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Financing Preferences Among Rural Women in Tanzania: The Role of Socio-Economic Attributes

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Abstract

This study investigates the socio-economic determinants shaping rural women's financing preferences in Tanzania, with the goal of informing inclusive financial systems that support women's economic empowerment. The study is grounded in Demand Theory and the Life Cycle Hypothesis with a multidimensional approach. The study considered financing options in three broad categories: financial exclusion, represented by women who do not use any form of credit; formal credit, comprising loans obtained from banks and public financing programmes; and informal credit, which includes borrowing from family and friends, obtaining loans from moneylenders, and asset-based financing such as selling farmland or other productive assets. Data were collected from 415 randomly selected rural women in the Arusha, Katavi, Mbeya, and Simiyu regions of Tanzania between June and December 2023. Cross-tabulations, likelihood ratio tests, and a multinomial logit regression model were used to analyse the data. The results indicate that age, education, income, household size, occupation, and credit cost are significant determinants of financing decisions. Women who are older, with higher education, and have higher income levels are more likely to get formal credit, while women who have high credit costs and limited financial capacity are more likely to borrow informally or be excluded from the financial system. The study suggests that rural areas need formal credit that is affordable, accessible, and gender-sensitive to reduce reliance on informal, high-risk alternatives and encourage equal participation in the financial system.

Keywords: Financing Preferences; Socio-Economic Determinants; Rural Women; Informal and Formal Credit; Multinomial Logit Model

1. Introduction

A well-functioning and inclusive financial services sector is universally recognized as a key factor in improving people's lives and helping businesses develop. It helps people meet their requirements throughout their lives, deal with economic shocks, and put money into productive opportunities (Rao & Priyadarshini, 2013). Microcredit, one of the tools in this system, is known for helping to reduce poverty and give people more control over their finances. It helps disadvantaged rural women start businesses, raise their living conditions, and gain more control over their social and economic lives (Akhter & Cheng, 2020; Ismail, Santoso & Satria, 2024).

Evidence shows that women, especially in rural and low-income communities, continue to face significant obstacles in accessing formal financial services despite their transformative potential (Silong & Gadanakis, 2020; Singh, 2021). Silong and Gadanakis (2020) report that women continue to be at a disadvantage by not only accessing credit less frequently than men but also rely on informal sources to access credit. These disparities highlight a persistent gender-based financial exclusion that undermines efforts toward inclusive economic development where women and men are fairly treated to maximize their potential economically.



Furthermore, there are three main groups of financial sources, i.e. formal, semi-formal, and informal (Silong & Gadanakis, 2020; Nguyen & Canh, 2021). Formal finance includes services from commercial banks, microfinance institutions (MFIs), savings and credit cooperatives (SACCOs), and government-backed loan programs. Informal sources, however, involve borrowing from moneylenders, friends, family, village community banks (VICOBAs), and suppliers. Semi-formal sources include rotating savings and credit associations (ROSCAs) and other existing support groups. The borrower's choice of which financial sources to pursue is often influenced by accessibility, affordability, socio-cultural factors, and his or her financial capacity.

In the Tanzanian context, public sector efforts to improve credit access for women began with the establishment of the Women, Youth, and People with Disabilities (WYPD) Fund in 1993 (Rugeiyamu, 2024). The Local Government Finance Act (Cap. 290, Section 37A) mandates that 10% of each local authority's own-source revenue be allocated as interest-free loans, 4% each to women and youth, and 2% to people with disabilities. However, concerns about poor fund administration have prompted policy reforms, including the transfer of loan disbursement responsibilities to partner banks to enhance efficiency and transparency (Rugeiyamu, 2024). While these reforms primarily address supply-side constraints, understanding the demand-side factors, particularly socio-economic attributes influencing women's financing preferences, remains equally important.

Moreover, informal finance remains a crucial component of rural financial ecosystems worldwide, especially in developing nations with limited formal financial infrastructure. In India, for instance, informal lenders account for between 32% and 77% of rural credit access (Rao & Priyadarshini, 2013). Similar trends have been observed in Pakistan, where access to formal finance is limited; hence, smallholder farmers often rely on informal credit through social networks (Ullah et al., 2024). Although informal sources offer immediate finance access with fewer procedural barriers, they pose risks such as exorbitant interest rates, lack of consumer protection, and limited transparency. For instance, the recent Kausha Damu scandal in Tanzania underscores the dangers associated with unregulated informal lending environments (Komba & Komba, 2024). These dynamics reinforce the need to better understand rural women's financing preferences to develop more inclusive, responsive and protective financial policies in Tanzania.

There are major advances toward promoting financial inclusion globally. According to the Global Findex Database (2021), the proportion of adults with access to formal financial accounts has increased from 51% in 2011 to 76% in 2021. Statistics show that Tanzania echoes this global trend, with an increase in formal financial inclusion from 65% in 2017 to 76% in 2023 (Finscope Tanzania, 2023). Nonetheless, notable disparities persist between rural and urban populations. According to the 2022 Tanzania National Census, 64.5% of the population resides in rural areas, where women constitute over 51%. Geographic isolation, limited financial infrastructure, and gendered socio-cultural norms often lead to the exclusion of these women from formal financial systems.

Globally, gender-based disparities in financial access remain a significant concern. The Global Findex (2021) reveals a 4% gender gap in account ownership globally and a 6% gap in developing countries. In Tanzania, the gap stood at 8% in 2023, slightly down from 9% in 2017 (Finscope Tanzania, 2023). Microcredit has been championed as a key instrument in narrowing this gap by empowering women economically and socially. Studies by Afrin, Islam, and Ahmed (2010) and Mizanur Rahman and Ahmad (2010) affirm that microcredit promotes women's agency, increases productivity, enhances employment, and improves living standards. Yet, access to formal credit remains disproportionately limited for most rural women, compelling them to rely heavily on informal sources (Silong & Gadanakis, 2020).

Despite the growing body of literature in this area, limited attention has been given to the specific financing preferences of rural women in Tanzania. Given the country's predominantly rural population, the increasing number of rural women, and persistent gender disparities in financial access, there is a pressing need to empirically examine the socio-economic factors shaping their credit choices.

Therefore, this study examines the following objectives:

- i. To examine the influence of socio-economic characteristics on rural women's financing preferences in Tanzania
- ii. To examine the effect of individual and household-level attributes on rural women's choice of formal and informal financing sources.



1.1 Theoretical Perspectives on Financing Preferences

There are various theoretical frameworks on financing behaviors, including demand theory, the life cycle hypothesis (LCH), credit rationing theory, and social capital theory (Ullah et al., 2024). However, this study is grounded primarily in demand theory and the life cycle hypothesis, which together offer critical insights into how individuals and household traits affect financing choices over time.

Demand theory is deeply rooted in the neoclassical tradition; it suggests that the quantity demanded for a service such as credit is inversely related to its price, assuming other factors remain constant (Baddeley, 2023). High interest rates, collateral requirements, and transaction costs reduce demand for formal credit, while informal credit, which are more accessible and flexible, becomes more attractive (Fেকে et al., 2016). In addition, factors such as income level, risk perception, and cultural norms shape behavior in financial choices, in particular credit-seeking (Ozili, 2025). Various studies on behavioral finance show that mental shortcuts and a lack of understanding about finances affect credit choices, which often result in poor borrowing decisions.

The Life Cycle Hypothesis (Ramsey, 1928; Friedman, 1957; Modigliani & Brumberg, 1954) complements this framework by emphasizing the temporal dimension of financial behavior. Individuals are considered rational agents who smooth consumption across different life stages based on expected income streams. This theory is particularly relevant in rural contexts where income volatility and shifting household roles influence financial needs and borrowing patterns. For rural women, financing preferences may vary considerably based on their age, marital status, household responsibilities, and economic participation, all of which evolve across the life cycle (Laibson et al., 2024).

1.2 Socio-Economic Determinants of Financing Preferences

Understanding rural women's financing preferences is essential in designing inclusive financial systems that are responsive to their needs. Existing empirical studies identified some socio-economic variables that shape financing decisions. Silong and Gadanakis (2020) highlighted critical drivers of credit demand, including education, household size, marital status, deposit behavior, and access to credit information, while gender, in particular, emerged as a strong determinant of reliance on informal credit. Dlamini and Mohammed (2018) emphasized the significance of interest rates, while Ouattara et al. (2022) insist on other influential factors such as demographic and credit conditions, including age, education, collateral requirements, and proximity to lenders. Similarly, Nguyen et al. (2022) show that perceived application barriers and high costs are other factors that often compel financially constrained firms to turn to informal or trade credit sources.

Among various socio-economic attributes, this study places particular emphasis on education, age, income level, occupation, household size, religion, marital status, and perceived credit cost, given their empirically established relevance in influencing individual financing preferences. Education is consistently identified as a significant determinant of formal credit uptake. Empirical studies suggest that individuals with higher levels of education are more likely to access and utilize formal financial institutions (Etonihu et al., 2013; Kumar et al., 2007). Education enhances financial literacy; it promotes awareness of credit options and enables individuals' capacity to evaluate credit terms and conditions. Chattopadhyay and Dasgupta (2015) also associate higher education with increased risk tolerance, which may further influence borrowing behavior. Moreover, Silong and Gadanakis (2020) argue that education, particularly financial literacy, equips individuals with the knowledge and skills needed to recognize financial risks and opportunities; hence, one can make informed financial decisions. Accordingly, this study hypothesizes that education is a significant factor that influences women's preferences across different financing options.

Age is another factor that significantly impacts financing decisions. Older people often prefer formal credit due to their accumulated financial knowledge, increased economic stability, and greater risk aversion (Kumar et al., 2007). This matches Chattopadhyay and Dasgupta (2015) findings, which show that older people tend to be more cautious about risks, which is influenced by limited financial understanding that makes them avoid borrowing from informal, high-risk lenders (Fraser et al., 2015). In contrast, younger individuals may lean toward informal credit due to lower perceived barriers or urgent financing needs.



Larger households are more likely to access formal finance, possibly due to the availability of additional household members to support loan processing and documentation requirements (Kumar et al., 2007). Also, household composition determines financial obligations and income distribution within the family, both of which influence financing choices.

Occupation is another strong predictor of financing behavior. People engaged in self-employment or agriculture are typically more integrated into formal credit systems due to the need for working capital and investment in productive assets. However, individuals involved in casual labor or subsistence activities often rely on informal lenders due to limited financial documentation or collateral (Lee & Persson, 2016).

Income and asset levels influence individuals in determining access to and preference for formal credit. Ullah et al. (2020) found that wealthier and asset-rich individuals are more inclined to borrow from formal institutions. However, Chattopadhyay and Dasgupta (2015) observed that people with higher income levels are sometimes associated with a greater risk appetite, potentially leading to reliance on informal finance. Nguyen and Canh (2021) add that convenience, speed, and flexibility often drive even financially capable individuals toward informal sources, particularly during emergencies or early business stages.

Apart from socio-economic characteristics, structural and behavioral constraints can inhibit the use of external financing. Nguyen and Canh (2021) found that some individuals deliberately avoid borrowing due to cognitive financial constraints such as fear of indebtedness, mistrust in lenders, or lack of financial confidence rather than lack of access. People from ethnic minorities, in particular, may avoid formal credit due to perceived discrimination, limited literacy, or remote business locations. Likewise, Lee and Marvel (2014) note that women face socio-cultural barriers rooted in traditional gender roles, which discourage financial risk-taking and limit engagement with formal credit institutions.

1.3 Formal and Informal Financing

Extensive empirical literature highlights the role of both formal and informal external financing as vital in enhancing individual welfare, supporting entrepreneurship, and fostering broader economic development. Nguyen and Canh (2021) classify financing behavior into four categories: (i) individuals who do not access external finance, (ii) those who rely solely on informal sources, (iii) those who utilize formal financial institutions, and (iv) those who engage in a hybrid use of both sources. This typology offers a useful lens for analyzing financing preferences within different socio-economic contexts, particularly among underserved populations such as rural women.

Although formal finance is often promoted for its lower interest rates and regulatory oversight, informal finance remains a significant component of rural financial ecosystems, especially where institutional barriers persist. Elston et al. (2016) demonstrated that Chinese microenterprises prefer informal financing from friends and family as they associate it with business growth. According to Badiru (2010), informal finance can be categorized into semi-formal and non-formal sources. Semi-formal sources include cooperative societies, support groups, and rotating savings and credit associations (ROSCAs), while non-formal sources encompass moneylenders, friends, spouses, relatives, and similar informal networks.

Informal financing can act as a transitional tool toward formal credit access. However, formal financing is limited by procedural complexities and lengthy approval processes, rendering it impractical for individuals with urgent credit needs (Wu et al., 2016). Informal credit is more accessible, especially for women and ethnic minorities, because of its flexibility, lower entry barriers, and fewer documentation requirements (Nguyen & Canh, 2021). In agricultural contexts, studies reinforced the role of informal finance in sustaining livelihoods. For instance, Turvey, Kong, and Huo (2010) found that informal credit from friends and family plays a vital role in rural China. Gniza (2023), found that demographic and farm-level factors such as age, gender, household size, income, crop type, and geographic location influence farmers' credit source selection.

In addition, institutional and governance contexts also shape financing decisions. Transaction costs, geographic distance, and institutional trust are among the major determinants of individuals' decisions on finance sources, i.e. formal or informal credit (Nguyen et al., 2018). Moreover, the likelihood of borrowing from informal sources increases as the distance between the household and a formal financial institution grows (Inyang, 2022). According to



Williamson (2000), local institutional norms, including shared values and informal rules, significantly influence the functionality of informal financial networks. Dell et al. (2018) demonstrate further that weak communal institutions may reduce the effectiveness of local informal lenders, limiting options for borrowers in certain regions.

1.4 Research Gap

While existing studies have identified a range of socio-economic and behavioral factors influencing financing preferences, there is limited empirical research focusing specifically on rural women in Tanzania. Despite national financial inclusion efforts, the rural demographic remains disproportionately excluded from formal credit systems due to entrenched socio-economic and cultural constraints. The literature has not adequately addressed how variables such as education, age, occupation, household size, and income jointly shape financing behavior in rural settings.

This study looks into how social and economic factors affect rural women's choices for borrowing money from both formal and informal sources, using original data and a specific statistical method called multinomial logit. The findings aim to contribute to the growing body of knowledge on inclusive finance and provide evidence-based insights for the development of gender-sensitive, context-specific financial systems that promote equitable economic participation in rural Tanzania.

Access to appropriate financial services in rural areas is key to the achievement of several Sustainable Development Goals (SDGs), notably those related to poverty alleviation, gender equality, and inclusive economic participation (Singh, 2021). However, making sure everyone has good access to financial services needs more than building many banks and financial systems; but requires understanding of the social and economic factors, as well as people's behaviors, that affect their financial choices.

2. Research Methods

This study employs a quantitative research design using primary data collected from four regions of Tanzania: Arusha, Katavi, Mbeya, and Simiyu between June and December 2023 to examine the factors influencing rural women's financing preferences. A multistage sampling approach was employed, whereby regions representing diverse socio-economic and food-security contexts were purposively selected, followed by the selection of district councils and wards based on PO-RALG loan disbursement performance. This strategy enhanced the robustness of the study by capturing variations in economic, institutional, and socio-cultural conditions. Arusha is characterized by high literacy and entrepreneurial activity, Katavi by a predominantly subsistence-based agrarian economy, Mbeya by a mix of commercial and subsistence farming, and Simiyu by traditional social structures and pastoralist livelihoods.

The data were collected from 415 women aged 18 years and above using a structured questionnaire that was validated through expert review and pre-testing to ensure clarity, relevance, and consistency. Ethical clearance was obtained from the relevant authorities prior to data collection, and informed consent was secured from all respondents before participation in the study. The study employed the Yamane (1967) formula to determine an appropriate sample size from the target population of 1,156,714 women in the selected districts. The formula yielded a minimum sample size of approximately 400 respondents, which is considered adequate for statistical inference and exceeds the threshold suggested by Comrey and Lee (1992).

To enhance statistical power, improve representativeness, and accommodate possible non-response, the final sample size was increased to 415 respondents. The analysis was conducted using multinomial logistic regression (specified in the model below), an appropriate method for modelling categorical dependent variables with more than two outcomes (Dlamini and Mohammed, 2018; Ouattara et al., 2022; Silong & Gadanakis, 2020). In this study, the dependent variable is the financing option preferred by rural women, categorized as no credit, bank, relatives/friends, moneylenders, public credit, and selling farm assets. The independent variables include age, religion (Rel), marital status (Mar), level of education (Edu), occupation (Occ), household size (Hsd), daily income level (Inc), and cost of financing (Crst). This methodological approach allows for assessing the relative influence of each predictor on the likelihood of choosing a particular credit option, thereby offering insights into the socio-economic dynamics underpinning rural women's financial decision-making. The following is the multinomial model specification.

$$\ln \left(\frac{P(Y_i = j)}{(Y_i = 0)} \right) = \beta_{0j} + \beta_{1j}Age_i + \beta_{2j}Rel_i + \beta_{3j}Mar_i + \beta_{4j}Edu_i + \beta_{5j}Occ_i + \beta_{6j}Hsd_i + \beta_{7j}Inc_i + \beta_{8j}Crst_i + \varepsilon$$



Y_i is dependent variable which denote the financing preference of woman i , which takes one of the six mutually exclusive categories: $Y_i \in \{0 = \text{No Credit}, 1 = \text{Bank}, 2 = \text{Relatives/Friends}, 3 = \text{Money Lenders}, 4 = \text{Public Credit}, 5 = \text{Selling Farm Assets}\}$, for $j = 1, 2, 3, 4, 5$ where: $P(Y_i=j)$ is the probability that respondent i chooses financing option j , $P(Y_i=0)$ is the probability of choosing the reference category (No Credit), β_{kj} are the coefficients associated with explanatory/independent variable k for outcome j , ε_{ij} is the error term.

3. Findings and Discussion

3.1. Data Profile

A total of 415 rural women were selected through random sampling, based on two inclusion criteria: being female and aged 18 years or older. Researchers collected data using a structured questionnaire administered across the selected regions. Table 1 presents the demographic profile. The regional distribution of respondents was as follows: Simiyu (34.1%), Mbeya (27.2%), Arusha (22.0%), and Katavi (16.7%). In terms of financing preferences, the majority of respondents reported accessing public funds (41.0%), followed by those who did not utilize any form of credit (27.5%) and those relying on relatives or friends (17.1%). Formal financing sources, such as banks (4.6%) and moneylenders (8.2%), were comparatively underutilized. Demographically, most respondents were aged between 35 and 64 years (71.1%), with primary education being the most prevalent level attained (40.5%). The primary occupation was farming (47.5%), followed by laboring (41.2%) and domestic roles (11.3%). The majority identified as Christians (77.8%) and were married (63.9%). Household income predominantly ranged between TZS 5,000 and 10,000 per day (48.4%), and nearly half of the households (48.0%) had between five and eight members. Notably, 72% of the respondents accessed interest-free credit, while only a small proportion (2.2%) incurred relatively high financing costs, ranging from 16% to 25%.

Table 1: Demographic Characteristics of Respondents

Variable	Categories	Frequency
Location	Arusha, Katavi, Mbeya, Simiyu	63 (22.0), 48 (16.7), 78 (27.2), 98 (34.1)
Financing Option	No Credit, Bank, Rel/Friend, Money Lenders, Public Fund, Selling Farm	114 (27.5), 19 (4.6), 71 (17.1), 34 (8.2), 170 (41.0), 7 (1.7)
Age Group	18–34, 35–64, 65+	97 (23.4), 295 (71.1), 23 (5.5)
Education	None, Primary, Secondary, Post-secondary	108 (26.0), 168 (40.5), 85 (20.5), 54 (13.0)
Occupation	Farmer, Housewife, Labourer	197 (47.5), 47 (11.3), 171 (41.2)
Religion	Christian, Muslim, None	323 (77.8), 88 (21.2), 4 (1.0)
Marital Status	Single, Married, Widow	87 (21.0), 265 (63.9), 63 (15.2)
Income (TZS/day)	<5000, 5000–10,000, >10,000	115 (27.7), 201 (48.4), 99 (23.9)
Family Size	2–4, 5–8, 8+	136 (32.8), 199 (48.0), 80 (19.3)
Financing Cost	0%, 1–15%, 16–25%	299 (72.0), 107 (25.8), 9 (2.2)

3.2. Descriptive Statistics

The descriptive data underscores the multi-dimensional nature of financing behavior among rural women in Tanzania. Public funding plays a pivotal role across most demographic segments, particularly for those with limited education, lower income, and informal occupations. Enhancing financial inclusion for these groups may require policy interventions, capacity building, and gender-sensitive financial innovations to strengthen their access to diverse, affordable, and sustainable credit sources. This section presents and analyzes the descriptive statistics of the data regarding the financing option preferences of rural women. Table 2 indicates that the preference for public funds increases with age, but this trend may change in the older age group due to constraints such as mobility or financial literacy. Younger women rely more on informal sources and are credit-averse. The study shows that youth aged between 18 and 34 years are more inclined to borrow from relatives/friends (23) than public funds (22); however, they are more likely to not use credit at all (30). Moreover, middle-aged rural women aged 35–64 years show a dominant preference for public funds (141), indicating higher awareness regarding access to government-related financial services; however, a significant number also do not use credit (83). In contrast, the elderly (65+) exhibit the lowest participation in all credit sources.



Moreover, the descriptive statistics presented in Table 2 indicate that education level appears to be positively correlated with diversification of financing options, especially access to formal institutions like banks among rural women. While women with no formal education predominantly depend on public funds (57) and have no credit (28), likely due to limited financial literacy, those with higher education (certificate, diploma, graduate+) show greater diversity in choices, including use of banks, moneylenders, and relatives/friends. Graduates show relatively higher bank usage (7). Furthermore, the financing option preferences in relation to the occupation indicate that public funds are most crucial for farmers, while laborers seem to be more into costly options like money lenders, perhaps due to easy accessibility relative to public funds. Interestingly, analysis of the marital status against financing preferences indicates that married women benefit from more stable support systems and possibly better eligibility for public programs, whereas widows and single women may face exclusion from formal channels.

Also, the descriptive statistics as presented in Table 2 indicate that public funds are central across all income groups, especially among lower-income women. However, higher-income women are better able to access banks and other options. Moreover, the study shows that larger households may exert pressure on women to seek easier, less formal financing options, and hence public funds seem a relatively vital safety net for this category. Interestingly, the credit cost seems to play a crucial role in preferences, such that most of the respondents either avoid credit or access interest-free financing, confirming the crucial role of public funds and informal arrangements. High-cost credit is rare but may indicate financial distress. Hence, socio-economic factors such as education, age, marital status, and income level seem to strongly influence financing choice. However, the logit regression analysis is conducted to examine the statistical significance. Table 2 also indicates that credits with no interest (0%) account for the bulk of public funds (168), followed by those not using financing (114) and low interest (1–15%). This distribution mostly applies to banks (14), relatives/friends (62), and high-interest (16–25%) loans provided by moneylenders and others, which account for the remaining funds.

The overall observation from the descriptive statistics is that public funds are the most preferred financing source, followed by relatives/friends among rural women. However, it is significant that most rural women do not take out any credit at all. In contrast, banks and money lenders are the least utilized options, possibly due to access barriers such as documentation requirements, collateral needs, or a lack of trust.

Table 2: Descriptive Statistics

Variable	Categories	No Credit	Bank	Relative/Friend	Money Lenders	Public Fund	Selling Farm	Total
Age	18-34	30	7	23	12	22	3	97
	35-64	83	10	40	18	141	3	295
	65+	1	2	8	4	7	1	23
	Total	114	19	71	34	170	7	415
Education	No formal Education	28	2	18	2	57	1	108
	Primary	47	6	21	12	80	2	168
	Secondary	24	3	22	9	25	2	85
	Certificate	4	0	5	4	2	2	17
	Diploma	4	1	3	5	4	0	17
	Graduate+	7	7	2	2	2	0	20
	Total	114	19	71	34	170	7	415
Occupation	Farmer	48	4	42	5	95	3	197
	Housewife	10	0	10	8	18	1	47
	Laborer	56	15	19	21	57	3	171
	Total	114	19	71	34	170	7	415
Religion	Christian	89	10	51	22	148	3	323
	Muslim	25	9	19	12	20	3	88
	None	0	0	1	0	2	1	4
	Total	114	19	71	34	170	7	415



Variable	Categories	No Credit	Bank	Relative/Friend	Money Lenders	Public Fund	Selling Farm	Total
Marital status	Single	25	8	9	9	34	2	87
	Married	69	10	51	19	111	5	265
	Widow	20	1	11	6	25	0	63
	Total	114	19	71	34	170	7	415
Income Level Per Day	Below 5000	39	4	28	6	36	2	115
	Between 5000 and 10000	53	3	31	20	91	3	201
	Above 10000	22	12	12	8	43	2	99
	Total	114	19	71	34	170	7	415
Household Members	2-4	42	11	25	20	34	4	136
	5-8	54	6	36	10	90	3	199
	8+	18	2	10	4	46	0	80
	Total	114	19	71	34	170	7	415
Credit Cost	0%	114	5	8	2	168	2	299
	1-15%	0	14	62	26	2	3	107
	16-25%	0	0	1	6	0	2	9
	Total	114	19	71	34	170	7	415

3.3. Model Fit

The study estimated the econometric equation using the multinomial logit regression model. The findings indicate that the data fit the model well and are statistically significant. Table 3 shows that the model explains a substantial portion, 72.7%, of the variation in women's preferences across different categories, as indicated by the commonly used Nagelkerke statistic. Additionally, Table 3 shows that the -2 Log Likelihood dropped from 1079.389 to 599.003 when using predictors, with a Chi-Square statistic of 480.385, which is significant at the 1% level. This provides the conclusion that the model with predictors fits significantly better than the intercept-only model; hence, predictors are important in explaining financing preferences. However, the Pearson chi-square is significant, which typically suggests poor fit; but in multinomial logistic regression, deviance is generally more reliable than Pearson for assessing fit, in which deviance is not significant with $p = 1.000$; hence, this suggests excellent model fit, and the data fit well.

Table 3: Model Summary and Goodness-of-Fit

Model Component	-2 Log Likelihood	Chi-Square	Df	Sig. (p-value)	Remarks
Intercept Only	1079.389	–	–	–	Baseline model with no predictors
Final Model	599.003	480.385	40	.000	Significant improvement over baseline
Goodness-of-Fit (Pearson)	–	3623.271	1285	.000	May indicate poor fit, often less reliable
Goodness-of-Fit (Deviance)	–	540.960	1285	1.000	Suggests very good model fit
Pseudo R-Square Statistics					
Measure	Value		Interpretation		
Cox and Snell	0.686		Moderate-to-strong explanatory power		
Nagelkerke	0.727		Explains 72.7% of the variance (preferred)		
McFadden	0.403		Acceptable model strength in social sciences		



3.4. Likelihood Ratio Analysis and Discussion

This section examines the determinants of rural women's credit preference using the Likelihood Ratio Test (LRT) approach within the multinomial logistic regression framework. The focus is on identifying the collective significance of each predictor in influencing credit choices, rather than interpreting the effects of individual predictor categories, an analysis addressed separately in the regression results section.

Table 4 displays the results of the likelihood ratio test, which revealed that the cost of credit is the most important factor influencing financing choices for rural women, with a chi-square value of 361.637 and a highly significant p-value ($p < .001$). This strong relationship suggests that the financial terms associated with borrowing, particularly the interest rate, are a primary consideration for women in rural areas when deciding where to seek credit. The dominance of this factor aligns with existing literature indicating that accessibility and affordability are crucial in determining credit-seeking behavior in low-income settings.

Moreover, as presented in Table 4, the variable occupation yielded a chi-square statistic of 17.840 with a corresponding p-value of 0.003, indicating a high level of statistical significance. This suggests that the nature of income-generating activities undertaken by women impacts their financing preferences.. Distinctions among farmers, laborers, and housewives reflect the varying degrees of access to and reliance on formal versus informal credit mechanisms. Similarly, education level emerged as a significant predictor (Chi-Square = 11.248, $p = 0.047$), implying that women with higher education are comparatively more adept at navigating financial landscapes. This is attributed to enhanced financial literacy, greater exposure to formal financial institutions, and improved capacity to evaluate credit terms and conditions (Mndeme, & Sinde, 2022).

Furthermore, daily income level emerged as a significant factor (Chi-Square = 11.244, $p = 0.047$), supporting the notion that economic capacity directly shapes financial choices. Women with higher daily earnings are more likely to access formal financing options due to better perceived creditworthiness and financial stability, while women with lower income may resort to informal mechanisms due to limited eligibility or collateral constraints. In addition, household size is statistically significant (Chi-Square = 11.391, $p = 0.044$), indicating that women from larger households may face more pressing or complex financial obligations. This demographic pressure may influence their selection of credit sources that are more flexible or capable of addressing the broader economic demands of the family unit. In contrast, the variables religion, age, and marital status were not statistically significant.

Table 4: Predictor Significance (Likelihood Ratio Tests)

Predictor	Chi-Square	Sig.	Interpretation
Age	9.995	.075	Not significant
Religion	4.426	.490	Not significant
Marital Status	9.697	.084	Not significant
Education	11.248*	.047	Significant
Occupation	17.840**	.003	Significant
Household Size	11.391*	.044	Significant
Income Level	11.244*	.047	Significant
Cost of Credit	361.637***	.000	Significant

* $p < .05$; ** $p < .01$; *** $p < .001$.

3.5. Multinomial Regression Results Analysis and Discussion

This section presents and discusses the findings from the multinomial logistic regression analysis that examined how socio-economic attributes influence rural women's financing preferences in Tanzania. The results are presented in relation to each financing option, with "no credit" as the base outcome.

Table 5 presents and analyzes multinomial logistic regression parameter estimates from where the financing option is the dependent variable and "no credit" is the reference category. This means all the estimates show the effect of predictors on the odds of choosing a particular financing option like public credit, relatives/friends, money lenders, banks, or selling an asset/farm compared to not taking any credit at all. This is grounded in Nguyen and Canh (2021), who emphasized that some individuals deliberately avoid borrowing due to cognitive financial constraints. In Table



5, the column labelled Exp(B) represents the odds ratio, indicating how a 1-unit increase in the predictor affects the odds of choosing a specific financing option compared to not taking any credit at all. Moreover, B stands for the coefficient (log odds), and Sig stands for the significance level, especially if the p-value is less than 0.05.

The comparison between choosing bank credit and not accessing credit at all revealed several significant predictors. Age was found to be a strong determinant ($p = 0.017$), with older women being nearly 5.9 times more likely to opt for bank credit than their younger counterparts. This supports the findings of Kumar et al. (2007) and reflects the notion that older individuals tend to possess greater financial maturity, accumulated assets, and risk-averse attitudes (Chattopadhyay and Dasgupta, 2015), making them more comfortable with formal institutions. Education also emerged as a significant factor ($p = 0.009$), with more educated women being nearly twice as likely ($\text{Exp}(B) = 1.929$) to utilize bank credit. This aligns with previous studies that show education enhances financial literacy, awareness, and confidence in navigating formal credit systems (Etonihu et al., 2013; Kumar et al., 2007; Silong and Gadanakis, 2020).

Income level had a statistically significant effect ($p = 0.046$), where women with higher daily income levels were 2.8 times more likely to access bank credit, supporting the argument by Ullah et al. (2020) that asset-rich individuals are more inclined to engage with formal financial institutions. Marital status ($p = 0.044$) also influenced financing preference, suggesting that women who are single or widowed may face challenges accessing bank credit due to lack of collateral or household-level financial stability. Although household size was only slightly important ($p = 0.075$), the negative effect ($\text{Exp}(B) = 0.315$) indicates that women from bigger households might be less likely to use banks, possibly because they have more financial responsibilities or prefer more flexible informal financing, which is different from what Kumar et al., (2007) found. The most prominent determinant was credit cost ($p = 0.000$), which had an extremely high odds ratio of 859.238, indicating that perceived affordability plays a dominant role in shaping bank credit usage. Conversely, religion ($p = 0.627$) and occupation ($p = 0.980$) were not statistically significant in this context.

When comparing credit from friends or relatives to non-use of credit, occupation emerged as a significant determinant ($p = 0.028$), with an odds ratio of 0.458. This suggests that women engaged in more stable or formal occupations were less likely to borrow from informal social networks, which aligns with Lee and Persson (2016), who suggest that financially independent individuals increasingly rely on formal or semi-formal financing. Household size ($p = 0.084$) was marginally significant, which implies that women from larger households are somewhat less likely to borrow from friends or family. This aligns with the findings of Inyang (2022), who identified the number of dependents as a relevant factor in influencing the choice of credit provider. This may be because larger households provide alternative support systems or because informal borrowing may not adequately meet their financial needs. Most notably, the cost of credit was again highly significant ($p = 0.000$), with an odds ratio of 1101.109, reinforcing the idea that high credit costs in formal institutions push women toward informal networks, where borrowing is more flexible and devoid of interest charges. Other socio-economic attributes such as age, education, income, marital status, and religion were not statistically significant, suggesting that affordability and occupational stability are the primary drivers of informal social borrowing.

The analysis comparing money lenders to no credit usage revealed both behavioral and economic determinants. Age showed marginal significance ($p = 0.069$), with an odds ratio of 3.687, indicating that older women are more likely to turn to money lenders, possibly due to accumulated relationships, financial responsibility, or limited access to formal channels. Education was also marginally significant ($p = 0.071$; $\text{Exp}(B) = 1.611$), suggesting that more educated women might be more aware of a range of credit options, including money lenders, and are perhaps more willing to tolerate associated risks in exchange for liquidity. Household size ($p = 0.010$) had a statistically significant negative effect ($\text{Exp}(B) = 0.194$), implying that women from larger households are significantly less likely to engage with money lenders. This could be due to the availability of internal household support or risk aversion toward the high-interest burden. Again, the cost of credit was the strongest determinant ($p = 0.000$), with an extraordinarily high odds ratio of 9,925.136, indicating that exorbitant borrowing costs from formal sources push women toward money lenders, even with associated risks.

When examining the choice of public credit over no credit, three variables emerged as influential. Age ($p = 0.020$; $\text{Exp}(B) = 2.182$) significantly increased the likelihood of accessing public credit, suggesting that older women may



be more aware of or experienced in navigating government credit schemes. Income level ($p = 0.020$; $\text{Exp}(B) = 1.538$) also had a significant positive impact, reflecting that those with more stable incomes are more capable of fulfilling eligibility criteria or meeting repayment obligations. Marital status was marginally significant ($p = 0.060$), indicating that certain marital statuses may present social or administrative barriers to accessing public funds. Interestingly, credit cost was not a significant determinant ($p = 0.888$), suggesting that public credit, often subsidized or interest-free, is not influenced by affordability concerns in the same way as other financing options.

Finally, the analysis of women who resorted to selling farm assets rather than borrowing revealed two key determinants. Household size ($p = 0.044$; $\text{Exp}(B) = 0.159$) was significantly associated with a lower likelihood of asset sales, likely due to the presence of alternative income sources or internal support structures in larger households. Credit cost ($p = 0.000$) once again had a profoundly strong influence, with an odds ratio of 2,742.504, suggesting that extremely high borrowing costs lead women to liquidate productive assets, a coping mechanism that may provide immediate relief but jeopardizes long-term financial security. The unusually large odds ratios observed for the “cost” variable across several financing categories (ranging from approximately 859 to over 9,900) suggest quasi-complete separation.

In summary, the results show that factors such as credit cost, age, education, income, household size, and occupation strongly shape the financing preferences of rural women. Credit cost has consistently emerged as the most powerful determinant across all models, highlighting the critical role of affordability in financial decision-making. While formal credit is preferred by older, educated, and economically stable women, informal options, including moneylenders and social networks, remain prominent even in high-cost contexts. Public credit schemes appear to be less sensitive to perceived cost and are most accessible to older, higher-income rural women. Meanwhile, the decision to sell farm assets is largely driven by cost pressure and a lack of viable alternatives.

These findings demonstrate the importance of more accessible and affordable formal credit options tailored to respond to the realities of rural women. Moreover, policy interventions must consider household dynamics, gender roles, and cost perceptions in designing inclusive and protective financial systems.

Table 5: Multinomial Regression Results

Financing Options		B	Sig.	Exp(B)
Bank	Intercept	-13.656	.000	
	AGE	1.769	.017	5.865
	REL	.340	.627	1.404
	MARI	-1.361	.044	.257
	EDU	.657	.009	1.929
	OCC	-.012	.980	.988
	NoHousehold	-1.154	.075	.315
	INC	1.030	.046	2.802
	cost	6.756	.000	859.238
Relatives/Friends	Intercept	-8.365	.000	
	AGE	.894	.160	2.444
	REL	-.227	.711	.797
	MARI	-.063	.902	.939
	EDU	.288	.205	1.334
	OCC	-.782	.028	.458
	NoHousehold	-.942	.084	.390
	INC	.077	.848	1.080
	cost	7.004	.000	1101.109



Financing Options		B	Sig.	Exp(B)
Money Lenders	Intercept	-16.580	.000	
	AGE	1.305	.069	3.687
	REL	-.273	.704	.761
	MARI	-.080	.900	.923
	EDU	.477	.071	1.611
	OCC	.213	.631	1.237
	NoHousehold	-1.642	.010	.194
	INC	.575	.255	1.777
	cost	9.203	.000	9925.136
Public Credit	Intercept	-.444	.733	
	AGE	.780	.020	2.182
	REL	-.224	.485	.799
	MARI	-.440	.060	.644
	EDU	-.162	.233	.850
	OCC	-.175	.292	.840
	NoHousehold	.250	.285	1.284
	INC	.430	.020	1.538
	cost	-.100	.888	.905
Selling Farm	Intercept	-13.271	.001	
	AGE	1.155	.226	3.173
	REL	1.022	.253	2.780
	MARI	-.863	.309	.422
	EDU	.260	.506	1.297
	OCC	-.605	.288	.546
	NoHousehold	-1.837	.044	.159
	INC	.690	.313	1.994
	cost	7.917	.000	2742.504
a. The reference category is no credit. *p < .05; ** p < .01; *** p < .001.				
b.				

4. Conclusions

This study investigated factors influencing Tanzanian rural women's preferences for credit options, focusing on socio-economic and demographic factors. Using multinomial logistic regression, the analysis revealed that the cost of credit is by far the most dominant factor shaping financing choices. Women confronted with high borrowing costs opted for informal or distress-based alternatives, such as borrowing from relatives or selling farm assets. This finding emphasizes a structural limitation for rural women in the accessibility and affordability of formal financial services for rural women.

Furthermore, age and income levels consistently emerged as significant predictors, with older and more economically stable women demonstrating a stronger inclination toward formal credit avenues such as banks and public funds. Similarly, women with higher levels of education use formal credit, especially bank services, which indicates that understanding finances and being familiar with how institutions work gives women power over their borrowing choices. Conversely, larger household sizes were associated with a decreased likelihood of borrowing or asset



liquidation, possibly due to more internal support mechanisms or cautious financial behavior. Occupation and marital status had mixed or marginal significance, indicating that their influence varies across credit types and contexts. The findings reveal that rural women's financing decisions are shaped by both economic necessity and structural conditions including access, cost/affordability, and social capital.

4.1. Limitations

A key limitation of this study is that observed financing choices may reflect existing constraints rather than women's actual preferences. Institutional barriers, gender norms, and limited access to financial services may influence financing decisions, suggesting the need for future research to distinguish between revealed financing behaviour and underlying financing preferences. Moreover, future research on the social and cultural aspects of financing options could look more closely at qualitative studies to uncover hidden social or cultural obstacles that affect these connections.

5. Recommendations

Policymakers and financial institutions must prioritize reducing the cost barriers associated with accessing formal credit, particularly in rural settings and for women from low-income backgrounds. This could involve interest rate caps, targeted subsidies, or the expansion of low-cost public credit schemes tailored to rural women's needs. Moreover, given the positive correlation between education and formal credit, integrating financial literacy programs into community development initiatives is necessary. With financial literacy, women in rural areas will be empowered to make informed financial decisions and better navigate credit markets. Public credit, while less influenced by cost, was still underutilized, therefore, robust awareness campaigns and simplified access procedures will enhance its uptake, especially among vulnerable groups including rural women. Tailored financial products should reflect the demographic reality that older and higher-income women are more inclined toward formal financing. Segmentation can improve product fit and uptake.

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