# Assessment of the Impact of Zimbabwe's Financial Sector Reforms on the Growth of the Agriculture Credit Market

**Authur Masuka[1*], Tanyaradzwa Rukasha[2], Simbarashe Tatsvarei[3]**

**[1]757 Sumben, Mt Pleasant Harare, Zimbabwe**

**[2]Department of Agribusiness and Management, Marondera University of Agricultural Science and Technology, P.O. Box 35, Marondera, Zimbabwe**

**[3]Department of Agricultural Business Development and Economics, University of Zimbabwe, P.O. Box MP167, Mt Pleasant, Harare, Zimbabwe**

***Corresponding Author**

**DOI: https://dx.doi.org/10.47772/IJRISS.2025.907000407**

**Received: 16 July 2025; Accepted: 22 July 2025; Published: 20 August 2025**

## ABSTRACT

This study examines the impact of Zimbabwe's financial sector reforms on the growth of the agricultural credit market, with a focus on smallholder farmers' access to credit, loan sizes, and the choice of credit sources. Using data from 445 farmers in Mashonaland East, the study employs Propensity Score Matching, Multinomial Logit, and Ordered Logit models to estimate the causal effects of post-2009 reforms. Results show that exposure to reforms significantly increased access to credit and loan amounts, with training and financial literacy emerging as key enablers of formal credit use. Reform awareness and income levels were also positively associated with improved perceptions of financial access. The findings highlight that while financial reforms have expanded rural credit pathways, disparities persist across gender, education, and geography. The study recommends scaling up inclusive financial products, strengthening digital and financial literacy programs, and enhancing outreach through mobile and microfinance platforms. It concludes that financial sector reforms have positively influenced the agricultural credit market, though deeper institutional support and targeted delivery mechanisms are essential to ensure equitable and sustainable access. This research contributes to policy discourse on rural financial inclusion and offers actionable insights for enhancing agricultural finance in Zimbabwe's evolving economic landscape.

**Keywords:** financial sector reforms, agricultural credit market, smallholder farmers, rural financial inclusion, Zimbabwe agriculture

## INTRODUCTION

Agriculture remains a cornerstone of Zimbabwe's economy, contributing significantly to employment, food security, and foreign exchange earnings. As of 2023, the sector accounted for approximately 15% of GDP, employed nearly a quarter of the formal workforce, and generated 23% of export revenues (FAO, 2024). Despite the country's considerable agricultural potential, widespread constraints, chief among them limited access to credit, have long hindered sustainable growth (Scoones, 2025). Agricultural credit enables farmers to invest in essential inputs, advanced technology, and necessary infrastructure. Yet, smallholder farmers, who dominate Zimbabwe's agrarian landscape, continue to face systemic barriers to accessing affordable and appropriate financial services (Chamba & Tarirai, 2024).

Globally, financial sector reforms have been crucial in advancing agricultural modernization and enhancing rural livelihoods. Countries like Kenya, with its mobile banking, and China, with its interest rate liberalization, have demonstrated how inclusive reforms can expand access to credit for underserved populations (Hasan, Dowla, & Tarannum, 2024). These reforms primarily involved regulatory restructuring, market liberalization, digitization,

and institutional development to enhance stability, efficiency, and accessibility (Sannou, Schneider, Walz, & Guenther, 2025).

Historically, agricultural financing in Zimbabwe has faced numerous challenges. Before independence in 1980, financing was primarily directed towards white commercial farmers through institutions such as the Land and Agricultural Bank of Southern Rhodesia (LABSR) (Chundu, 2020). Following independence, efforts were made to extend credit to smallholder farmers through institutions such as the Agricultural Finance Corporation (AFC), but these were often hindered by high non-repayment rates and limited access to affordable credit (Chigunhah, Svotwa, Govere, & Chikazhe, 2020).

Between 2000 and 2008, Zimbabwe experienced hyperinflation and financial sector collapse, which hindered efforts to finance smallholder agriculture (Chamba & Tarirai, 2024). In 2009, in response to the economic crisis, the country implemented financial sector reforms, including the liberalization of interest rates, promotion of microfinance, expansion of digital financial services, introduction of credit registries, and the development of the National Financial Inclusion Strategy. The adoption of Zimbabwe Gold (ZiG) as the official currency in 2024 aimed to restore further macroeconomic stability (Nyathi, Nkala, & Mlobane, 2024).

Despite these reforms, the agricultural credit market remains underdeveloped. Farmers continue to face barriers, including high lending rates, a lack of collateral, inadequate financial literacy, and underdeveloped rural banking infrastructure. Land tenure security issues further inhibit land use as collateral, excluding many from formal financial services (Scoones, 2025). While mobile banking and microfinance have improved financial access in urban and peri-urban areas, their reach in rural farming communities remains uneven. Evidence of increased lending volumes in agriculture is promising; however, it remains unclear whether this growth reflects a genuine structural transformation or remains skewed toward a minority of better-resourced farmers (Chikwira, 2024).

This study addresses a critical gap in the literature by empirically assessing how post-2009 financial sector reforms in Zimbabwe, which includes the expansion of microfinance, digital financial services, the establishment of credit registries and regulatory incentives, have impacted agricultural credit outcomes. The study examines whether the reforms implemented between 2009 and 2024 (during the post-dollarization stabilization and financial sector reform era) have affected smallholder farmers' access to credit, the size and terms of the loans received, and their credit sources. Focusing on smallholder farmers in Mashonaland East province, the study offers timely insights into the efficacy of financial reforms and their alignment with rural development goals. In doing so, it aims to inform inclusive policy design, support more equitable financial systems, and promote agricultural productivity and sustainability in Zimbabwe’s evolving economic landscape.

**Overview of key post-2009 financial sector reforms in Zimbabwe**

Following the economic collapse and hyperinflation of the 2000s, Zimbabwe adopted a multi-currency regime in 2009, marking the beginning of a new era of financial sector reforms. The reforms were designed to restore confidence, expand financial access, and stimulate agricultural productivity through improved credit delivery mechanisms. This study focuses on four pivotal reforms introduced after 2009, selected for their direct relevance to rural financial inclusion and their measurable impact on the agricultural credit market. These include microfinance expansion, digital financial services, improvements to credit assessment and collateral systems, and regulatory incentives for rural financial access.

The expansion of microfinance institutions (MFIs) was one of the earliest and most targeted interventions, formally taking shape with the enactment of the Microfinance Act in 2013, following policy shifts that began in 2010. This reform aimed to address the exclusion of smallholder farmers and informal sector actors from formal banking services. The establishment of the Zimbabwe Association of Microfinance Institutions (ZAMFI) and the licensing of over 150 MFIs created a decentralised credit infrastructure tailored to low-income and rural populations. By 2024, the financial sector in Zimbabwe had 277 registered MFIs (RBZ, 2025). While MFIs have improved outreach, challenges remain in terms of high interest rates, limited capitalisation, and inconsistent regulatory compliance (Maburutse, Chidhumo, Marada, & Chaurura, 2025).

In parallel, Zimbabwe began introducing digital financial services in 2011 with EcoCash by Econet, followed by four more (OneMoney, Telecash, InnBucks, and Mukuru) since then. This innovation revolutionized financial

transactions by enabling millions of previously unbanked Zimbabweans, particularly in rural areas, to send, receive, and store money using their mobile phones. By 2025, mobile money accounted for over 80% of electronic payments (GSMA, 2025). While mobile platforms have improved convenience and outreach, their integration with formal agricultural lending products remains limited, and infrastructure disparities continue to exclude remote farming communities (Nyathi, Nkala, & Mlobane, 2024).

Credit assessment and collateral systems reforms began in 2014, with the introduction of the Credit Registry in 2017 and the Movable Property Security Interest Act (RBZ, 2025). As of 31 December 2024, credit reporting institutions held 23.51 million searchable records, while the Collateral Registry recorded 2,481 active registrations valued at USD1.57 billion, with microfinance institutions and banks accounting for 1,185 and 1,135 entries, respectively (RBZ, 2025). These innovations aimed to enhance borrower profiling and reduce reliance on immovable property, thereby facilitating easier access to finance for asset-poor farmers (Scoones, 2025). Despite these advances, credit history coverage remains thin, and cultural barriers limit the acceptance of movable collateral by financial institutions.

Finally, regulatory incentives to increase rural financial access emerged through the Reserve Bank of Zimbabwe's Financial Inclusion Strategy (2016–2020) (RBZ, 2025). Now in its second phase (2022-2026), the strategy introduced agent banking frameworks and tiered Know Your Customer (KYC) guidelines. As of December 2024, the financial sector had 3.37 million low-cost bank accounts (RBZ, 2025). These measures were designed to lower entry barriers for rural clients and decentralize banking services (Chikwira, 2024). However, the uptake of the measures has been uneven, and the mismatch between policy intent and practical implementation has limited their effectiveness in expanding rural agricultural lending.

These four reforms are central to this study because they represent the most significant and measurable interventions aimed at transforming Zimbabwe's rural credit ecosystem post-dollarization. They represent the government's most significant post-2009 efforts to rebuild the sector and address long-standing constraints facing smallholder farmers. Their combined impact provides a comprehensive lens for evaluating the effectiveness of financial sector reforms in catalyzing the growth of the agricultural credit market.

## LITERATURE REVIEW

This literature review examines theoretical and empirical perspectives on the relationship between financial sector reforms and the expansion of the agricultural credit market, with a particular focus on smallholder farmers in Zimbabwe. It examines how reforms implemented since 2009—including the expansion of microfinance, digital financial services, improvements to credit assessment and collateral systems, and regulatory incentives for rural financial access—have influenced credit access, loan size, and the selection of credit sources among rural farmers.

### Theoretical Framework

The theoretical framework for this study draws on theories of financial liberalization and access to finance to explain the mechanisms through which Zimbabwe's financial sector reforms may have influenced the growth of the agricultural credit market. The financial liberalization theory presented in Figure 1 below was propounded by McKinnon and Shaw in 1973 and has been widely used to analyse the relationship between financial sector reforms and economic development (Mugamu, 2020). The theory posits that removing government-imposed restrictions on financial markets, such as interest rate controls, credit quotas, and licensing barriers, enhances market efficiency, deepens financial intermediation, and promotes economic growth.

In the context of Zimbabwe, the post-2009 reform period marked a shift from a heavily constrained financial system characterized by hyperinflation and banking sector collapse to a more liberalized environment with the introduction of market-based policies. These included the promotion of microfinance institutions, the expansion of mobile financial services, the deregulation of interest rates, and legal reforms such as the Movable Property Security Interest Act of 2017, which broadened acceptable forms of collateral (Chikwira, 2024). Financial liberalization theory provides a macroeconomic rationale for such reforms, suggesting that liberalized financial systems are more capable of mobilizing savings, allocating resources efficiently, and facilitating access to credit for productive sectors, including agriculture.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue IIIS July 2025 | Special Issue on Education

Complementing the Financial liberalization theory is the access to finance theory, which focuses on the structural and behavioural barriers that limit individuals' and enterprises' ability to access and effectively use financial services (Demirguc-Kunt, Klapper, & Singer, 2017). This theory emphasizes the importance of the availability, affordability, and usability of financial products in expanding financial inclusion. In Zimbabwe's rural agricultural context, the theory of access to finance is particularly relevant, given the historical exclusion of smallholder farmers from formal credit due to collateral constraints, high transaction costs, and limited financial literacy. Recent financial sector reforms aimed at increasing outreach through digital platforms, promoting inclusive financial products, and integrating financial education and group-based lending models are consistent with the principles of this theory. The framework thus supports the idea that, beyond macro-level liberalization, micro-level enablers —such as awareness, education, income, and institutional trust —are equally critical in determining whether farmers actually access and benefit from expanded financial opportunities.

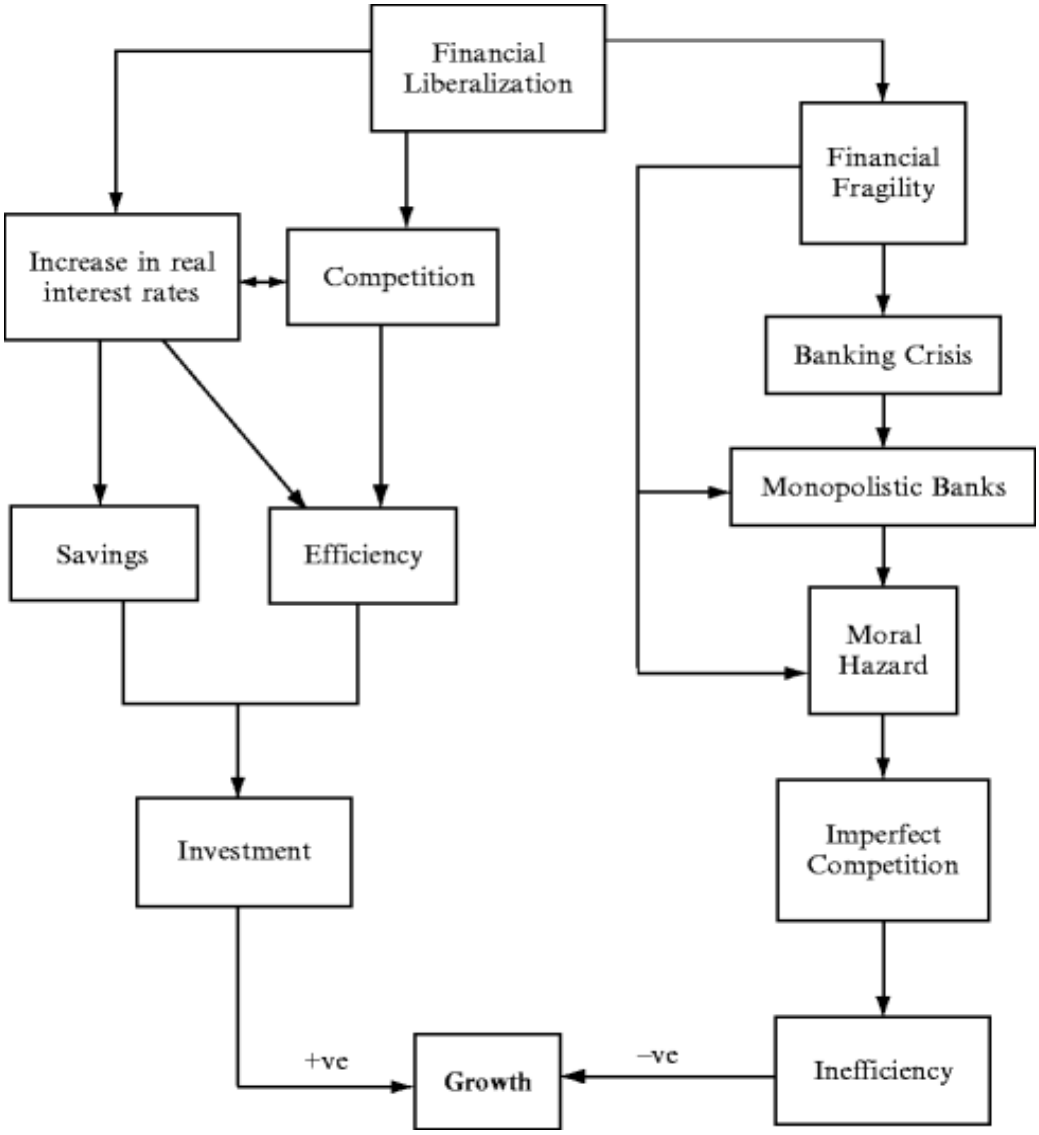


Figure 1: The Financial Liberalization Theoretical Framework. Source: (Scholtens & Wensveen, 2003)

Together, these theories offer a multifaceted understanding of the relationship between financial sector reforms and the expansion of Zimbabwe's agricultural credit market. Financial liberalization establishes the enabling environment for increased credit supply. At the same time, the access to finance theory explains the demand-side and intermediary-level factors that shape how smallholder farmers respond to and utilize financial services. This dual-theoretical approach is essential for interpreting the study's econometric findings, which assess not only the structural effects of reforms but also how these reforms influence farmers' behaviours, perceptions, and credit choices. The integration of these perspectives aligns with recent empirical literature that highlights the importance of sequencing structural reforms alongside inclusive financial delivery mechanisms to ensure equitable growth in rural finance markets (Mapanje, 2023). By synthesizing both theories, this framework offers

a comprehensive lens through which to evaluate the effectiveness and inclusivity of financial sector reforms in promoting agricultural credit market development in Zimbabwe.

### Empirical Literature Review

Recent empirical literature provides valuable insights into how financial sector reforms influence the development of agricultural credit markets, particularly in sub-Saharan Africa. Several studies have evaluated the impact of financial liberalization and financial inclusion measures on smallholder farmers' access to credit, the structure of lending markets, and the effectiveness of policy interventions.

In Nigeria, (Babajide, Ishola, Adekunle, Achugamonu, & Bosede, 2021) used a Propensity Score Matching approach to demonstrate that financial literacy programs and mobile money adoption significantly increased credit access and improved loan utilization among rural households. Similarly, (Bogale, Reta, Ayalew, & Mehare, 2022) employed logit models in Ethiopia to assess how awareness of financial reforms and participation in digital finance initiatives influenced farmers' perceptions of access to finance, showing that exposure to reform-related information had a significant positive effect on perceived credit availability and engagement with formal lenders.

In Ghana, (Alhassan, Musah Abu, & Nkegbe, 2020) found that training in financial management and the availability of microfinance services were associated with increased use of formal credit channels among smallholder farmers. Their multinomial logit analysis revealed that factors such as financial education, mobile wallet ownership, and group membership significantly influenced farmers' choices between formal, informal, and no credit sources. These findings parallel the conditions in Zimbabwe's post-reform landscape, where efforts have included the promotion of microfinance institutions, regulatory support for digital platforms, and legal reforms such as the Movable Property Security Interest Act of 2017 (Nyathi, Nkala, & Mlobane, 2024).

Although Zimbabwe-specific literature remains limited, emerging studies suggest similar dynamics. (Chamba & Tarirai, 2024) report that reform-driven expansion of mobile money and rural microfinance outlets has improved access to credit for smallholder farmers in Zimbabwe. Additionally, limited research has disaggregated the effects of reforms on specific credit access outcomes such as loan size, credit source selection, or perceived improvements in access among smallholder farmers. This study addresses these gaps by providing a comprehensive and context-specific analysis of Zimbabwe's post-2009 financial sector reforms and their impact on agricultural credit.

By employing a mixed econometric approach that combines Propensity Score Matching, multinomial logit, and ordered logit models, this study captures both the causal effects of reforms and the behavioural and perceptual dimensions of credit market participation. Furthermore, it contributes empirical evidence from a Zimbabwean rural setting, where data remains scarce. It offers insights into how different reforms interact to influence the depth, quality, and inclusivity of agricultural credit. This approach enables a more nuanced understanding of how institutional, demographic, and behavioural factors jointly shape the evolution of the agricultural credit market in response to policy change.

## METHODOLOGY

### Data

The study was conducted in nine rural districts of Mashonaland East province in Zimbabwe. A structured questionnaire was developed to collect quantitative data for the research. The Research Ethics Committee of the Agribusiness and Management Department at Marondera University of Agricultural Sciences and Technology (MUAST) approved the structured questionnaire used in this study (Approval Number: MUAST 03/24) in accordance with the MUAST Research Ethics Policy (2020). The primary data sources for this study were smallholder farming households. Data were collected from a sample of 445 households through face-to-face interviews using a structured questionnaire—the first part of the questionnaire aimed to identify the socio-demographic characteristics of the respondents' households. The second part included questions on several broad categories: agricultural status, financial services and products, financial literacy, and household income

estimation. The survey questions were adapted from established instruments, including previous household surveys conducted in Zimbabwe and guidelines from the World Bank's Global Findex framework (World Bank, 2024).

The sample unit consisted of household heads who were farmers aged 18 or older and engaged either in the official financial market or not. The sample size for the household survey was calculated using a derivative of Yamane's formula for calculating sample size when population size is finite (Sorzano, 2022). Given that the total number of households in the nine rural districts of Mashonaland East based on the 2022 population census is 392,724 (ZIMSTAT, 2022), aiming for a 95% confidence level and a 5% margin of error, and assuming the attribute proportion is 0.5, the sample size for the household survey was 445. The sample sizes per district were distributed proportionally. The strategy for sampling respondents involved random selection of villages within each ward, followed by systematic sampling of five participants per village. Leaders from the village assisted in selecting farming households to be respondents. The study primarily relied on the Lot Quality Assurance Sampling (LQAS) technique (Kamau, Majiwa, Otieno, & Kabuage, 2024). Using the LQAS, 24 wards were selected to represent the various agro-ecological zones in the province for the study.

**Methods of Analysis**

This study applies quantitative methods, including Propensity Score Matching, Multinomial Logit, and Ordered Logit models, to assess the impact of post-2009 financial sector reforms on smallholder farmers' access to agricultural credit, loan terms, and credit source choices. It uses primary (access to credit, loan size, and credit source type) and secondary (perceived improvement in financial access, training participation, and agricultural productivity) indicators to measure the growth of the agricultural credit market. These indicators capture both supply and impact dimensions of agricultural credit market growth.

**Model Specification**

This study adopts a multi-model econometric framework to evaluate the impact of financial sector reforms on the agricultural credit market. Propensity Score Matching estimates causal effects on credit access, the Multinomial Logit model examines credit source choice, and the Ordered Logit model captures farmers' perceived improvements in credit access following the post-2009 reform period.

**Propensity Score Matching (PSM)**

The PSM is used to address selection bias and estimate the Average Treatment Effect on the Treated (ATT) by comparing outcomes between farmers who accessed reformed financial services (the treatment group) and those who did not (the control group). The probability of treatment is estimated using logistic regression:

$$P(T_i = 1|X_i) = \frac{e^{x_i \beta}}{1+e^{x_i \beta}} \quad (1)$$

Where,

- $T_i$ is a binary variable indicating treatment status.
- $X_i$ is a vector of observed covariates, including age, education level, land size, livestock ownership, financial literacy, distance to the nearest financial institution, mobile phone ownership, and awareness of reforms.
- $\beta$ is a vector of coefficients estimating the effect of each covariate on the probability of treatment.
- $P(T_i = 1|X_i)$ is propensity score, i.e., the estimated probability that individual $i$ received the treatment.

The ATT is then calculated as:

$$ATT = E[Y_i(1) - Y_i(0)|T_i = 1] \quad (2)$$

Where $Y_i(1)$ and $Y_i(0)$ represent the outcomes for treated and matched untreated individuals, respectively. Matching is performed using the nearest-neighbour and kernel-based methods, and balance diagnostics are conducted to verify the comparability of groups (Caliendo & Kopeinig, 2020).

**Multinomial Logit Model**

A Multinomial Logit model is estimated to analyze the determinants of credit source selection. The dependent variable $Y_i$ is categorical, representing the primary source of agricultural finance accessed by the farmer: 0 = no credit, 1 = informal sources (e.g., savings groups), 2 = contract farming and other private sector companies, and 3 = formal financial sources (e.g., microfinance, banks and mobile platforms). $\beta_j$ are the category-specific coefficient vectors, and the base category (no credit) has $\beta_0$=0. The model is specified as:

$$P(Y_i = j) = \frac{e^{x_i \beta_j}}{\sum_{k=0}^{3} e^{x_i \beta_j}}, j = 1,2,3 \quad (3)$$

Covariates include household income, education, farm size, mobile money use, gender, group membership, and awareness of reforms. This model allows the estimation of the relative probability of selecting a particular credit source (Greene, 2021).

**Ordered Logit Model**

An Ordered Logit model is used to evaluate farmers' perceived improvement in access to finance as a result of financial sector reforms. The dependent variable is ordinal, with values 1 indicating no improvement, 2 indicating some improvement, and 3 indicating significant improvement. The model assumes a latent variable $Y_i^*$ defined as:

$$Y_i^* = X_i \beta + \varepsilon_i \quad (4)$$

$$Y_i = \begin{cases} 1 \text{ if } Y_i^* \leq \mu_1 \\ 2 \text{ if } \mu_1 < Y_i^* \leq \mu_2 \\ 3 \text{ if } Y_i^* > \mu_2 \end{cases} \quad (5)$$

Where $\mu_1$ and $\mu_2$ are threshold parameters, and $\varepsilon_i$ follows a logistic distribution. Explanatory variables include reform awareness, frequency of banking use, household income, and group participation (Long & Freese, 2021).

**Estimation Procedure and Software**

All models are estimated using Stata 18. PSM results are evaluated using balancing tests and standard support checks. Multinomial and ordered logit models are tested for multicollinearity using the Variance Inflation Factor (VIF), and goodness-of-fit is assessed using likelihood ratio and Wald tests. Marginal effects are computed to facilitate the interpretation of probabilities and outcomes in policy-relevant terms.

**Empirical Results and Discussion**

This study examines the impact of post-2009 financial sector reforms on smallholder farmers' access to agricultural credit, loan terms, and credit source choices. Using data from 445 farmers in Mashonaland East, this study applies econometric models to analyze both the supply and impact dimensions of agricultural credit market growth based on indicators such as credit access, loan size, perceived financial access, training participation, and productivity.

**Econometric Results**

This study presents econometric results from Propensity Score Matching, Multinomial Logit, and Ordered Logit models to assess the impact of Zimbabwe's post-2009 financial sector reforms on smallholder farmers' access to credit, loan size, and credit source selection, which are key indicators of agricultural credit market growth.

**Propensity Score Matching (PSM)**

The study employed propensity score matching (PSM) to estimate the causal impact of financial sector reforms (treatment) on key outcomes of agricultural credit market growth, including access to credit, loan amount, and repayment period. It controls for observable differences between treated (exposed to reforms) and control (not

exposed to reforms) farmers to minimize selection bias and improve the validity of the estimated treatment effects. The results are shown in Table 1.

Table 1:Estimated impact of financial sector reforms on agricultural credit outcomes

| Outcome Variable | Treated Mean | Control Mean | ATT (Difference) | Std. Error |
|---|---|---|---|---|
| Access to any credit | 0.38 | 0.25 | 0.13 | 0.08 |
| Amount of credit (USD) | 1,100 | 730 | 370 | 180 |
| Repayment period (months) | 15.2 | 12.1 | 3.1 | 1.4 |

Source: Authors' analysis based on household survey data

The PSM results prove that Zimbabwe's post-2009 financial sector reforms have positively influenced smallholder farmers' access to credit. The average treatment effect on the treated (ATT) indicates that farmers exposed to reforms were 13% more likely to access credit than their counterparts (ATT = 0.13; SE = 0.08). This finding highlights the pivotal role of reforms, including the expansion of microfinance, digital finance, and regulatory incentives, in driving the growth of Zimbabwe's agricultural credit market. The reforms also had a notable impact on the size and terms of loans received. Treated farmers accessed an average of USD 1,100 in credit, compared to USD 730 for the control group, reflecting an increase in credit supply. Additionally, the average loan repayment period was extended by 3.1 months for treated farmers, suggesting improved loan conditions, possibly due to greater institutional flexibility or better alignment of financial products with farming cycles.

These findings align with similar empirical studies in sub-Saharan Africa. For instance, (Ozili, 2023) found that financial inclusion interventions in Nigeria significantly increased credit access and loan size among smallholder farmers. Likewise, (Ahmad, Green, & Jiang, 2020) reported a positive causal impact of financial reform awareness and mobile money use on credit uptake in Africa. These parallels reinforce the relevance of targeted financial reforms in transforming rural agricultural credit markets. The Zimbabwean context adds to this growing body of literature by demonstrating that even in a fragile post-crisis economy, structured financial sector reforms can yield measurable gains in agricultural finance.

**Multinomial Logit**

The study employed a multinomial logit model to analyze the factors influencing smallholder farmers' choice of credit source, distinguishing between formal, informal, and no credit access. The results are shown in Table 2 below:

Table 2: Estimates of the determinants of credit source choice among smallholder farmers post-reform

| Predictor | Non-formal vs No credit (RRR) | Formal vs No credit (RRR) |
|---|---|---|
| Age (40–49) | 7.06e+09 | 1.91 |
| Age (50–59) | 7.40e+07 | 5.92 |
| Age (60–69) | 5.34e–06 | 0.52 |
| Age (70+) | 2216.75 | 98.94 |
| Completed Primary Education | 1.56e–06 | 0.15 |
| Completed Secondary Education | 8.05e–13 | 0.23 |
| Financial Institution Distance | 0.79 | 0.94 |
| Mobile Money Wallet | 1.01 | 0.77 |
| Financial Literacy | 0.23 | 3.29 |
| Reform Awareness | 90.60 | 4.13 |
| Membership in Savings Group | 0.21 | 0.56 |
| HH Head Gender (Female) | 7.08e+09 | 2.08 |

RRR- Relative risk ratio

Source: Authors' compilation

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue IIIS July 2025 | Special Issue on Education

The multinomial logit model results provide critical insights into the influence of financial sector reforms on smallholder farmers' credit source choices and the broader growth of Zimbabwe's agricultural credit market. Reform awareness emerged as a significant predictor, with farmers who were aware of reforms being over four times more likely to access formal credit and over 90 times more likely to use informal credit sources than those who were unaware. This suggests that post-2009 reforms have broadened farmers' awareness and access to diversified financial services, contributing to the structural expansion of the agricultural credit market.

Financial literacy was another key determinant, increasing the likelihood of accessing formal credit (RRR = 3.29), which indicates that reforms aimed at building financial capabilities are translating into more informed credit decisions. Age was also influential, with farmers aged 50 and above showing higher odds of accessing formal credit, possibly reflecting accumulated social capital, experience, or trust among lenders. Additionally, female-headed households were more likely to use formal credit, signalling improved gender inclusion in post-reform credit access.

Overall, the findings highlight that Zimbabwe's financial reforms have stimulated the growth of the agricultural credit market by enhancing access, broadening the range of providers, and promoting inclusive participation. These results are consistent with recent studies by (Babajide, Ishola, Adekunle, Achugamonu, & Bosede, 2021) in Nigeria and (Bogale, Reta, Ayalew, & Mehare, 2022) in Ethiopia, where financial sector reforms, such as financial literacy and digital platforms, have been found to influence credit uptake and market expansion significantly.

**Ordered Logit Model Results**

The study employed an ordered logit model to assess how financial sector reforms influence smallholder farmers' perceptions of improved credit access, distinguishing between no improvement, some improvement, and significant improvement. Key predictors included awareness of reforms, financial literacy, training received, household income, and group membership. The results are shown in Table 3 below:

Table 3: Results on determinants of perceived improvement in credit access among smallholder farmers

| Predictor | Coefficient | Std. Error | Odds Ratio | z-value | p-value |
|---|---|---|---|---|---|
| Reform Awareness | 1.15 | 0.82 | 3.16 | 1.40 | 0.162 |
| Financial Literacy | 0.93 | 0.67 | 2.53 | 1.39 | 0.163 |
| Training Received | 1.47 | 0.74 | 4.34 | 1.99 | 0.047 |
| Household Income (US$/year) | 0.02 | 0.01 | 1.02 | 2.00 | 0.045 |
| Group Membership | 0.61 | 0.59 | 1.84 | 1.03 | 0.302 |
| Female Household Head | -0.25 | 0.57 | 0.78 | -0.44 | 0.659 |

Source: Authors' compilation

The ordered logit model results provide valuable insights into how Zimbabwe's financial sector reforms have contributed to the perceived growth of the agricultural credit market. Training received and household income emerged as statistically significant predictors of improved credit access perceptions, indicating that reforms have not only expanded access to financial services but also strengthened farmers' capacity to utilize them effectively. Farmers who received training were over four times more likely to report improved access (OR = 4.34, p = 0.047), suggesting that capacity-building is a key mechanism through which reforms translate into tangible market benefits. This aligns with (Alhassan, Musah Abu, & Nkegbe, 2020), who found that financial training improved access to and use of credit among smallholders in Ghana, underscoring the role of knowledge in fostering functional agricultural credit markets.

Similarly, the positive influence of household income (p = 0.045) on perceived credit access reflects how economic empowerment increases creditworthiness and demand, thereby contributing to market expansion. Although not statistically significant, awareness of reform and financial literacy showed positive effects on

perceptions of credit access, indicating that broader exposure to reform messages and improved understanding of financial systems facilitate deeper market engagement. This supports the findings by (Bogale, Reta, Ayalew, & Mehare, 2022), who reported that awareness campaigns significantly improved farmers' engagement with reformed credit systems in Ethiopia.

While group membership and gender were not significant predictors, the overall trend suggests that financial sector reforms have begun to shift the structure and perception of rural finance. These findings confirm that reforms are not only increasing formal credit supply but are also fostering behavioural and institutional changes that underpin a more inclusive and responsive agricultural credit market. This highlights the importance of sustained investment in farmer training and financial education to reinforce the ongoing growth and transformation of Zimbabwe's agricultural credit market.

## CONCLUSIONS AND RECOMMENDATIONS

This study aimed to assess the impact of Zimbabwe's financial sector reforms on the growth of the agricultural credit market, focusing on the extent to which these reforms influenced smallholder farmers' access to credit, loan size, and choice of credit sources. The research was motivated by persistent challenges in rural credit access despite multiple financial sector interventions since 2009, including the expansion of microfinance, digital financial services, collateral system reforms, and regulatory incentives targeting rural financial inclusion.

The key findings from the analysis are multifaceted. The Propensity Score Matching (PSM) results show that farmers exposed to reforms were significantly more likely to access credit, with higher loan values and more favourable repayment terms. The Multinomial Logit model identified reform awareness and financial literacy as strong predictors of formal credit access, signalling that reforms have reshaped farmers' financial decision-making and expanded available credit channels. The Ordered Logit model confirmed that training and income levels have a positive influence on farmers' perceived improvement in credit access, emphasizing the role of complementary interventions, such as capacity building and economic empowerment.

These findings carry important implications. They demonstrate that Zimbabwe's financial reforms have begun to catalyze the structural growth of the agricultural credit market by improving both the supply of credit and the capacity of smallholder farmers to engage with financial institutions. However, they also reveal lingering disparities, especially in rural outreach, gender equity, and collateral accessibility, highlighting the need for more inclusive financial architecture.

In light of the findings, the study recommends several actions. First, policymakers and financial institutions should scale up tailored credit products for agriculture, including seasonal and long-term loans aligned with farming cycles. Second, deeper integration of financial literacy and digital tools into reform programs will be critical in sustaining informed credit decisions. Third, reforms must address gender and geographical disparities by improving the outreach of mobile platforms and rural banking services. Public-private partnerships and credit guarantee schemes could further mitigate lender risks and encourage agricultural financing.

The study's limitations lie in its geographic focus on Mashonaland East, which may constrain the generalizability of the results to other provinces. Moreover, while the models capture key variables influencing credit access, unobservable institutional or behavioural factors may still affect outcomes. These limitations suggest that future research should expand the geographic scope, incorporate panel data, and examine the long-term effects of reforms on credit sustainability, repayment behaviour, and productivity.

In conclusion, this study affirms that financial sector reforms in Zimbabwe have had a measurable, though uneven, impact on the agricultural credit market. Reforms have improved credit uptake and diversified access pathways for smallholder farmers. Nevertheless, sustained progress requires that reforms be paired with inclusive delivery mechanisms, robust monitoring, and institutional support to transform access into long-term financial empowerment and agricultural growth. Strengthening these linkages will be key to ensuring that financial reforms fulfill their promise of fostering a more resilient, inclusive, and productive rural economy.

# REFERENCES

1. Ahmad, A. H., Green, C., & Jiang, F. (2020). MOBILE MONEY, FINANCIAL INCLUSION AND DEVELOPMENT: A REVIEW WITH REFERENCE TO AFRICAN EXPERIENCE. Journal of Economic Surveys Volume 34, Issue 4 https://doi.org/10.1111/joes.12372, 753-792.
2. Alhassan, H., Musah Abu, B., & Nkegbe, P. (2020). Access to Credit, Farm Productivity and Market Participation in Ghana: A Conditional Mixed Process Approach. Margin The Journal of Applied Economic Research 14(2):DOI:10.1177/0973801020904490, 226-246.
3. Babajide, A. A., Ishola, L. A., Adekunle, A. K., Achugamonu, B. U., & Bosede, A. V. (2021). Financial Sector Reform and Economic Development in Nigeria. Asian Economic and Financial Review, 11(2), https://doi.org/10.18488/journal.aefr.2, 160–172.
4. Bogale, F., Reta, B., Ayalew, S., & Mehare, A. (2022). Liberalizing Financial Sector in Ethiopia: Constraints, Consequences and Policy Issues. Ethiopian Journal of Economics Vol. 31 No. 2 (2022); https://www.ajol.info/index.php/eje/article/view/265792, 1-32.
5. Caliendo, M., & Kopeinig, S. (2020). Some practical guidance for the implementation of propensity score matching. Journal of Economic Surveys, 34(4), https://doi.org/10.1111/joes.12367, 774–797.
6. Chamba, L., & Tarirai, I. (2024). The efficacy of Agricultural Financing on Agricultural Production in Zimbabwe. African Journal of Commercial Studies Vol. 5 No. 4 .
7. Chigunhah, B., Svotwa, E., Govere, I., & Chikazhe, L. (2020). Stimulating farmer access to bank credit in Zimbabwe: The bankers' perspective. Journal of Economics and International Finance, 84-94.
8. Chikwira, C. (2024). Bank Credit and Agricultural Growth in Zimbabwe: Analysing Effectiveness and Impact. Acta Universitatis Danubius. Œconomica, 20(5)) https://dj.univ-danubius.ro/index.php/AUDOE/article/view/2975, 96-117.
9. Chundu, M. .. (2020). Sectoral Dynamics in the Determinants of Micro, Small and Medium Enterprises (MSMEs) Growth in Zimbabwe. American Journal of Industrial and Business Management, 10(07), 1271.
10. Demirguc-Kunt, A., Klapper, L., & Singer, D. (2017). Financial Inclusion and Inclusive Growth A Review of Recent Empirical Evidence. World Bank Group Development Research Group Policy Research Working Paper WPS8040.
11. FAO. (2024, July 18). Zimbabwe at a glance. Retrieved from FAO in Zimbabwe (Food and Agriculture Organisation of the United Nations): https://www.fao.org/zimbabwe/fao-in-zimbabwe/zimbabwe-at-a-glance/en/
12. Greene, W. H. (2021). Econometric analysis (8th ed.). London: Pearson Education Limited.
13. GSMA. (2025). The State of the Industry Report on Mobile Money 2025. London: Global System for Mobile Association (GSMA).
14. Hasan, A., Dowla, A.-U., & Tarannum, R. (2024). Financial Inclusion and Economic Growth in Developing Nations: A Case study of Bangladesh. MPRA Paper No. 120213, https://mpra.ub.uni-muenchen.de/120213/.
15. Kamau, C. N., Majiwa, E. B., Otieno, G. O., & Kabuage, L. W. (2024). A double-hurdle model estimation of adoption and intensity of use of poultry production technologies in Machakos County, Kenya. Taylor & Francis Online Article: 2338435 https://doi.org/10.1080/23311932.2024.2338435.
16. Long, S. J., & Freese, J. (2021). Regression Models for Categorical Dependent Variables using STATA (4th ed.). Stata Press.
17. Maburutse, B. T., Chidhumo, G., Marada, T., & Chaurura, B. (2025). The Question of Sustainability among Zimbabwean Microfinance Institutions: A Case of MFIs in Gokwe Town. International Journal of Research and Innovation in Social Science (IJRISS) DOI: https://dx.doi.org/10.47772/IJRISS.2025.90400247.
18. Mapanje, O. K. (2023). Financing sustainable agriculture in sub-saharan africa: a review of the role of financial technologies. Sustainability, 15(5), 4587.
19. Masuka, A. (2025, May 19). Rural Finance Mashonaland East Zimbabwe v1 [Data set]. Retrieved from Zenodo: https://doi.org/10.5281/zenodo.15464054
20. Mugamu, E. (2020). A Study of the Effect of Privatisation on the Financial Performance of the Privatised Companies: A Case Study of Zimbabwe. International Journal of Business and Social Science Vol. 11. No. 6 doi:10.30845/ijbss.v11n6p2, 8-31.

21. Nyathi, L. D., Nkala, M., & Mlobane, M. (2024). Trade Openness And Total Sector Productivity In Zimbabwe: Empirical Analysis Using Ardl And Granger Casuality Approach. International Journal of Research and Innovation in Social Science (IJRISS).
22. Ozili, P. K. (2023). Institutional theory of financial inclusion. Munich Personal RePEc Archive (MPRA), Online at https://mpra.ub.uni-muenchen.de/115770/ MPRA Paper No. 115770, posted 27 Dec 2022 08:23 UTC.
23. RBZ. (2025). 2025 Monetary Policy Statement, 06 February. Harare: Reserve Bank of Zimbabwe.
24. Sannou, R. O., Schneider, C. P., Walz, M., & Guenther, E. (2025). Organizational innovations and access to sustainable finance in agriculture: the case of Shea farmers in Ghana. International Journal of Agricultural Sustainability Volume 23, 2025 - Issue 1.
25. Scholtens, B., & Wensveen, D. v. (2003). THE THEORY OF FINANCIAL INTERMEDIATION: AN ESSAY ON WHAT IT DOES (NOT) EXPLAIN. Vienna: SUERF – The European Money and Finance Forum.
26. Scoones, I. (2025, April 8). A new tenure regime for Zimbabwe's land reform areas? Retrieved from Institute of Development Studies: https://www.ids.ac.uk/opinions/a-new-tenure-regime-for-zimbabwes-land-reform-areas/
27. Sorzano, C. O. (2022). Introduction to sample size calculations. Madrid: National Center of Biotechnology (CSIC), coss@cnb.csic.es.
28. World Bank. (2024, March 15). Agriculture and Food. Retrieved from The World Bank: https://www.worldbank.org/en/topic/agriculture/overview
29. ZIMSTAT. (2022). Zimbabwe 2022 Population & Housing Census (PHC). Harare: Zimbabwe National Statistics Agency (ZIMSTAT).