite and Machethe, 2020). Legal and cultural constraints further prevent women from using assets like land to secure loans, deepening financial exclusion (Doss *et al.*, 2020).

Furthermore, many individuals in rural areas have not yet adopted mobile money or other digital tools, which could make financial services more accessible and affordable, although informal saving mechanisms offer some support, they lack the security and capacity for long-term stability (Adegbite and Machethe, 2020).

Rural residents face additional challenges such as distance to financial institutions, lack of formal identification, and high transaction costs which translates to low access and use of seemingly available financial services. These challenges intensify in the case of women, Women are consistently less likely than men to have bank accounts or access credit, limiting their ability to save securely, invest in businesses, or handle economic shocks (Demirgüç-Kunt *et al.*, 2018).

Given these challenges, there is a critical need to understand and address the gendered barriers to financial inclusion in rural areas. This understanding is essential for designing targeted interventions that promote inclusive growth and improve welfare outcomes among rural households in Nigeria.

In addition, majority of existing studies like Soetan and Umukuro (2022) and Serrao, Sequeira and Verambally (2021) focus on financial inclusion at national or urban level often neglecting the unique experiences and barriers faced by rural populations, particularly women. In rural regions, traditional norms and socio-cultural structures heavily influence the gendered access to financial services (FAO, 2020). This study, therefore seeks to explore the level of financial inclusion among rural women in the study area, examining the barriers faced by women and how these barriers impact their economic welfare. The study will also investigate how improving financial inclusion can potentially reduce gender disparities and enhance the welfare of rural households.

In the light of this the study therefore seeks to provide answers to the following research questions;

1. What are the socio-economic characteristics of the respondents in the study area?
2. What is the extent of awareness of the respondents of financial services in the study area?
3. How accessible are these financial services to respondents in the study area?
4. What is the extent of utilization of these financial services by the respondents in the study area?
5. How has these financial services improved the welfare of the respondents in the study area?
6. What are the structural, institutional and socio-cultural barriers affecting respondents from accessing financial services in the study area?

1.3 Objectives of the Study

The main objective of the study is to examine the financial inclusion and outcome on welfare among rural women in the study area.

The specific objectives are to;

1. describe the socio-economic characteristics of respondents in the study area.
2. examine the respondent's extent of awareness of financial services in the study area.
3. examine the accessibility of these financial services to the respondents in the study area.

4. examine the extent of usage of these financial services among respondents in the study area.
5. examine how these financial services improved the welfare of respondents in the study area.
6. examine the structural, institutional and socio-cultural barriers affecting respondents from accessing financial services in the study area.

1.4 Hypothesis of the Study

The hypothesis in this study is stated in the null form.

H₀₁. There is no significant contribution of selected independent variables (socioeconomic characteristics, awareness, access, utilization and constraints) of respondents to their level of welfare.

1.5 Justification of the Study

The absence of gender-disaggregated data and analysis hinders the development of effective inclusive financial policies. Without clear evidence on how financial access or its lack affects women differently in rural areas. Policymakers and financial institutions are less equipped to implement targeted interventions that support equitable development. This gap is particularly consequential because financial inclusion among women has been linked to improved welfare outcomes, including increased income, better access to healthcare and education, and enhanced economic resilience (Demirgüç-Kunt *et. al.*, 2022).

In the absence of gender-sensitive research, interventions may unintentionally favour the already-included segments of the population while leaving out the excluded further behind. This reinforces a cycle of economic marginalization and social inequality. Therefore, there is an urgent need for context-specific and gender-aware research that examines the structural, institutional, and socio-cultural barriers that inhibit financial inclusion for rural households, as well as the welfare implications of this exclusion.

In addition, this study has the potential to help foster economic empowerment and poverty reduction as awareness of financial inclusion and services can provide low-income individuals with knowledge concerning savings, credit, and insurance, enabling them to invest in education, business, and health. This will be of benefit to poor households, especially in rural areas by enhancing income allocation and reducing poverty.

This study seeks to provide an accurate measure of financial inclusion specifically for rural women in the study area, this will go a long way in awakening the need for these rural women to access these financial services and transition from informal and risky financial practices to more secure, formal systems. This access allows them to save safely, manage risks effectively, and invest in income-generating activities, all of which lead to greater resilience against economic shocks and emergencies.

The findings resulting from this study can be of use to policy makers to steer policies in a direction that reduces the challenges faced by rural women and tailor interventions to ensure that women in rural area benefit from it equally, rather than one-size-fits-all

policies that fail to address the structural, institutional and socio-economic barriers that hinder rural women from accessing financial services.

Recent studies have tended to focus on financial inclusion as it pertains to urban areas or the general population without considering gender differences or rural context (e.g., Demirgüç-Kunt *et al.*, 2018; Ozili, 2021; Zins and Weill, 2016) unlike this study which intends to specifically highlights the frequently overlooked rural areas and examine how rural women interact with formal financial services, thereby helping to fill a critical gap in knowledge.

This study aims to fill this gap by conducting a comprehensive analysis of financial inclusion and its welfare outcomes among rural women in the study area. By examining the level of financial awareness, access, utilization and evaluating their effect on welfare of rural women in the study area, the findings from this study will inform appropriate evidence based-policy which in turn leads to improved welfare for rural women and their households and promotion of inclusive economic growth and gender equity.

CHAPTER TWO

LITERATURE REVIEW

2.1 Financial Inclusion

2.1.1 Concept of Financial Inclusion

Financial inclusion refers to the availability, accessibility, and active use of affordable financial products and services by all segments of society particularly the poor, women, and rural dwellers. It goes beyond account ownership to include the effective use of credit, savings, insurance, and payment services in ways that enhance welfare and economic stability (Bello *et al.*, 2022).

A major element of financial inclusion is the role of financial literacy. Individuals with relevant financial knowledge are more likely to access and use appropriate financial products. In Nigeria, Sakanko *et al.* (2022) found a significant positive relationship between financial literacy and the likelihood of being financially included, indicating that literacy gaps remain a major barrier in rural areas.

Digital financial services (DFS) have also become a central component of financial inclusion among rural populations. Mobile banking, agent banking, and digital payment systems reduce the constraints of distance and infrastructure, allowing rural women to participate in the financial system. Okon and Ndayi (2023) demonstrated that the use of digital platforms among women agripreneurs significantly increased their business income and financial autonomy.

At the policy level, institutions such as the Central Bank of Nigeria (CBN) and development agencies have introduced frameworks aimed at expanding inclusion. The CBN (2024) highlights the importance of digital infrastructure, consumer protection, and agent-banking networks in raising inclusion levels across Nigeria. Similarly, the Alliance for Financial Inclusion (2022) stresses that addressing structural barriers, especially the women's credit gap is essential for improving rural financial inclusion.

2.1.2 Dimensions of financial inclusion

Financial inclusion is multidimensional. Contemporary literature identifies several major dimensions:

1. Access: Physical and digital availability of financial services. Rural women often face long distances to bank branches and limited agent coverage (CBN, 2024).
2. Usage: Regularity and depth of use, including savings frequency, credit uptake, and digital transactions (Bello *et al.*, 2022).
3. Quality: Appropriateness of products, transparency, affordability, and consumer protection (AFI, 2022).
4. Digital Inclusion: Access to mobile money, digital payments, and fintech platforms (Okon and Ndayi, 2023).
5. Gender Inclusion: Tailoring financial services to address gender-based constraints such as collateral requirements, norms, and literacy levels (Okolo-Obasi *et al.*, 2024).

These dimensions are crucial in assessing how rural women participate in the financial ecosystem, especially in agriculturally dependent regions like Edo North.

2.1.3 Concept of welfare and welfare outcomes

Welfare refers to the overall well-being of individuals and households, encompassing economic, social, and psychological dimensions. Welfare outcomes in development studies commonly include income levels, consumption, food security, education, health, resilience to shocks, and empowerment.

In rural contexts, welfare is often measured using multidimensional indicators rather than income alone. Okolo-Obasi *et al.* (2024) found that improved access to financial services among rural women in Nigeria significantly reduces poverty and enhances household welfare. Similarly, Olalekan *et al.* (2023) reported that participation in financial inclusion programs enhances women's economic stability, decision-making power, and general well-being.

Financial inclusion also influences rural development more broadly. Jolaiya (2023) found a strong link between access to savings mobilization, rural credit, and improvements in rural economic activity, suggesting that inclusive financial systems contribute to local development.

2.1.4 Conceptual link between financial inclusion and welfare outcomes

The relationship between financial inclusion and welfare outcomes is well-documented in recent studies. Several pathways explain the connection:

1. **Growth and Enterprise Development:** Access to savings and credit allows rural women to invest in farm and non-farm enterprises. Microloans and digital

banking services provide capital for productive activities, increasing income and reducing poverty (Okolo-Obasi *et al.*, 2024).

2. **Financial Resilience and Risk Management:** Savings accounts, microinsurance, and digital transfers enhance household resilience. Bello *et al.* (2022) showed that financially included women are better able to manage shocks such as illness or crop failure.
3. **Transaction Efficiency and Reduced Costs:** Digital financial services significantly reduce travel time and transaction costs. Okon and Ndayi (2023) highlighted that digital technologies free up productive time for rural women, thereby improving household welfare.
4. **Empowerment and Decision-Making:** Financial access strengthens women's socio-economic autonomy. AFI (2022) emphasizes that women with financial control gain greater bargaining power in their households, which has positive effects on welfare indicators.
5. **Policy and Structural Support:** Effective regulatory frameworks, such as those of the CBN (2024), create enabling environments that broaden access and deepen usage. This institutional support is vital for sustaining welfare improvements among rural women.

2.1.5 Contextual issues affecting rural women's financial inclusion

Rural women in Edo North face several structural and socio-cultural barriers, including:

2. Low financial literacy
3. Limited access to digital devices and poor network connectivity
4. Restrictive gender norms
5. High collateral requirements
6. Distance from financial service points
7. Low income and seasonal cash flows

These factors listed above influence both their level of inclusion and the extent to which inclusion can translate to welfare gains. Recent evidence (Okolo-Obasi *et al.*, 2024; Sakanko *et al.*, 2022) suggests that targeted interventions especially those combining digital tools, gender-sensitive programs, and financial education can significantly enhance outcomes.

2.2 Theories and Models of Financial Inclusion

For this study financial inclusion and welfare outcomes among rural women in Edo North Agricultural Zone, Edo State, Nigeria; five complementary theoretical perspectives are especially useful: The Feminist/Women's Economic Empowerment (WEE) theory, Household Bargaining Theory, Transaction-Cost/Access Theory, and also the Sustainable Livelihoods Framework or approach. Each theory highlights different mechanisms, mediators, and moderators that the empirical model should examine.

- **Feminist Economics / Women's Economic Empowerment**

Feminist economics emphasizes structural gendered constraints (social norms, legal barriers, unpaid care burdens) and advocates designing economic policies that address gendered power relations. The Women's Economic Empowerment literature connects financial inclusion to empowerment when services actually increase women's control over resources and decision-making (FindevGateway/FinEquity, 2023; Women's World Banking, 2021). Contemporary practitioners such as AFI (2022) argue that gender-sensitive product design, female agent networks, and financial capability programmes are required to translate access into empowerment (Alliance for Financial Inclusion, 2022). For rural women in Edo North, a Women's Economic Empowerment lens foregrounds how socio-cultural norms, time poverty and childcare responsibilities may moderate the inclusion to welfare pathway.

Implication for variables: These include measures of empowerment/agency (decision-making, control of income, time use), and interaction terms to test whether the effect of inclusion on welfare is conditioned by women's empowerment or constrained by gender norms (FindevGateway, 2023; AFI, 2022)

- **Household Bargaining Theory**

Household bargaining models (collective models) predict that changes in a household member's control over resources alter intra-household allocations and welfare. If financial inclusion raises a woman's independent income or control of assets, her bargaining position may improve, shifting expenditure toward child health, nutrition, or education (Adera, 2023; Jose, 2023). Empirical studies on digital finance by

Demirgüç-Kunt *et al.*,(2022) and Han (2023) also find that mobile money and digital payments can increase women's bargaining power by giving them direct control of receipts/transfers. However, effects can be ambiguous as husbands may react in ways that offset gains, so testing for heterogeneous responses and potential household-level spillovers is important.

Implication for variables: model women's financial inclusion as affecting household welfare partly through changes in bargaining (measure with WEAI/proxies), and test for spillovers or husband reactions where data permit (Adera, 2023; Han, 2023)

- **Transaction-Cost/Access Theory**

A practical strand of theory explains inclusion through transaction costs and frictions: distance to branches, time costs, fees, lack of IDs, and information frictions deter use of formal services. Digital finance, agent networks, and simplified KYC reduce these frictions and thereby increase uptake (World Bank, 2023; Bongomin, 2023). This perspective supports operational indicators such as distance to agent, agent liquidity, network coverage and fee structures as key determinants of usage particularly relevant for geographically dispersed, agriculturally seasonal populations in Edo North.

Implication for variables: explicitly include measures of access friction (distance to agent/branch, presence of female agents, network quality, fees) as determinants/moderators of financial service usage. (World Bank, 2023; Bongomin, 2023)

- **Sustainable Livelihoods Framework (SLF)**

The Sustainable Livelihoods Framework places households in the context of multiple capitals (human, social, natural, physical, financial) and emphasizes vulnerability contexts and institutions. Financial inclusion can be conceptualized as strengthening the financial capital component and interacting with other capitals to improve resilience and welfare (Natarajan, 2022; UNDP/MDTF briefs). SLF is particularly apt for rural women whose livelihoods are seasonal and reliant on a portfolio of income sources; it encourages multidimensional outcome measurement (assets, consumption smoothing, coping strategies).

Implication for variables: model welfare as multidimensional (assets, consumption, food security, shock coping) and test how financial inclusion interacts with other capital endowments (education, land access, social networks). (Natarajan, 2022).

2.2.1 Integrative theoretical model for this study

These five perspectives are complementary. The Capability Approach and SLF justify multidimensional welfare measurement; Feminist / WEE theory and Household Bargaining explain the gendered intra-household mechanisms; while Transaction-Cost theory identifies supply-side and infrastructural conditions that enable or block usage. Together they suggest an empirical model where:

Financial inclusion (access + usage + quality) → directly influences welfare outcomes (consumption, food security, assets, resilience, empowerment)

Effects are mediated by: digital and financial literacy, women's bargaining power (agency), and productive investments.

Effects are moderated by: distance/agent coverage, presence of female agents, social norms, seasonality of income, and other capital endowments

This mixed theoretical grounding guides variable selection, hypotheses, and empirical strategies (e.g., mediation analysis, interaction terms, and inclusion of access/friction controls) to credibly assess how financial inclusion affects welfare among rural women in Edo North.

2.3 Structural Equation Modeling (SEM) for Modelling Latent Constructs and Mediation

Structural Equation Modeling (SEM) is a powerful quantitative framework for modelling complex relationships among observed and latent variables and is widely used in development studies to;

- (a) specify measurement models for constructs that are not directly observed (e.g., financial inclusion, empowerment, welfare), and
- (b) test structural (causal) pathways including mediation and moderation (Homman, 2023; Almeida, 2024).

Structural Equation Modeling brings two useful capabilities for this study:

1. Measurement model for latent constructs. Financial inclusion is usefully treated as a latent variable with multiple indicators (account ownership, frequency of transactions, savings behaviour, credit uptake, insurance uptake, agent/digital access). Likewise, welfare may be a latent construct composed of observed indicators (per-capita

consumption, asset index, HFIAS score for food access, healthcare use, empowerment subscales). SEM (confirmatory factor analysis or CFA) lets you test whether the chosen indicators load onto the intended latent constructs and to refine indicator sets based on factor loadings and reliability statistics (e.g., Cronbach's alpha, composite reliability, AVE) (Homman, 2023).

2. Testing mediation and indirect effects. SEM naturally estimates direct and indirect (mediated) effects for example, financial inclusion to women's agency to welfare outcomes and provides formal tests of the significance and size of indirect paths (Gunzler *et al.*, 2013; Homman, 2023). When you hypothesize that digital literacy or empowerment mediates the inclusion to welfare linkage, SEM gives more credible decomposition than separate reduced-form regressions.

2.4a Digital Financial Services (DFS) — Theory and Empirical Links to Women's Welfare

Definition and components. Digital Financial Services (DFS) encompass mobile money, USSD banking, mobile apps, agent banking, e-wallets, digital payments, and platform-based credit/savings products. Digital Financial Services lower physical distance and time costs, enabling last-mile outreach to rural users (CBN, 2024).

How Digital Financial Services affects rural women. Empirical work finds DFS can:

- (a) increase account ownership and transaction frequency,
- (b) reduce transaction costs/time (critical for time-poor women),
- (c) expand access to transfers and remittances

(d) enable new business models for women entrepreneurs (Ozili, 2024; Adeleke, 2024). However, gains depend on digital literacy, network coverage, agent liquidity and trust: the “digital gender gap” (access, skills, affordability) often limits rural women from realizing full benefits (CBN, 2024; Adeleke, 2024; Zakaria, 2025).

2.4b Mechanisms for welfare outcomes through digital financial services

Digital Financial Services supports welfare via:

- Cash-flow smoothing and emergency funds (easier to save and receive transfers), improving food security and resilience (Hussaini, 2025).
- Reducing time and travel costs which frees women’s time for income activities (Okon and Ndayi, 2023).
- Integration with other digital services (digital credit, e-savings, input vouchers) that improve agricultural productivity and enterprise growth (Adeleke, 2024).
- Risks and constraints. Possible downsides include exposure to digital fraud, predatory digital credit, and exclusion of the least literate. Effective regulation, consumer protection, and digital skills programs are necessary complements (CBN, 2024; Zakaria, 2025).

2.5.1 Sustainable livelihoods framework (SLF) and measurement of livelihood outcomes (Household Food Insecurity Access Score examples)

- Sustainable Livelihood Framework or approach overview: The Sustainable Livelihoods Framework or approach conceptualizes livelihoods as combinations of five capitals which are human, social, natural, physical and financial interacting

within vulnerability contexts and institutional structures to produce livelihood outcomes (Natarajan, 2022). For rural women, Sustainable Livelihood Framework or approach highlights how financial inclusion (financial capital) interacts with human capital (education), social capital (groups/VSLA membership), and natural capital (land) to shape outcomes like food security, asset accumulation and resilience.

- Using HFIAS within SLF. The Household Food Insecurity Access Scale (HFIAS) is an experience-based measure of food access that captures behavioral and psychological manifestations of food insecurity (reduced meal size, skipping meals, worrying about food) and is widely used in livelihood studies (Salman, 2023; Tufts/INDDDEX). Within SLF, HFIAS serves as a proximate livelihood outcome reflecting the combined influence of capitals and shocks. Studies applying SLF frequently use HFIAS to operationalize food security outcomes when assessing interventions, including financial inclusion programmes (Salman, 2023; Adekoya, 2023).

2.5.2 Analytical implications. When modeling HFIAS in SEM

HFIAS can be an observed indicator (a continuous/ordinal score) or integrated into a latent welfare construct alongside consumption and assets.

SLF suggests including other capitals as covariates or moderators (e.g., land ownership, education, group membership) to capture complementarities that condition the impact of financial inclusion on food security (Natarajan, 2022).

CHAPTER THREE

METHODOLOGY

3.1 Area and Scope of the Study

Edo is located at the southern part of Nigeria and has 18 Local Government Areas. It lies between Latitudes 5°44' and 7°34' North of the equator and longitude 5°04' and 6°43' East of the Greenwich Meridian. It shares boundary to the South with Delta State, in the west with Ondo and in the East with Kogi and Anambra State. Edo State has three ecological zones Edo South comprising of rainforest and some mangrove swamp, Edo central comprising of little rain forest and savanna, Edo North which is made up of more savanna and a little rainforest. The state is situated in the south-south geopolitical region of Nigeria. It covers an estimated land area of 19,714 km² with HDI of Determinants of technical efficiency of small-scale rice farmers in Edo North 27L0.530 and a population of 44,461,137 people (NPC,2024); located between latitudes 060301 and 07001 North and between longitudes 050451 and 06001 East at an average elevation of about 88 m (Ogbeitun, 2018).

The study was conducted in Edo North, which lies approximately between latitudes 6°45'N and 7°35'N and longitudes 5°55'E and 6°45'E. It is bounded in the North by Kogi State, in the East by River Niger Beach, in the west by Ondo State and in the south by Esan North East and Ovia North East Local Government areas (EDSMA, 2013). Edo North ecological Zone consists of six (06) LGAs (Akoko Edo, Estako East, Estako West, Estako Central, Owan West and Owan East). Edo North Ecological Zone

has an estimated population of 1,973,000 people with an estimated area of 4,711 km² (NPC, 2024). This region is known for its rich cultural heritage, vibrant festivals, and traditional crafts. The area has long been an agricultural hub, producing crops such as yam, cassava, maize, rice, cocoa, palm produce, plantain, guinea corn, fruits and vegetables. Over time, Edo North has also developed a reputation for trade and small-scale manufacturing, contributing to Edo State's economy. Although major bank branches are present in the urban centers of Edo North like Auchi, many rural communities still rely heavily on informal savings groups (like esusu or ajo) and local moneylenders due to peculiar challenges like low financial literacy, poor road networks, inadequate collateral, and cultural norms restricting women's access to formal credit.

3.2 Data Collection

Primary and secondary data collection were employed to source for data for the purpose of this study. The primary data were obtained using a well-structured questionnaire and interview schedule while secondary data were sourced from journal, article, bulletins, text books and past project works.

3.3 Sampling Procedure and Sample Size

A three-stage sampling procedure was used in the selection of respondents for this study;

Stage 1

There are six LGAs in Edo north (Etsako East, Etsako West, Owan East, Owan West, Akoko Edo and Etsako Central). Etsako Central and Etsako East LGAs were purposively selected due to the abundance of rural households, dependence of the majority of the residents on agriculture and the clear gender roles embedded in agricultural production and household decision making in the area which made it suitable for this study on rural women's welfare outcome and financial inclusion.

Stage 2

There are 15 communities in Etsako central (Fugar, Iyakhei, Uchi, Takura, Okpella, Ugbekpe-Ekperi, Anegbette, Udaba, Afokpella, Ukepeko, Ekwotsor, Osomegbe, Ogbona and Igiode) and 67 communities in Etsako East (Agenebode, Okpella, Weppa-Wanno communities (Agenebode), Okpekpe (known for the Okpekpe International 10km Road Race), Imiegba, Imiokono, Iviukwe, Okpira, Ogute, Ogbona, Iwoye, Ivbiawhina, Igiode, Idoia, Ivianokpodi and others). Three communities namely Fugar, Ekperi and Ogbona were selected from Etsako Central LGA and three communities namely Agenebode, Okpella and Weppa-Wanno were be selected from Etsako East LGA using simple random sampling.

Stage 3

Simple random sampling procedure was used to select 30 rural household each from the total six communities, giving a total of 180 respondents.

3.4 Measurement of Variables

The variables used during the course of this study include the following:

Independent Variables

1) SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

- a) Age: Respondents were asked to indicate their actual age in years.
- b) Gender: Respondents were be asked to indicate their sex as either make or female. It was measured on nominal level where male=1 and female = 2.
- c) Marital status: Respondents were asked to indicate their marital status. The options were: single = 1, married = 2, divorced = 3 and widowed = 4.
- d) Household head status: Respondents were asked to indicate if they are the household head, they indicated choosing either "Yes" which was coded as 1 or "No" which was coded as 2.
- e) Religion: Respondents were asked to indicate their religion by selecting from the options; Christianity = 1, Islam = 2, and Traditional = 3
- f) Years of formal education: Respondents were asked to indicate their number years of formal education.
- g) Main occupation: Respondents were be asked to indicate their major occupation by selecting among options; Farming = 1, Trading = 2, Artisan = 3, Civil service = 4 and Others (specify) = 5.
- h) Secondary occupation: Respondents were asked to indicate if they have any other source of income. "Yes" was coded as 1 and "No" as 2.

- i) Household size: Respondents were asked to indicate their household size as number of persons eating from the same pot.
 - j) Monthly income: Respondent were asked to indicate their actual monthly income in Naira.
- 2) **Awareness of the rural households of financial services:** Extent of awareness was measured by asking the respondents to indicate "Yes/No" to some questions. Where "Yes" was coded as 1 and "No" was coded as 2. When the respondents chose "Yes" to a particular question, they were further required further required to indicate the extent to which they were aware. This was measured using a three-point Likert scale, where "highly aware" was coded as 3, "moderately aware" was coded as 2 and "slightly aware" was coded as 1. Mean scores of the respondent responses was calculated and this was used to categorize them into high and low levels of awareness.
- 3) **Accessibility of these financial services to male and female rural households:** Accessibility of these financial services was measured by asking the respondents to indicate "Yes/No" to some questions. Where "Yes" was coded as 1 and "No" was coded as 2. Mean scores of respondent responses was calculated and this was used to categorize them into high and low levels of usage.
- 4) **Extent of usage of these financial services among rural household:** The extent of usage of these financial services was measured by asking the respondents to indicate "Yes/No" to some questions. Where "Yes" was coded as 1 and "No" was coded as 2. If a respondent chooses "Yes" to a particular question, they were further

required to indicate the extent to which extent they use financial services. This was measured using a four-point Likert scale, where “always used” was coded as 4, “often used” was coded as 3, “sometimes used” was coded as 2 and “rarely used” was coded as 1. Mean scores of respondent responses was calculated and this was used to categorize them into high and low levels of usage.

5) Constraints in Accessing Financial Services (Institutional, Structural and Socio-cultural Barriers): In order to rank the severity of constraints encountered by respondents in assessing financial services, a list of factors considered to be barriers was given (structural, institutional and socio-economic barriers) respectively. Garrett ranking was used, the respondents were asked to rank the constraints, from 1 for the most severe, to the least (5), based on their personal experience.

Dependent Variable:

Welfare outcomes of formal financial services: HFIAS (Household Food Insecurity Access Scale) was used as a proxy to measure financial inclusion.

Using HFIAS, the respondents were given a list of nine standard HFIAS questions, they indicated by selecting either "Yes" or "No" which was coded as 1 and 2 respectively and when the respondents chose "Yes" they were asked to indicate the frequency-of-occurrence by further selecting among "Rarely" (once or twice in the past 30 days) coded as 1, "Sometimes" coded as 2 (three to ten times in the past 30 days) and "Often" coded as 3 (more than ten times in the past 30 days). This allowed for the household to be scored along a continuous scale (0–27) and categorizing them

into: Food secure (0–1), Mildly food insecure (2–8), Moderately food insecure (9–16) and Severely food insecure (17–27).

3.5 Data Analysis

Descriptive and inferential statistics were used to analyze data for the study. Descriptive statistics such as mean, frequency, standard deviation, percentages and Garret's ranking were used for objectives 1 to 6.

3.6 Hypothesis Testing

The hypothesis (H_{01}) of the study was tested using Multiple Linear Regression.

CHAPTER FOUR

RESULT AND DISCUSSIONS

4.1 Socioeconomic Characteristics of Respondents

4.1.1 Age

The average age of respondents was 46.34 years, indicating that most of the women were middle-aged. Women in this age group often bear significant household responsibilities and engage in income-generating activities that require financial support. Prior research shows that middle-aged rural women tend to have greater financial needs yet face stronger socio-cultural restrictions in accessing formal financial services (Aterido *et al.*, 2019; Okoye and Eze, 2023). This age structure suggests that the women surveyed are in their economically active years, increasing the relevance of financial inclusion for livelihood enhancement.

4.1.2 Educational qualification

Respondents recorded an average of 8.93 years of education, suggesting that most had only basic or lower secondary education. Limited educational attainment is widely recognized as a major barrier to financial inclusion because it reduces financial literacy, understanding of banking processes, and confidence to engage with formal institutions (Klapper and Singer, 2021; Atakora *et al.*, 2021). This relatively low education level may therefore constrain women's ability to access, use, or negotiate financial services effectively.

4.1.3 Household size

The average household size was 5.19 persons, indicating relatively large households typical of rural Nigerian communities. Larger households tend to increase financial pressure and dependency ratios, which may push women to seek credit or savings opportunities. However, large household responsibilities can also limit mobility, time availability, and financial decision-making autonomy (Ejemeyovwi and Osabuohien, 2020). Thus, household size may influence both the need for financial services and the socio-cultural constraints around accessing them.

4.1.4 Marital status

The findings indicate that 60.4% of the respondents were married, 18.7% were widowed, 15.9% were single, and 4.9% were divorced. The predominance of married women suggests that most respondents have family responsibilities, which may influence their financial needs and decision-making power. Married women often contribute significantly to household income and welfare, and their access to credit or savings services can directly improve family living standards. This finding is consistent with Afolabi (2015), who reported that marital status significantly affects access to credit, as married individuals, especially women, tend to seek financial support for family upkeep and business expansion. Adeola and Evans (2020) also observed that marriage can enhance economic participation through shared labor and resources but may also limit women's financial autonomy depending on household power dynamics.

4.1.5 Household head

About 29.7% of the respondents reported being household heads, while 70.3% were not household heads. This indicates that while most rural women contribute economically, a smaller proportion hold primary decision-making positions within their households. Female-headed households are often associated with higher financial vulnerability and lower access to productive resources due to limited collateral and socio-cultural constraints. According to Okpara and Nwachukwu (2021), household headship plays a crucial role in determining financial behavior and welfare outcomes, as heads are typically responsible for budgeting, borrowing, and investment decisions. Ogunlela and Mukhtar (2009) also noted that female-headed households in rural Nigeria often experience greater financial exclusion due to limited access to land and formal credit institutions.

4.1.6 Religion

The religious distribution shows that 48.9% of respondents were Christians, 46.7% were Muslims, and 4.4% practiced traditional religion. This near balance between Christianity and Islam reflects the cultural and religious diversity of Edo North. Religious affiliation can influence financial attitudes, savings behavior, and willingness to engage with formal financial institutions. Ogunyomi and Ojo (2018) found that religion shapes people's trust in financial systems, as some groups may prefer informal savings associations like esusu or cooperative societies based on shared religious or community identity. Similarly,

Adebayo and Adeola (2021) observed that religious teachings about interest (riba) can influence Muslim women's participation in conventional banking, prompting preference for Islamic or microfinance models.

4.1.7 Main occupation

The results show that 36.8% of respondents were engaged in farming, 33.5% in trading, 2.2% in civil service, and 27.5% in other occupations such as craftwork or food processing. This indicates that rural women in Edo North are primarily involved in agriculture and informal trade, which are the dominant livelihood activities in rural Nigeria. Such economic activities often require small capital inputs and are highly sensitive to access to credit and savings facilities. According to Oluwatayo (2014), farming and petty trading are common among rural women as they provide flexible means of livelihood compatible with domestic responsibilities. However, Adetayo and Ojo (2020) emphasize that lack of access to formal credit facilities limits women's ability to expand these ventures, thereby affecting their income and welfare outcomes.

4.1.8 Secondary occupation

The findings reveal that 93.4% of respondents had no secondary occupation, while only 6.6% engaged in a second source of income. This implies that the majority of rural women depend on a single livelihood activity, making them more vulnerable to income shocks and seasonal variations. The absence of multiple income sources suggests low economic diversification, which may affect resilience and financial stability. According to Ibrahim and Usman (2018), income diversification is a key

strategy for improving rural welfare and reducing poverty. However, barriers such as limited access to credit, training, and market opportunities restrict rural women from engaging in multiple income-generating activities. FAO (2021) also reported that promoting financial inclusion through microcredit and savings schemes enables rural women to diversify livelihoods and enhance household welfare.

4.1.9 Monthly income

The average monthly income of ₦64,298.83 suggests relatively low-income levels typical of rural communities. Low income reduces women's ability to meet requirements for minimum account balances, registration fees, or collateral for loans (World Bank, 2020). Income level is thus a critical determinant of financial inclusion, as low-income women tend to rely more on informal financial systems such as thrift collectors or rotating savings groups.

Table 4.1: Socio-economic characteristics of respondents

Variable	Category	Frequency	(%)	Mean	SD
Age				46.34	14.99
Educational Qualification				8.93	3.81
Household Size				5.19	1.95
Marital Status	Single	29	15.9		
	Married	110	60.4		
	Divorced	9	4.9		
	Widowed	34	18.7		
Household Head	No	128	70.3		
	Yes	54	29.7		
Religion	Christianity	89	48.9		
	Islam	85	46.7		
	Traditional	8	4.4		
Main Occupation	Farming	67	36.8		
	Trading	61	33.5		
	Civil Service	4	2.2		
	Others	50	27.5		
Secondary Occupation	No	170	93.4		
	Yes	12	6.6		
Monthly income				64298.8	46233

Source: Field Survey, 2025

4.2 Awareness of Financial Services among Rural Women

Table 2 presents the level of awareness of financial services among rural households in the Edo North Agricultural Zone. The results indicate a high level of general awareness of formal and digital financial services among respondents, although with considerable variation across specific financial products and programs.

4.2.1 Financial services with the highest percentage awareness (general awareness of financial services, mobile banking platform and savings account)

The result shows that three financial service indicators; general awareness of financial services, awareness of mobile money platforms, and awareness of savings accounts, recorded the highest levels of awareness among rural women in Edo North. Specifically, 97.3% of respondents had general awareness of financial services, 92.9% were aware of mobile money platforms, and 84.6% were aware of savings accounts. These results indicate strong penetration of financial information in rural communities and reflect the progress made in expanding financial literacy in Nigeria's informal sector. The very high general awareness (97.3%) suggests that rural women are not isolated from financial information networks. Sensitization efforts by government agencies, financial institutions, NGOs, and community associations consistent with the Central Bank of Nigeria's Revised National Financial Inclusion Strategy (2018) have improved grassroots exposure to financial services. Empirical evidence also shows that innovations in Nigeria's financial sector have increased public financial knowledge. For example, Ejemeyovwi and Osabuohien (2020) report that financial

technology growth and awareness campaigns have significantly enhanced knowledge of formal financial options across rural West Africa. Thus, the high awareness level in this study mirrors national trends in improved financial visibility. Awareness of mobile money platforms (92.9%) further reflects the growing influence of digital finance as an accessible alternative to traditional banking. Mobile agents and digital tools have expanded rapidly since 2018, enabling rural households to engage in transactions even without formal bank accounts. GSMA (2021) and the World Bank (2022) note that mobile money adoption in Africa has increased due to convenience, affordability, and reduced distance barriers. Similarly, Suri and Jack (2016) emphasize that mobile money ecosystems thrive in rural settings because they lower transaction costs and improve financial reach. These observations support the strong mobile money awareness among respondents. The high awareness of savings accounts (84.6%) also shows that rural women are familiar with basic formal financial instruments. Savings accounts often serve as an entry point to the formal financial system. Research by Alkire *et al.*, (2020) and Balogun *et al.* (2025) highlights that rural Nigerian women value formal savings for security, access to credit, and participation in group financial schemes. However, the slightly lower awareness relative to mobile money may reflect the continued use of informal mechanisms such as esusu and thrift collections.

Overall, awareness is an essential first step in financial inclusion and it is relatively high among rural women in the study area. However, high awareness alone does not guarantee access or usage. As Demirgüç-Kunt *et al.* (2022) argue, structural and socio-cultural barriers such as distance, high interest rates, inadequate documentation, and gender norms often limit the conversion of awareness into meaningful participation. Thus, while awareness is strong, more targeted interventions are required to translate it into improved access, usage, and ultimately, better welfare outcomes.

4.2.2 Financial Services with the lowest percentage of awareness (Insurance services, NGO and Government financial inclusion program and special Micro-Finance packages designated for women)

The results show that insurance products (37.9%), government/NGO financial inclusion programmes (26.4%), and women-targeted microfinance packages (23.1%) recorded the lowest awareness levels among the respondents in the study area. These findings suggest that while general financial services and digital platforms are well known, specialized financial products remain largely invisible to rural communities. The relatively awareness of insurance services indicates limited outreach, low trust and poor understanding of risk-mitigation tools among rural populations. Evidence shows that rural households often perceive insurance as complex, costly or inaccessible due to limited exposure to agents and weak sensitization (World Bank, 2022; Adetayo and Ojo, 2020). Similarly, awareness of government and NGO programmes is low, reflecting gaps in policy communication and rural outreach.

Studies highlight that rural women often lack access to timely information about government schemes due to communication barriers, political gatekeeping, and reliance on informal networks (Babajide *et al.*, 2020; Adegbite and Machethe, 2020). The lowest awareness women-focused microfinance packages points to a disconnect between microfinance institutions and their intended beneficiaries. Microfinance banks often promote products in urban areas, while rural women depend more on informal systems such as esusu or cooperative groups (Eze *et al.*, 2022; Balogun *et al.*, 2025).

Table 4.2a: Awareness of financial services among rural women

Variable	Yes Frequency	Yes (%)
1. Awareness of financial services (bank, mobile money services, insurance, etc.).	177	97.3
2. Savings account and the process involved in opening/operating one	154	84.6
3. Bank loan and how it can be obtained.	103	56.6
4. Mobile banking platforms (e.g., OPAY, PAGA) and how they work.	169	92.9
5. Interest rate incentives with money deposited in commercial banks.	75	41.2
6. Transaction costs involved in the use of formal financial services.	91	50.0
7. Government (e.g., EdoJobs) and NGO programs supporting financial inclusion.	48	26.4
8. Special packages that microfinance banks offer to women (e.g., subsidized loans, reduced interest rates).	42	23.1
9. Insurance products and how they operate	69	37.9

Source: Field Survey, 2025.

Table 4.2b: Awareness composite category

Variable	Category	Frequency	%
Awareness	High	113	62.1
Awareness	Low	69	37.9

Source: Field Survey, 2025

4.3 Accessibility of Financial Services to Rural Women

Table 3 presents findings on the **accessibility of financial services** and supporting infrastructure among rural households in Edo North Agricultural Zone. Accessibility is a crucial determinant of financial inclusion, as it reflects the physical, digital, and administrative ease with which individuals can use financial products and services.

4.3.1 Most accessed financial services by percentage (SIM card, mobile phone and required documentation like NIN or ID)

The results of the financial access indicators shows that rural women in the study area have the highest access to SIM cards (95.6%), mobile phones (95.1%), and national identification documents such as the NIN (86.3%). These three requirements form the basic infrastructure enabling participation in digital financial services, especially in rural environments where formal banking facilities are limited. Their high accessibility reflects the deepening penetration of mobile technologies in Nigeria and the progress made through national identification initiatives.

The near-universal access to SIM cards and mobile phones is particularly important because these tools allow women to use mobile money, USSD banking, and other low-cost digital financial services. This trend aligns with findings by GSMA (2021), which emphasizes that mobile connectivity reduces geographic and cost barriers that traditionally exclude rural populations, especially women from formal finance. Aker and Jack (2021) similarly note that widespread mobile adoption enhances women's

financial autonomy by improving their ability to save, access credit, and receive remittances.

Access to national identification documents by 86.3% of respondents also represents a significant achievement. Identification has long been a major constraint to financial inclusion in Nigeria, as KYC regulations restrict account opening and digital finance enrollment for individuals without formal IDs. The high NIN access rate in this study indicates the improved compliance with national ID programmes and aligns with findings by Yusuf and Bala (2021), who report that national ID possession substantially increases individuals' ability to access formal and digital financial services. Likewise, the World Bank (2022) highlights that robust identification systems reduce transaction barriers and bolster trust in digital finance.

Overall, these findings suggest that foundational access to digital financial infrastructure is strong among rural women in the study area. With high mobile connectivity and substantial ID ownership, the structural prerequisites for digital financial inclusion are already in place, providing a solid platform for expanding financial literacy, service awareness, and welfare-enhancing financial participation.

4.3.2 Least-accessed services by percentage (electricity supply, receipt of money through mobile phones and functional ATM)

The results obtained from financial access indicators shows that electricity supply (54.9%), the ability to receive money through mobile phones (54.4%), and access to functional ATMs (52.7%) recorded the lowest access levels among rural women in Edo North. These findings reveal persistent infrastructural constraints that continue to limit effective financial inclusion, despite widespread awareness and ownership of mobile devices. Access to electricity remains a critical barrier to digital financial service (DFS) use. Since digital platforms rely on functional mobile devices, irregular electricity supply prevents rural women from reliably charging their phones or maintaining continuous connectivity. The World Bank (2022) reports that rural electricity access in Nigeria remains below 60%, disproportionately affecting women who depend on mobile phones for financial activities. Ofori-Sasu *et al.* (2020) similarly show that inadequate energy infrastructure substantially reduces digital financial uptake because users are unable to maintain uninterrupted access to mobile banking tools. The relatively low ability to receive money via mobile phones (54.4%) further reflects functional constraints rather than lack of awareness. Although mobile money knowledge is high, effective use depends on network quality, service agent availability, and ease of transaction processing. Aker and Jack (2021) highlighted that rural digital finance usage often lags behind awareness due to poor network reliability and inconsistent liquidity among mobile agents. GSMA (2021) also notes that women

in low-income rural settings typically face additional barriers such as limited digital skills and fewer transaction points, which restrict their ability to independently receive funds digitally. Access to functional ATMs is reported by only 52.7% of respondents, this points to broader gaps in physical financial infrastructure. Rural Nigeria continues to experience sparse ATM distribution, frequent machine downtime, and irregular cash loading. Yusuf and Bala (2021) observed that these deficiencies reduce trust in formal banking and limit rural households' ability to convert digital transactions into cash, which remains essential in cash-based economies. Balogun *et al.* (2025) further emphasize that women often have mobility constraints, making long trips to distant ATMs difficult and undermining their financial autonomy.

Overall, these low access indicators reflect “last-mile barriers” that restrict the practical use of financial services among rural women. As Demirgüç-Kunt *et al.* (2022) noted, infrastructural deficits especially those related to electricity, network reliability, and physical banking facilities—play a decisive role in determining whether financial services translate into actual empowerment and improved welfare outcomes. Strengthening energy, network, and financial infrastructure is therefore essential to enable rural women to fully benefit from both digital and traditional financial systems.

4.3a: Accessibility of financial services among rural women

Variable	Yes Frequency	Yes (%)
1. Access to bank branches in your area.	103	56.6
2. Access to any functional ATM in your area.	96	52.7
3. Access to steady electricity to run banks and operate mobile money services.	100	54.9
4. Access to the required documentation (ID, NIN) to open a bank account.	157	86.3
5. Access to a mobile phone.	173	95.1
6. Access to a SIM (Subscriber Identity Module) card to operate mobile services.	174	95.6
7. Access to the internet in your area	135	74.2
8. Access mobile money services through your mobile phone	99	54.4

Source: Field Survey, 2025

Table 4.3b: Accessibility composite category

Variable	Category	Frequency	%
Access	High	101	55.5
Access	Low	81	44.5

Source: Field Survey, 2025

4.4 Utilization of Financial Services by Rural Women

Table 4 presents data on the extent of usage of financial services among rural households in Edo North Agricultural Zone. While awareness and accessibility of financial services were relatively high (as seen in Tables 2 and 3), actual utilization across most financial products remains moderate to low. This suggests that awareness does not always translate to active participation in formal financial systems.

4.4.1 Highest Utilization of Financial Services Among Rural Women (Bank Accounts, Payment Receipt and Bill Payment through Account and ATM Cards for withdrawals)

The results indicate that the financial services most frequently used by rural women in Edo North include bank accounts (67.5%), using accounts for receiving money and paying bills (65.9%), and making cash withdrawals with ATM cards (62.1%). These patterns show that many rural women are actively engaging with fundamental formal financial services, signaling moderate advancement toward functional financial inclusion.

The relatively high reliance on bank accounts suggests that formal banking has become an important avenue for managing savings and routine financial activities. Demirgüç-Kunt et al. (2022) emphasize that effective account usage strengthens financial security by limiting dependence on informal financial arrangements and providing safer mechanisms for money management. The utilization level observed here likely reflects improvements in agent banking availability and simplified KYC processes, which have made banking more accessible in rural environments.

Likewise, the use of accounts for bill payments and receiving funds (65.9%) highlights the growing uptake of digital and cashless payment options among rural populations.

Expanding mobile network coverage and the spread of POS and banking agents have made electronic transactions more feasible. Evidence from GSMA (2021) and Aker and Jack (2021) shows that digital payments reduce transaction costs and enhance women's economic autonomy, aligning with the trends identified in this study.

The use of ATM cards by 62.1% of respondents further reflects active interaction with the formal financial system, especially in predominantly cash-oriented rural economies. ATMs play a key role in providing liquidity and reducing dependence on informal lenders, as noted by Yusuf and Bala (2021). Although ATM access in rural areas is often hindered by distance and poor machine functionality, the usage level recorded here suggests that agent banking and nearby semi-urban ATM access may be facilitating withdrawals.

Taken together, these indicators show meaningful engagement with formal finance, though participation remains incomplete. The fact that usage levels remain below 70% indicates persistent structural limitations, including inadequate infrastructure, low digital literacy, and trust-related concerns. As Balogun *et al.*, (2025) argued, genuine financial inclusion requires not only availability of services but consistent, confident, and convenient use which is an area where further progress is still needed.

4.4.2 Highest Utilization of Financial Services Among Rural Women (ATM for Bill Payment, Banks to Secure loans and insurance)

The findings indicate that the financial services with the lowest usage among rural women in Edo North were ATMs for bill payments (26.2%), obtaining loans through commercial or mobile banking (13.7%), and insurance products (8.8%). These low levels highlight persistent gaps in functional financial inclusion, particularly regarding more specialized or advanced financial products.

The limited use of ATMs for bill payments suggests that although ATM cards are commonly used for cash withdrawals, rural women rarely utilize other transactional features. This pattern is often linked to low digital financial literacy and a preference

for cash transactions (Yusuf and Bala, 2021). Additionally, perceptions of complexity and low trust constrain broader adoption of digital payment systems (GSMA, 2021).

Loan utilization was also minimal (13.7%), reflecting structural challenges in the rural credit market, including high collateral demands, irregular incomes, and gender-related barriers. Many women in rural areas depend on informal lending mechanisms because formal financial institutions are often viewed as inaccessible or unfriendly (Aker and Jack, 2021; Balogun *et al.*, 2025).

Insurance uptake was the lowest among all indicators (8.8%), consistent with trends in low-income populations. Limited awareness, affordability issues, and mistrust of insurance providers hinder adoption, leaving rural households exposed to financial shocks such as illness, crop failure, or emergencies (Demirgüç-Kunt *et al.*, 2022; Okon and Ndayi, 2023).

Collectively, these findings demonstrate that while rural women engage moderately with basic financial services, advanced financial tools remain significantly underused. The low utilization rates are largely driven by literacy gaps, infrastructural limitations, and socio-cultural factors. As highlighted by Balogun *et al.*, (2025), meaningful financial inclusion extends beyond access to consistent and confident use of financial services, which is essential for enhancing economic resilience and household welfare.

Table 4.4: Utilization of Financial Services by Rural Women

Variable	No (%)	Rarely (%)	Sometimes (%)	Often (%)	Always (%)
1. Bank account (savings or current).	32.4	3.8	25.8	27.5	10.4
2. Use of account to receive payment and pay bills.	34.1	4.9	27.5	25.3	8.2
3. Use of ATM card for withdrawals.	37.9	12.1	25.3	22	2.7
4. Use of ATM for transfers	73.1	8.2	8.2	9.9	0.5
5. Use of ATM for bill payments	73.6	7.1	8.2	9.3	1.6
6. Use of mobile money services (e.g., PalmPay, Moniepoint)	45.1	2.7	16.5	31.3	4.4
7. Use of commercial banks, microfinance, or mobile money to secure loans	86.3	6	4.4	3.3	0
8. Use of insurance services	91.2	5.5	3.3	0	0

Source: Field Survey, 2025

Table 4.4b: Utilization composite categorization

Variable	Category	Frequency	%
Utilization	High	91	50
Utilization	Low	91	50

Source: Field Survey, 2025

4.5 Utilization of HFIAS to Show Rural Women Welfare Outcome in the Study Area

The welfare outcome of rural women in the study area, measured using the Household Food Insecurity Access Scale (HFIAS), reveals widespread food insecurity, with only 9.3% of respondents classified as food secure and a substantial 90.7% experiencing varying degrees of food insecurity. Specifically, 8.8% were mildly food insecure, 35.7% moderately food insecure, and 46.2% severely food insecure. These welfare outcomes can be meaningfully aligned with the respondents' levels of awareness, access, and utilization of financial services, which together shape the overall potential of financial inclusion to improve household welfare.

The analysis shows that 62.1% of rural women in the study area have high awareness of available financial services, while 37.9% have low awareness or just remain unaware. This level of awareness suggests moderate exposure to financial products, however, the sizeable proportion of respondents with low or no awareness indicates a critical gap in information dissemination. Awareness forms the first step in the financial inclusion pathway, as individuals who lack knowledge about savings, credit, insurance, and digital financial platforms are unable to seek or benefit from them. Recent studies confirm that low awareness is a persistent barrier to financial inclusion among rural women, limiting their ability to adopt financial tools that could help them withstand food shortages and economic shocks (EFinA, 2023; Omotosho, 2021). Thus, part of the high prevalence of food insecurity observed in the study can be attributed to

the limited awareness that prevents a significant share of women from entering the formal financial system.

Beyond awareness, the findings show that 55.5% of respondents have high access to financial services, while 44.5% have low access or do not have access at all. This may perhaps indicate that even among women who are aware of financial services, there could be institutional, structural, or socio-economic barriers that prevent them from accessing the financial services. These barriers may include long distances to financial institutions, lack of required documentation, limited availability of agents, or procedural constraints. Existing literature emphasizes that access to financial services is strongly associated with improved household welfare, as it enables women to save, borrow productively, and smooth consumption during periods of food scarcity (Bello *et al.*, 2022; Nanziri and Leibbrandt, 2018). Therefore, the limited access recorded in this study restricts many women from leveraging financial instruments that could reduce their vulnerability to hunger and improve household food security.

The actual use of financial service provides the most direct link to welfare improvement. The data show that only 50% of respondents who are aware and have access, have high or active utilization of these formal financial services. This means that half of the respondents do not actively engage with financial services such as savings accounts, credit facilities, mobile money, or microinsurance. Related literature consistently demonstrates that welfare gains from financial inclusion are realized only when financial services are used effectively and consistently. For example, studies in

Sub-Saharan Africa reveal that women who utilize microloans, digital financial platforms, and savings programs experience significant improvements in food security and overall household welfare (Okolo-Obasi *et al.*, 2024; Karlan *et al.*, 2019). Therefore, the low level of utilization in the study area suggests a major break in the financial inclusion–welfare pathway: even when women are aware of and have access to financial services, many do not use them, diminishing the potential benefits for household food security.

In summary, the widespread food insecurity observed in the study area can be partly understood as a consequence of gaps at all three stages of financial inclusion and the existing structural, Institutional and Socio-economic barriers prevalent in the study area.

Table 4.5: HFIAS as proxy for measuring welfare

Food Insecurity Categorization	Frequency	%
Food Secure	17	9.3
Mildly Food Insecure	16	8.8
Moderately Food Insecure	65	35.7
Severely Food Insecure	84	46.2

Source: Field Survey, 2025

4.6.1 Structural barriers affecting access to financial services among rural women

Table 4.6.1 presents the structural barriers affecting access to financial services among rural women in Edo North Agricultural Zone, Edo State. Using Garrett ranking, respondents identified and prioritized the key barriers based on their perceived significance.

The analysis shows that irregular income was ranked as the most critical barrier, with 42.3% of respondents assigning it Rank 1. This indicates that inconsistent or unstable earnings significantly hinder rural women from accessing financial services, as reported in previous studies that link income irregularity to limited financial inclusion (Okolo-Obasi *et al.*, 2024; Bello *et al.*, 2022).

The second most important barrier was lack of collateral, with 29.7% of respondents ranking it as Rank 1. This finding aligns with earlier research which emphasizes that the inability to provide collateral remains a key constraint for rural women seeking formal financial services in Nigeria (Almeida, 2024).

Lack of necessary documents was ranked third, showing that administrative requirements such as identity cards, utility bills, or registration papers limit women's participation in formal financial systems. This is consistent with the findings of Onaolapo and Odetayo (2020), who highlighted documentation as a recurring barrier to rural financial inclusion.

Conversely, digital illiteracy and lack of infrastructure were ranked fourth and fifth respectively, indicating that while technological and infrastructural challenges exist, they are less critical compared to financial and administrative barriers. This observation resonates with the work of Malapit and Quisumbing (2021), who noted that digital and infrastructural issues, though important, were secondary to income and collateral constraints among rural women.

The Garrett ranking analysis reveals that financial insecurity and collateral requirements are the most significant structural barriers affecting rural women's access to financial services in Edo North, whereas digital illiteracy and infrastructure limitations are comparatively less influential. This prioritization provides valuable insight for policymakers and development practitioners aiming to enhance financial inclusion among rural women in Nigeria.

4.6.2 Institutional barriers affecting access to financial services among rural women

Table 4.6.2 presents the institutional barriers affecting rural women's access to financial services using Garrett Ranking. The ranking distribution illustrates the severity with which respondents perceive each barrier. The findings reveal that distance to the nearest bank ranks as the most critical barrier, with 38.5% of respondents placing it in the first position. This indicates that physical proximity remains a major structural constraint limiting rural women's engagement with formal financial systems. Several studies have confirmed that long distances to banking

facilities increase transaction costs, reduce frequency of financial interactions, and discourage participation in formal financial markets (Aterido *et al.*, 2019; World Bank, 2020). In rural Nigerian contexts, inadequate rural banking infrastructure has been consistently linked to low financial inclusion among women (Okojie and Oviawe, 2021).

The second most prominent institutional barrier is high interest rates on loans, which received substantial first-, second-, and third-place rankings. This suggests that borrowing costs remain a major deterrent for women seeking credit for livelihood activities. High interest rates have been widely identified as a binding constraint for rural women who rely heavily on microcredit for small-scale agriculture and trading (Okafor *et al.*, 2022). Evidence shows that when loan repayment terms are stringent, rural women often withdraw from formal financial systems due to fear of loan default (Ajani and Onwuegbunam, 2020). Thus, the prominence of this barrier reflects broader national concerns about the affordability of credit for low-income populations. The complexity of loan application processes also ranks high, with a concentration of responses in the second (25.8%) and fourth (19.2%) positions. This indicates that bureaucratic procedures such as documentation requirements, collateral demands, and lengthy approval processes pose challenges for rural women. Prior research highlights that women in rural Africa often lack formal documentation (such as identity cards or certificates of occupancy), making it difficult to access bank loans (Demirgüç-Kunt *et al.*, 2022). In Nigeria, cumbersome application processes have been reported as a

major bottleneck preventing women from accessing credit even when financial institutions are available (Ejemeyovwi and Osabuohien, 2020).

In contrast, lack of financial education is ranked least severe, with the highest proportion of respondents (39.6%) placing it in the fifth position. This suggests that while respondents recognize the importance of financial literacy, they perceive other barriers such as distance and interest rates as more immediate constraints. Nevertheless, literature stresses that inadequate financial education can limit women's ability to utilize financial tools effectively, manage loans, or engage with savings products (Atakora *et al.*, 2021; OECD, 2023). Thus, although it is ranked low here, financial literacy remains a structural issue that indirectly influences financial inclusion.

The final institutional barrier, discrimination or poor treatment by financial service providers, presents a mixed ranking pattern. While some respondents placed it high (28% in the second position), others ranked it least severe (28% in the fifth position). This variation suggests that discriminatory practices may not be uniformly experienced across the study area. Past investigations indicate that women often face subtle forms of gender bias in financial institutions, particularly in loan approval or customer service interactions (Klapper and Singer, 2021; Nwosu and Okafor, 2019). The mixed responses here may reflect differences in bank policies or personal experiences across communities in Edo North.

The Garrett ranking demonstrates that physical access barriers (distance), financial cost barriers (interest rates), and procedural barriers (complex applications) are the most influential institutional constraints limiting women's access to financial services. These findings align with broader empirical evidence across sub-Saharan Africa, suggesting that both structural and institutional weaknesses significantly hinder women's participation in formal financial systems (UN Women, 2021; CGAP, 2023). Addressing these barriers will therefore require policy actions that improve rural financial infrastructure, reduce loan costs, simplify procedures, and promote inclusive banking practices.

4.6.3 Socio-cultural barriers affecting access to financial services among rural women

Table 4.6 presents the socio-cultural barriers that hinder rural women's access to financial services, using the Garrett ranking technique to determine the relative severity of each barrier based on respondents' perceptions. The distribution of rankings provides insight into how cultural norms, gender dynamics, and social beliefs influence women's financial inclusion in the Edo North Agricultural Zone.

The results reveal that lack of trust in formal financial services is perceived as the most critical socio-cultural barrier. This is evident from its highest proportion of first-place rankings (28.6%) and a substantial concentration of responses in the fifth position (28%). This polarized ranking pattern suggests that while many rural women consider distrust of financial institutions to be the foremost barrier, others perceive it

as a background issue. Low trust in formal financial systems is a common challenge in rural areas, often stemming from past negative experiences, low financial literacy, fear of bank charges, or perceived institutional inefficiencies (Demirgüç-Kunt *et al.*, 2022; Adeola and Evans, 2020). Research in sub-Saharan Africa also confirms that distrust significantly reduces women's likelihood of using formal credit and savings services (Klapper and Singer, 2021; Osabuohien *et al.*, 2020).

The next major socio-cultural barrier, based on ranking distribution, is spouse disapproval, which appears prominently in the first ranking (26.4%). This shows that male partners' restrictions or lack of support significantly limit women's engagement with financial services. Studies consistently highlight that patriarchal household structures in rural African communities give men the dominant role in financial decision-making, which can restrict women's autonomy in opening accounts, applying for loans, or participating in savings groups (UN Women, 2021; Okoye and Eze, 2023). Spousal disapproval has been particularly linked to socio-cultural norms that discourage women from independent financial management.

Another important barrier is the belief that women should have little or no control over financial resources, which records the highest share of second-place rankings (33.5%) and a strong presence in the third-ranking position (28.6%). This indicates that gendered beliefs about financial control remain strongly rooted in the culture of the study area, limiting women's agency and participation in formal financial activities. Previous studies have shown that deeply ingrained gender norms often dictate the

extent to which women can participate in economic decision-making, ultimately affecting their ability to benefit from financial inclusion initiatives (Atakora *et al.*, 2021; Ejemeyovwi and Osabuohien, 2019).

Gender restrictions also constitute an important socio-cultural barrier, with its rankings spread across first (19.2%), second (22%), and third positions (24.7%). This pattern suggests that formal and informal gender-based limitations continue to constrain rural women from accessing financial services. Gender restrictions may occur through community norms, land ownership rules, or limitations on women's mobility—factors commonly identified in financial inclusion literature as major determinants of gender gaps in financial access (World Bank, 2020; CGAP, 2023).

Lastly, cultural or religious beliefs were ranked least severe by respondents, with the highest proportion of respondents placing them in the fourth (35.7%) and fifth (26.9%) positions. This implies that while religious or cultural doctrines may influence attitudes toward finance, they are not perceived as immediate impediments relative to more direct social barriers such as spousal influence and gender norms. Nonetheless, literature shows that cultural practices and religious orientations can still subtly shape women's financial behaviour and risk perception (Nwosu and Okafor, 2019; OECD, 2023).

The Garrett ranking results indicate that distrust in financial institutions, spousal disapproval, and entrenched gender norms constitute the most significant socio-cultural barriers affecting rural women's access to financial services in Edo North.

These findings corroborate existing studies emphasizing the pervasive influence of socio-cultural dynamics on women's financial inclusion in developing economies. Addressing these barriers requires targeted interventions aimed at promoting trust-building mechanisms, engaging men in financial inclusion programmes, and challenging restrictive gender norms through community-level sensitization

Table 4.6.1: Barriers Affecting Access to Financial Services Among Rural Women

Structural Barrier	1	2	3	4	5
1. Lack of collateral	29.7	34.1	29.1	4.9	2.2
2. Lack of necessary documents	18.1	34.1	26.9	15.9	4.9
3. Lack of infrastructure	3.3	3.3	19.8	34.6	39
4. Digital illiteracy	9.9	7.7	13.2	31.9	37.4
5. Irregular income	42.3	19.2	10.4	12.6	15.4
Institutional Barrier	1	2	3	4	5
1. High interest rate on loans	26.9	23.1	29.7	15.4	4.9
2. Complex loan application process	16.5	25.8	22.5	19.2	15.9
3. Distance to nearest bank	38.5	18.7	14.3	15.9	12.6
4. Lack of Financial Education	6.6	4.9	18.7	30.2	39.6
5. Discrimination or poor treatment	13.7	28	13.7	16.5	28
Socio-economic Barrier	1	2	3	4	5
1. Gender restriction	19.2	22	24.7	13.7	20.3
2. Spouse disapproval	26.4	18.7	18.1	18.1	18.7
3. Belief that women that women should have little or control over finance	22	33.5	28.6	9.9	6
4. Lack of trust in formal financial services	28.6	9.3	12.1	22	28
5. Cultural or religious beliefs	6	15.4	15.9	35.7	26.9

Source: Field Survey, 2025

4.7 Hypothesis Testing

H₀₁: There is no significant contribution between selected independent variables of rural household by gender and their level of welfare

The multiple regression model assessed the joint and individual contributions of selected socio-economic and financial inclusion variables to the welfare level of rural households. The results show that the model has a good explanatory power, with an R-squared value of 0.6247, which means that about 62.5% of the variability in welfare outcomes among rural women is explained by the four significant independent variables (age, awareness, access, and utilization). The Adjusted R-squared (0.5884) further confirms the model's adequacy after accounting for the number of predictors as it still explains 58.84% of the variation in the welfare outcome of respondents in the study area. The overall regression model is statistically significant ($F = 17.2026$, $p < 0.01$), demonstrating that the set of independent variables collectively influences welfare among rural households.

Analysis of the individual regression coefficients shows that only a few variables significantly contributed to welfare outcomes. Age had a positive and significant effect on welfare at the 5% level ($\beta = 0.106$, $p = 0.038$). At face value, this may be thought to imply that older respondents experience slightly higher welfare levels as age increases but a Positive coefficient actually indicates that as age increases, HFIAS (which is a metric for measuring household food insecurity) slightly increases, and as HFIAS increases, food security and welfare actually decrease, this suggests that older

women may experience slightly higher food insecurity. Age may reflect household responsibilities or vulnerability. Older women might face more dependents or limited income sources, slightly reducing food security. Nonetheless, age remains a significant demographic factor affecting welfare (Etim, 2022; Balogun *et al.*, 2025).

Conversely, the Awareness Composite ($\beta = -0.8213$, $p = 0.002$), this negative coefficient indicates that higher awareness of financial services is associated with lower HFIAS which translates to better welfare (as prior explained with the age variable). Awareness empowers women to plan, save, and access financial tools that enhance household food security. This aligns with evidence that financial literacy is critical for converting inclusion into welfare improvements (Demirgüç-Kunt *et al.*, 2022; World Bank, 2022).

The access Composite ($\beta = -0.6944$, $p = 0.018$) shows a negative coefficient indicating that better access to financial services reduces HFIAS, thereby improving food security and welfare. Access allows rural women to translate financial knowledge into practical actions like savings, borrowing, or investing in livelihoods. Barriers to access limit this potential. Supporting literature highlights access as a key determinant of positive welfare outcomes (Suri and Jack, 2016; Babajide *et al.*, 2020).

The utilization Composite ($\beta = -0.4160$, $p = 0.001$) has a negative co-efficient showing that higher utilization of financial services reduces HFIAS, directly improving food security and by extension welfare. Utilization represents actual engagement with financial products like savings, mobile money, microloans, or

insurance which is the most direct mechanism improving welfare. Awareness and access matter, but utilization drives tangible benefits (Etim, 2022; Demirgüç-Kunt *et al.*, 2022). The awareness, access and utilization were all statistically significant predictors, with negative coefficients. This suggests that higher levels of awareness, access, and utilization of financial services were associated with lower insecurity level which is positive for the rural women.

Other variables such as gender, marital status, religion, education level, household size, main occupation, monthly income, structural barriers, institutional barriers, and socio-cultural factors did not significantly predict welfare individually ($p > 0.05$). This implies that these variables, when considered independently, do not exert a strong influence on welfare outcomes among rural households in the study area.

Given the significance of the overall model but the insignificance of gender as an independent predictor, the results partially support the null hypothesis. While the selected variables collectively influence welfare, gender alone does not have a statistically significant contribution to welfare levels among rural households in the study area. This finding aligns with prior studies emphasizing that welfare outcomes among rural populations are more strongly shaped by structural and financial inclusion factors than by gender differences (Tufts University, 2020; Ojo *et al.*, 2023).

Table 4.7: Contribution of selected independent variables to the welfare outcomes of respondents

Variable	Coefficient	Std. Error	t-value	p-value
Intercept	-15.11	12.1301	-1.2457	0.2148
Age	0.106	0.0506	2.0952	0.0378
Sex	4.7756	3.8802	1.2307	0.2203
Marital Status	-0.9949	0.7233	-1.3755	0.171
Household Head	-2.2155	1.2101	-1.8308	0.069
Religion	0.9082	0.9143	0.9933	0.3221
Educational Qualification	0.258	0.1617	1.5959	0.1125
Main Occupation	0.1846	0.3736	0.4941	0.6219
Household Size	0.1597	0.2795	0.5715	0.5685
Monthly Income	0	0	-1.0929	0.2761
Awareness Composite	-0.8213	0.265	-3.0987	0.0023
Access Composite	-0.6944	0.2891	-2.4018	0.0175
Utilization Composite	-0.416	0.1282	-3.2451	0.0014
Structural Composite	-1.1841	1.2243	-0.9671	0.335
Institutional Composite	-0.2109	0.9768	-0.2159	0.8294
SS Composite	2.9698	1.8395	1.6145	0.1085
R-squared		0.6247		
Adjusted R-squared		0.5884		
F-statistic		17.2026		
Model p-value		0		

Source: Field Survey, 2025

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study was aimed at examining the welfare outcomes of financial inclusion on rural households in Edo, North Agricultural Zone, Edo State, Nigeria. The specific objectives were to; describe the socio-economic characteristics of respondents in the study area, examine respondents' extent of awareness on financial services in the study area, examine how accessible these financial services are by respondents in the study area, examine the extent of usage of these financial services by respondents in this area of study, assess the level of welfare of respondents in the study area, identify the structural, institutional and socio-cultural barriers affecting respondents from accessing financial services in the study area.

A Three-stage sampling procedure was employed to obtain 180 households for the study. The study utilized questionnaire and field survey to obtain primary data. The data obtained from the questionnaire and field survey were analyzed using frequency count, percentage, mean, standard deviation, Garrett's ranking and tables. The hypothesis was tested using multiple linear regression analysis.

Results from the descriptive statistics show that the mean age, household size, years of formal education and monthly income was 46 years, 5 persons, 6.9 years and

₦64,298.83 respectively. 62.1% of the respondents were highly aware of financial services, accessibility to financial services varied 55% of the respondents having high level of access to financial services, while 50% of the respondents frequently used financial services. The most severe structural barrier was identified to be Irregular income, the most severe institutional barrier was distance to the nearest financial institution, and the most severe socio-cultural barrier was lack of trust in financial institutions. Welfare outcome (measured using HFIA) showed that a 46.2% of the respondents were severely food insecure, 35.7% were moderately food insecure, 8.8% were mildly food secure and about 9.3% were food secure. The results of the multiple linear regression results showed that variable age ($\beta = 0.106$, $p = 0.038$), had a positive relationship with welfare outcomes of rural women in the study area while the variables awareness ($\beta = -0.8213$, $p = 0.002$), access ($\beta = -0.6944$, $p = 0.018$) and utilization ($\beta = -0.4160$, $p = 0.001$) had a negative relationship, all four of these variables had statistically significant relationship with welfare outcomes of rural household in Edo North Agricultural zone, Edo State.

5.2 Conclusion

1. The awareness of financial services in Edo North is fairly high but this has not been properly translated to financial inclusion.
2. The accessibility of financial services is moderate in the study area.
3. The utilization of financial services was average in the study area.

4. The welfare outcome (HFIA) level indicated that most of the respondents were food insecure.
5. The most severe structural, institutional and socio-cultural barriers were; irregular income, distance to the nearest financial institution and gender lack of trust in institutions respectively.
6. The variables age, awareness, access and utilization had a significant relationship with welfare outcome (HFIA) of rural women in the study area.

5.3 Recommendations

1. Government agencies, NGOs, and financial institutions should intensify targeted financial literacy campaigns tailored specifically to rural women, using local languages and community-based methods (e.g., market outreach, village meetings, women cooperative groups, local radio). Training should focus on how to convert awareness into practical financial behavior such as opening accounts, saving regularly, using digital platforms, and participating in credit schemes.
2. Stakeholders should expand community-based mobile and agency banking, as well as village savings groups, to reduce distance barriers. Microfinance banks should provide flexible, low-deposit products tailored to seasonal and irregular earners, while household-level financial education involving both spouses

should be promoted to reduce spousal disapproval and encourage shared support for women's financial participation.

3. Policymakers and financial institutions should provide affordable micro-credit with lower interest rates and fees, supported by government or NGO-backed loan guarantees, while expanding low-cost digital transactions and zero-charge USSD services to reduce financial barriers for rural women.
4. Interventions should adopt a holistic approach that combines financial inclusion initiatives with food security programmes, such as agricultural support services, input subsidies, women-focused extension services, and livelihood diversification training. Strengthening social protection programmes (conditional cash transfers, rural nutrition schemes) will further help vulnerable households achieve stable welfare gains.
5. Stakeholders should promote income-diversification programmes for rural women, expand rural financial touchpoints such as ATMs, agent banking centers, and mobile money kiosks to reduce distance challenges, and strengthen trust in financial institutions through improved transparency, better customer service, and effective complaint-resolution systems.
6. Partnerships between government, NGO's, local groups and Financial institutions should be formed to take collaborative efforts in addressing structural and institutional barriers to increase access and utilization of financial services and ensure that it translates to better welfare for rural women.

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RESEARCH QUESTIONNAIRE
DEPARTMENT OF AGRICULTURAL ECONOMICS AND EXTENSION
SERVICES, FACULTY OF AGRICULTURE, UNIVERSITY OF BENIN,
BENIN CITY, NIGERIA

Dear Respondent,

I am a final year student of the Department named above. I am conducting research on: **“FINANCIAL INCLUSION AND WELFARE UOTCOMES AMONG RURAL WOMAN IN EDO NORTH AGRICULTURAL ZONE, EDO STATE, NIGERIA”**. I solicit your cooperation in kindly answering the following questions as correctly as possible, as your honest and sincere response will aid the validity of this study. This research is strictly for academic purposes only and will be treated confidentially.

Thanks for your anticipated cooperation.

FRANCIS OSHOKHAI JOSHUA

Researcher

INSTRUCTION: Please, tick (✓) one answer and write where applicable.

SECTION A: SOCIOECONOMIC CHARACTERISTICS

1. Age: _____ years
2. Sex: Female (), Male ().
3. Marital status: Single (), Married (), Divorced (), Widowed ().
4. Are you the household head: Yes (), No ().
5. Religion: Christianity (), Islam (), Tradition ().
6. Years of formal education: _____ Years
7. Main occupation: Farming (), Trading (), Artisan (), Civil service (), Others ()
8. Secondary occupation: Yes (), No ().
9. Household size: _____ Persons
10. Monthly income or allowance: _____ Naira

SECTION B: AWARENESS OF FINANCIAL SERVICES

11. What is your level of awareness of financial services?

S/N	Sub-Question	No	Yes	If Yes, then how aware are you?		
				Highly aware	Moderately aware	Slightly aware
1	Financial services, insurance, etc.)?					
2	Savings account and the processes involved in opening and operating one?					
3	Bank loan and how it can be obtained?					
4	Mobile banking platforms (e.g., OPAY, PAGA) and how they work or are used?					
5	Interest rate incentives with money deposited in commercial banks?					
6	Transaction cost involved in the use of formal financial services?					
7	Government (e.g., EdoJobs) and NGO programs supporting and enhancing financial inclusion in your area?					
8	Special packages that Micro-Finance Banks offer to women like subsidized loans and reduced interest rates?					
9	Insurance?					

SECTION C: ACCESS TO FINANCIAL SERVICES

12. What is your level of accessibility to financial services?

SECTION D: USAGE OF FINANCIAL SERVICES

13. What is your level of usage of financial services?

S/N	Sub-question	No	Yes	If Yes, then how much do you use are these services?			
				Always	Often	Sometimes	Rarely
1	Bank account (savings or current)?						
2	Account to receive payment and pay bills?						
3	Use an ATM card for withdrawals?						
4	Use of ATM for transfers						
5	Use of ATM for bill payments						
6	Mobile money services (like Palmpay and Moniepoint) to make transfers, pay bills and make payments?						
7	Commercial bank, Micro-Finance Bank or mobile money service to secure loans?						
8	Insurance services?						

SECTION E: WELFARE OUTCOME OF FINANCIAL SERVICES

14. What is your level of food security (HFIAS)?

S/N	Sub-questions	No	Yes	If Yes, then by how much frequency?		
				Rarely	Sometimes	Often
1	In the past 30 days, did you worry that your household would not have enough food?					
2	In the past 30 days, were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?					
3	In the past 30 days, did you or any household member have to eat a limited variety of foods due to a lack of resources?					
4	In the past 30 days, did you or any household member have to eat some foods that you really did not want to eat because of a lack of					

	resources to obtain other types of food?					
5	In the past 30 days, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?					
6	In the past 30 days, did you or any household member have to eat fewer meals in a day because there was not enough food?					
7	In the past 30 days, was there ever no food to eat of any kind in your household because of lack of resources to get food?					
8	In the past 30 days, did you or any household member go to sleep at night hungry because there was not enough food?					
9	In the past 30 days, did you or any household member go a whole day and night without eating anything because there was not enough food?					

SECTION E: BARRIERS IN ACCESSING FINANCIAL SERVICES

This section is designed to identify and rank the institutional, structural and socio-cultural barriers preventing women in rural households from accessing financial services. You are requested to rank the barriers in each group from 1 (most severe) to least severe based on your person experience (Do not assign the same rank to more than one option in the same group).

(a) Ranking structural barriers

S/N	Structural Barriers	Your Rank
1	Lack of collateral or guarantor	
2	Lack of necessary documents	
3	Lack of infrastructure (example no banks, poor road networks)	
4	Digital illiteracy, poor mobile network	
5	Irregular income that limits savings and loan repayment	

(b) Ranking Institutional Barriers

S/N	Institutional Barriers	Your Rank
1	High interest rate on loans	
2	Complex or lengthy loan application process	
3	Distance to nearest bank or financial agent	
4	Lack of financial education or support from institutions	
5	Discrimination or poor treatment by bank staff	

(c) Ranking Socio-cultural Barriers

S/N	Socio-cultural Barriers	Your Rank
1	Gender restrictions or inequality in financial matters	
2	Spousal disapproval of the use of financial services	
3	Belief that women should have little or no access to and control over finance	
4	Lack of trust in formal financial institutions	
5	Cultural or religious beliefs	