Influence of Socio-Economic Factors on Women Access to Land in Ilorin, Nigeria

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Land has been recognized as a primary source of wealth, prestige, social status, as well as the foundation for shelter, food production and other economic activities. In many countries, access to land is critical for individual and group, but women's access is often disproportionately constrained. This paper assessed the influence of socio-economic factors on land accessibility for women in Ilorin, with the goal of promoting equitable access to land. To achieve this, a sample size was determined based on the 2006 population census figures of females in the Ilorin West Local Government Area. A total of 397 questionnaires were distributed to women in the region using systematic random selection methods to ensure a representative sample. The collected data were analysed using binary logistic regression, providing a thorough assessment of the factors influencing women's access to land. The study revealed that the majority of respondents were self-employed, constituting 46.1%, while 11.1% were unemployed. Furthermore, 62.9% of respondents did not have access to land. Using the binary logistic regression model, the results showed that "income" was the only statistically significant variable in the model, with a p-value of 0.003, highlighting its crucial role in influencing women's access to land in the study area. In contrast, educational qualification ($p = 0.998$), occupation ($p = 0.815$), religion ($p = 0.812$), marital status ($p = 1.083$), and inheritance ($p = 1.474$) exhibited p-values exceeding 0.05, indicating no significant contribution to the model. Government measures such as creating an environment that encourages job creation and empowers women, enabling them to earn more and secure their rights to property ownership be implemented in order to increase women's access to land.

Keywords: Land access, Women, Binary logistic regression, socio-economic, Ilorin

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Introduction

One of the most vital resources is land, it serves as a significant source of income and a key means of investment, wealth accumulation, and transferring wealth to future generations (Oluwatayo *et al.*, 2023). Land is the primary source of employment opportunities in rural areas; it provides the foundation for housing, food, and economic activity, and is a scarce resource in urban areas. These factors highlight land's importance as a source of revenue, prestige, social status, and power. Access to land has a significant impact on the willingness and capacity to make long-term investments in residential development and arable land. Secure land rights and their protection are essential for physical development (Meinzen-Dick *et al.*, 2019).

In addition to being essential for survival, land is used to attain social standing, financial security, and political influence (Oladehinde *et al.*, 2023). According to Turay and Omirin (2023), land accessibility is defined by the availability of usable land, its affordability, transactional ease, and the protection of the owner's rights. For land to be considered accessible to end users, it must be physically reachable, reasonably priced, easy to transact, and secured by a solid tenure system. In every society, access to land is crucial for poverty reduction and economic advancement. People need access to land and security of tenure to stabilize and increase their income sources and participate in national economic development.

According to Nigeria's 2006 National Population Census, women make up over half of the country's population, 37% of the formal sector, and the majority of the informal economy, which mainly consists of home-based enterprises (Idowu & Owoeye, 2019). However, due to their relative lack of political, social and economic power, women are unable to access and control resources, particularly land. Cultural and religious customs in many Nigerian communities prevent or limit women's access to land. Increasingly, female-headed households are only able to secure unsafe and unhealthy housing in squatter settlements and illegal slums, where they frequently face displacement and eviction (Adedire, 2017).

Oguamanam and Obah (2024) stated that the Land Use Act of 1978 governs land accessibility in Nigeria and guarantees that all Nigerians, regardless of gender, political affiliation, occupation, education, tribe, or religion have equal access to land. In practice, however, access to land is influenced by both the law and the socioeconomic status of the applicant. Socioeconomic factors shape our way of life, and social values such as religion, economic status, education, family, politics,

cultural values, income, inheritance, and occupation can influence an individual's behaviour (Sakariyau *et al*., 2023; Umar *et al.,* 2021). These are the factors and experiences that shape people's personalities, attitudes, and lifestyles (Kayode *et al.,* 2021). Socio-cultural variables include both the social and cultural elements of society. Ajayi and Adebayo (2017) identified several socioeconomic factors affecting women's access to land, such as low economic status, literacy, religious beliefs, the inheritance system, women's disinterest in land matters and employment status.

Nepal's 2011 population census revealed that women own land and property in only 19.71% of households. This demonstrates that women's access to land tenure and ownership is extremely limited. Furthermore, land registration in women's names is primarily an urban phenomenon, mostly used for non-farming purposes (Koirala, 2022). In many countries, cultural and traditional beliefs limit women's access to land and undermine their rights (Chigbu, 2019). One could argue that violence against women has been institutionalized in these countries.

Davison (2019) also noted that in some countries, women traditionally do not inherit land from their fathers or through marriage, which limits their access to collateral and opportunities for productive work. Women's land ownership is a significant issue in developing nations; how land tenure is addressed in development programs may directly affect people's security and standard of living in urban, peri-urban, and rural areas. Land development projects or plans that fail to recognize the land rights of all parties, particularly the weakest and most marginalized, including women, can lead to unexpected challenges and injustices (Nara *et al.,* 2021).

Access to land can be obtained through direct occupancy, purchase, rental exchange, family and kinship groups, or allocation by management authorities, the government, or other landowners. Aluko (2019) emphasised that rights are legally or socially recognized privileges to use, control, and access land and its associated natural resources. However, land access remains a critical issue, particularly from a female perspective. Land tenure stability improves family welfare, provides women with a secure place to live and work (especially if the work is done at home), and enhances their access to financing. Women are more likely to invest in real estate and the environment when households headed by women are granted security of tenure (Adeogun & Alademerin, 2019).

Slavchevska *et al.* (2021) distinguished between land access and land ownership. From the perspective of women's accessibility, land and property rights encompass not only the rights to access and control land acquired through inheritance, market purchase, and state redistribution or resettlement but also information about land rights and decision-making related to mortgaging, leasing, selling, or bequeathing land and houses. This study identifies several critical research gaps regarding the influence of socioeconomic factors on women's access to land in Ilorin, Nigeria.

While existing literature acknowledges various socio-cultural variables affecting land access, region-specific data that capture the unique dynamics of Ilorin remain lacking. Similarly, the relationship between religious beliefs and women's land rights is underexplored, particularly in relation to local inheritance practices in Ilorin, Nigeria. Moreover, the current understanding of role in literacy in raising awareness about land rights is limited, presenting an important area for investigation. Additionally, the cultural stigma surrounding women's involvement in land matters requires deeper analysis to inform interventions, and the implications of institutional violence against women in land ownership contexts need further examination. Finally, the distinction between land access and ownership, particularly in rural versus urban settings, demands more rigorous exploration to inform policy and practice. Addressing these gaps will significantly contribute to understanding and improving women's access to land in Nigeria. It is against this background that this study was conceived.

Literature Review

Women access to land

According to Mukasa *et al.* (2019), women make up around 43% of the agricultural workforce in developing nations worldwide, making them the main driving force behind the expansion of rural and national economies. It should be noted that in Asia, women's land ownership and distribution patterns differ greatly from those of men. Although land is obviously the most important productive asset for generating income in rural regions (Meinzen-Dick *et al.,* 2019), women are less likely than men to own land (Balasubramanian *et al.*, 2019; Doss & Meinzen-Dick, 2020). The majority of land access and ownership in South Asia is held by men (Agarwal, 2018). Additionally, compared to men, women are more likely to own smaller and lower-quality land. While protecting women's land and property rights is seen as essential to guaranteeing efficient and sustainable human development (Meinzen-Dick *et al*., 2019), most rural women in developing nations lack access to and control over land and productive resources (Agarwal, 2018). By reducing poverty, an equitable distribution of productive resources, such as land, between men and women can pave the way for economic prosperity (Doss & Meinzen-Dick, 2020).

Improving women's livelihoods requires ensuring their access to or ownership of land (Agarwal, 2018; Meinzen-Dick *et al.,* 2019). For instance, women's economic status can be improved through equity in the

land tenure system (Han *et al.*, 2019). Protecting women's land rights can help them adopt technology, obtain credit for investments, improve agricultural production, and spend more on food and medical care (Meinzen-Dick *et al.,* 2019). In India, women's access to land was critical in enhancing the ability of poor women to access loan facilities (Santos *et al.,* 2014). In Tanzania, women increased their income by protecting their inherited property rights (Peterman, 2011). According to Goli and Pou (2014), owning land increases a woman's ability to resist inequities. Mishra and Sam (2016) also found that land ownership improved Nepali women's decision-making capacity. Similarly, access to land improved Chinese women's decision-making capacity (Han *et al*., 2019).

In a related development, Adejoh *et al.* (2017) investigated the variables influencing gender access to productive resources for rice production. The findings suggest that gender accessibility to land resources is influenced by age, family size, and cooperative membership. Adebayo (2018) found that occupation was the best predictor. From a gender perspective, Ajayi and Adebayo (2017) investigated the socioeconomic factors influencing residential land accessibility in Akure, Nigeria. The study showed that occupation, income, and education were the best predictors among the examined socioeconomic variables. Odudu (2015) conducted a study on land accessibility among urban crop farmers in the informal sector of Lagos metropolis. The study found that the most significant factors affecting land accessibility among urban crop farmers were usability (6.29%), competition with other users (12.80%), security of tenure (18.06%), affordability (47.61%), and availability (7.29%).

Oyedokun *et al.* (2012) examined urban residents' barriers to land accessibility in Akure. Among other findings, the analysis revealed that a lengthy title registration process, a costly land title registration process, poor government policy, lack of funding, and corrupt land officers all significantly hindered land accessibility in the study area. Jibrin (2012) examined the factors influencing women's participation in the Kaduna State agricultural development project's women-in-agriculture (WIA). At the 5% level of significance, regression analysis showed that age, marital status, and educational attainment were all highly correlated with level of participation. At the 10% level, extension contact and market access were both significantly correlated. Aribigbola (2007) studied Akure's land market and management. The study asserted that the timing of land purchase is an important determinant of land accessibility. Bello (2007) examined participants in the informal sector and their access to land. The study revealed that informal participants were marginalized based on their education, occupation type, and income in terms of access to both government and private lands.

Olayiwola and Adeleye (2006) established that accessibility to land for residential purposes and development projects in urban areas in Nigeria is becoming almost impossible for individuals, particularly for low- and middle-income groups, due to prohibitive prices. The implication of this unequal access to land is that it has forced many urban dwellers into abject poverty due to a lack of legal titles for securing loans to invest in desirable shelter or purchase equipment for economic activities (Mabogunje, 1992). Gbadegesin *et al.* (2016) stated that tenure security is the most crucial accessibility factor, whereas availability (scarcity) ranked last among the factors affecting land accessibility in Lagos urban housing supply. It is also observed that each specified component impacts the others in a unique dimension when it comes to delivering urban housing. Elias *et al.* (2013) examined gender disparity and traditional land ownership in Ghana's Wa Municipality. According to the survey, significant disparities existed between men and women in terms of land ownership and access. Compared to 68% of male respondents, only 38% of female respondents owned land. The patrilineal system of inheritance was mostly responsible for this. The study also found that a high prevalence of female illiteracy, increasing urbanization, and financial limitations were the main causes of the disparity in access to property.

Research Methodology

The target population for this study was households (specifically women) in Ilorin West Local Government. According to the National Population Census (2006), Ilorin West has a population of 45,745 women who are above 35 years of age. This population was projected, and a figure of 63,312 was arrived at. Yamane's (1967) formula for determining sample size was applied, and a sample size of 397 respondents was determined for the study. A simple random sampling technique was used to select the women households in Ilorin West Local Government.

Primary data for this study were sourced directly from field surveys using structured questionnaires. The questionnaire, as a type of instrument, reduces the cost of postage, travel, and interviewer bias (Mutepfam & Tapera, 2019). The questionnaire contained open-ended questions in the pilot study and close-ended questions in the field study, measured on a 5-point Likert scale. Open- and close-ended questions have been described by Mutepfa and Tapera (2019) as preferable in questionnaire design. The use of the scale was adopted because, according to Al Baghal *et al.* (2020), it ensures that questions or statements are posed in a fair and balanced way, especially in measuring the strength of attitude and perception. A total of 334 questionnaires

were returned for analysis, representing 84% of the distributed questionnaires. Binary logistic regression was employed to determine the influence of socio-economic factors on women's access to land in Ilorin. Other similar studies that have adopted questionnaires and logistic regression include Adejoh *et al.* (2017), Adebayo (2018) and Ajayi and Adebayo (2017). According to McDonald (2014), logistic regression is used to analyse data that have one nominal variable with two values (e.g., male/female, dead/alive, true/false) and one measurement variable. The binary logistic variable was chosen because it is specifically designed to model such dichotomous dependent variables, making it a suitable choice (Boateng & Abaye, 2019).

More importantly, socio-economic factors such as income level, education, marital status, and occupation vary widely among individuals. Binary logistic regression allows for the examination of these factors simultaneously to identify which ones significantly influence land access (Salam et al., 2024). The model provides odds ratios for each socio-economic factor, making it easier to interpret the strength and direction of their influence on women's access to land (Salam et al., 2024). This can help policymakers understand which factors are most impactful. In summary, binary logistic regression is a robust statistical tool that aligns well with the research objectives and data characteristics, making it an appropriate choice for studying the influence of socio-economic factors on women's access to land in Ilorin. The independent variables were the socio-economic characteristics of respondents, which included income, educational level, occupation, religious belief, marital status, and inheritance, while the dependent variable was women's access to land. The logistic regression model is given as follows:

$(p) = b_0 + b_1X_1 + b_2 X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6$

Where p = access to land,

b_0 = constant

b_1, b_2, b_3, b_4, b_5, b_6 = regression coefficient

X_1 =Income

X_2 = Education level

X_3= Occupation

X_4 = Religion belief

X_5 =Marriage status

X_6 = Inheritance

Results and Discussion

Demographic Information of Respondents

Respondent demographic information: it is crucial to get information about the respondent's age, religion, marital status, education level, occupation, and income. Table 1 revealed that the majority of respondents were aged between 45 and 55 years, comprising 41.3% of the total respondents. Muslims accounted for 95.2% of the respondents, while Christians made up 4.8%, indicating that the study area is dominated by Islam religion. A large percentage of the respondents were married, constituting 92.2%. Regarding the educational level of the respondents, 71.8% had tertiary education, 24.9% had secondary education, and 3.3% had primary education. A significant proportion of respondents, 46.1%, were self-employed, and 27.3% of the respondents reported an average income in the range of N38,000 to N58,000.

Table 1: Demographic Characteristics of Respondents

Characteristics of respondents	Frequency	Percentage %
Age group		
35-45 years	79	23.7
45-55 years	138	41.3
55-65 years	91	27.2
65 years and above	26	7.8
Total	334	100
Religion		
Christianity	16	4.8
Islam	318	95.2
Traditional	-	-
Total	334	100
Marital Status		
Single	3	0.9
Married	308	92.2
Divorced	4	1.2
Widowed	19	5.7
Total	334	100
Educational qualification		
Primary	11	3.3
Secondary	83	24.9
Tertiary	240	71.8
Total	334	100
Occupation Status		
Government employment	75	22.5
Private employment	68	20.4
Self employed	154	46.1
No employment	37	11.1
Total	334	100

Socio-economic factors were evaluated using binary logistic regression to determine their influence on women's access to land in the study area. The results of the analysis are presented as follows:
Table 2 presents the results of the analysis without any independent variables included in the model, serving as a baseline for later comparison with the model that includes the predictor (independent) variables. The overall percentage of correctly classified cases was 62.9%.

Table 2: Classification Table of influence of Socio-Economic factor

	Observed		Predicted		
			Access to Land		Percentage
			No access	Access	Correct
Step 0	ACCESS TO LAND	No access	210	0	100.0
		Access	124	0	.0
	Overall Percentage				62.9

Table 3 shows how well the model predicted the correct category (No access/Access) for each case. The result in Table 2 is compared with that of Table 3 to assess the improvement when the predictor (independent) variables are included in the model. The model in Table 3 correctly classified 65.9% of the cases overall (referred to as the percentage accuracy in classification, PAC), which is an improvement over the 62.9% in Table 2.

Table3: Socio-Economic factor

	Observed		Predicted		
			Access to Land		Percentage Correct
			No access	Access	
Step 0	ACCESS TO LAND	No access	186	24	88.6
		Access	90	34	27.4
	Overall Percentage				65.9

Table 4 presents an overall indication of how well the data fit the model. For this set of result, a highly significant value which should be less than 0.05 is needed. Hence, the result from Table 3 in the column labelled significance is 0.000 which means that the value of p is less than 0.005. The chi-square value is 36.138 with 10 as degree of freedom.

Table 4: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	36.138	10	.000
	Block	36.138	10	.000
	Model	36.138	10	.000

The HosmerLemeshow goodness of fit test is displayed in Table 5; a significance value below 0.05 indicates a poor fit, hence a value over 0.05 is required to validate the model. The chi-square value from Table 4 is 9.571 at the 0.296 significance level (Pedersen, 2023). The significance level exceeds 0.05. This implies that the Hosmer and Lemeshow Test show that the model is worthwhile (Liu *et al*., 2024).

Table5: Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	9.571	8	.296

Table 6 presents the model summary, with a -2 Log Likelihood statistic of 404.489a. The Cox and Snell R Square and Nagelkerke R Square values provide an indication of the variation in the dependent variable explained by the model. The values are 0.103 (10.3%) for Cox and Snell R Square and 0.140 (14%) for

Nagelkerke R Square, suggesting that between 10.3% and 14% of the variability is explained by this set of independent variables.

Table 6: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	404.489[a]	.103	.140

Table 7 presents the variables in the equation, providing information about the effect of each predictor variable on women's access to land in the study area. The Wald Test statistic for each predictor is shown in the column labelled "Wald" in Table 6. In the column labelled "Significance," values less than 0.05 indicate variables that contribute significantly to the predictive ability of the model, while values greater than 0.05 indicate variables that do not contribute significantly to the predictive ability of the model. The model contains six independent variables.

As shown in Table 7, only the variable "Income" is statistically significant to the model because its p-value is 0.003, which is less than 0.05. This means it contributes significantly to the predictive ability of the model. The implication is that income is the major contributing factor influencing women's access to land in the study area. In contrast, the variables educational qualification (p = 0.998), occupation (p = 0.815), religion (p = 0.812), marital status (p = 1.083), and inheritance (p = 1.474) have p-values greater than 0.05, indicating they do not contribute significantly to the model. This implies that these five variables do not influence women's access to land in the study area.

Additionally, the B values provided in Table 7 indicate the direction of the relationship (positive or negative) between the dependent and each independent variable. Negative B values suggest that an increase in the independent variable score will result in a decreased probability of recording a score of 1 (access to land) for the dependent variable. From the table, educational qualification, occupation, and religion show negative B values (-0.002, -0.204, and -0.208, respectively). This implies that if educational qualification, occupation, and religion increase, the probability of having access to land decreases.

The Exp. (B) value column in Table 7 presents the odds ratios (OR) for each independent variable. The variable "Income" is significant at p = 0.003. The odds ratio for this variable is 1.374, a value greater than 1. This indicates that higher income increases the likelihood of respondents having access to land.

Table 7: Variables in the Equation

		B	S.E.	Wald	Df	Sig.	Exp. (B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1[a]	Income	.043	.320	9.094	1	.003	1.374	.894	2.756
	Eduqualf	-.002	.258	.000	1	.995	.998	0.262	3.985
	Occupationsta	-.204	.151	1.831	1	.176	.815	2.506	6.767
	Religion	-.208	.570	.133	1	.716	.812	.370	3.658
	Marrgstatus	.080	.160	.248	1	.619	1.083	.558	4.249
	Inheritance	.388	.282	1.897	1	.168	1.094	.634	4.732
	Constant	-.773	1.145	.455	1	.500	.462		

a. Variable(s) entered on step1: Income, Eduqualf, Occupationsta, Religion, Marrgstatus, inheritance

Conclusion

This study investigated the influence of socioeconomic factors on women's access to land in Ilorin, Nigeria. Using a binary logistic regression model, the study identified the variables that significantly impact women's access to land in the study area. The findings revealed that the majority of women in the study area lacked access to land, with income being the most critical socioeconomic factor influencing this access. The study, therefore, recommends that the government design programmes to enhance women's access to land, create an enabling environment for more job opportunities, and improve existing jobs to increase women's income. This, in turn, will boost women's per capita income and purchasing power, enabling them to acquire land. Additionally, the government should prioritize women's economic empowerment programs in key development policies to address the high rate of female unemployment. One of the limitations of the study is that it overlooked qualitative aspects like cultural norms. This has thus led to an incomplete understanding of barriers faced by women. Future

research should include qualitative approaches and consider broader geographic contexts for better generalisability.

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