Gender Disparities in Land Ownership and Their Effects on Cassava Productivity: Evidence from Enugu State, Nigeria

Ogechi Lynda Egwue[1], Adewale Isaac Olutumise[2], Chibuzo Lucy Nnadi[1], Stanley Chukwudi Anugwo[3], Temitope Olanrewaju Bello[4], Abiodun Festus Akinrotimi[5], Chinasa Sylvia Onyenekwe[1],

[1] Department of Agricultural Economics, University of Nigeria, Nsukka, Obukpa Rd, Nsukka 410105, Enugu State, Nigeria.
[2]Department of Agricultural Economics, Adekunle Ajasin University, P.M.B. 001, Akungba-Akoko, Ondo State, Nigeria.
[3]Department of Agricultural Economics and Farm Management, Federal University Oye-Ekiti, P. M. B. 373, Km 3 Oye–Afao Road, Oye-Ekiti, Ekiti State, Nigeria.
[4]Department of Agricultural and Resource Economics, Federal University of Technology, P.M.B. 704, Akure, Ondo State, Nigeria.
[5]Ondo State Produce Inspection Service, Ministry of Agriculture and Forestry, Alagbaka-Akure, Ondo State, Nigeria.

Abstract
In Sub-Saharan Africa, gender disparities in land ownership persist as a critical barrier to agricultural productivity and inclusive development. In Nigeria, where cassava serves as both a staple food and an income source, these disparities remain under-examined at subnational levels. This study investigates the extent and effect of gender-based land inequality on cassava productivity in Enugu State, Nigeria. A multistage random sampling technique was used to select 120 cassava farmers (60 males and 60 females) across three LGAs. Data were collected via structured questionnaires and analysed using descriptive statistics and Ordinary Least Squares (OLS) regression. The findings revealed that 83.3% of female respondents do not own land, compared to 35.0% of males. Regression analysis showed that land ownership ($\beta = 0.050$, $p < 0.01$) positively influenced cassava output among women, while land disputes ($\beta = –1.207$, $p < 0.01$) and lack of equal rights ($\beta = –0.234$, $p < 0.05$) negatively affected their productivity. For male farmers, the number of agricultural lands owned ($\beta = 0.381$, $p < 0.05$) was the most significant positive determinant. The model explained 46.5% and 34.8% of the variation in cassava output for females and males, respectively. The study confirms that secure land tenure significantly improves cassava productivity, particularly for women. Cultural norms, inheritance practices, and limited legal awareness were the most cited constraints to land access. Bridging gender gaps in land rights through policy reform, community sensitisation, and legal empowerment is essential for enhancing agricultural performance and gender equity.
Keywords: Gender inequality, land tenure, cassava productivity, OLS regression, agricultural development, Nigeria.

1. Introduction

Agriculture remains the backbone of many Sub-Saharan African economies, not only as a source of food and employment but also as a cornerstone of rural livelihoods and economic development (Staatz & Dembele, 2008; Moyo, 2016; Muzari, 2016; Odusola, 2017; Modi, 2018). In Nigeria, cassava (*Manihot esculenta*) plays a particularly vital role, serving as a primary staple food, a source of household income, and a growing component of industrial supply chains (Anyanwu et al., 2015; Ikuemonisan & Akinbola, 2021; Onyediako & Adiele, 2022; Olutumise et al., 2024). Nigeria is the world's largest producer of cassava, accounting

for more than 20% of global output, with states like Enugu serving as important hubs for production and processing (FAOSTAT, 2023). However, despite its strategic value, cassava farming is fraught with productivity constraints, many of which are rooted in systemic land inequalities along gender lines.

Land is central to agricultural productivity. It is the platform for cultivation, the basis for collateral in accessing credit, and a primary factor influencing investment decisions among smallholder farmers (Deininger & Jin, 2006; Holden & Ghebru, 2016; Lawry et al., 2017). Yet, access to land in Nigeria remains highly inequitable, particularly for women. Gender disparities in land tenure, often driven by patriarchal inheritance norms, weak legal enforcement, and discriminatory cultural practices, disproportionately affect female farmers' ability to own, access, and control agricultural land (Uduji et al., 2025; Nwaekpe, 2024). These inequalities are not merely symbolic; they translate into measurable differences in productivity, input adoption, and income, especially in cassava value chains where women play critical but underrecognized roles in cultivation and processing (Alabuja et al., 2023).

Recent studies (e.g., Uduji & Okolo-Obasi, 2019; Daudu et al., 2022; Balas & Lemmen, 2022; Liu, 2022) underscore the pressing nature of this inequality. In Nigeria's oil-producing regions, Uduji et al. (2025) found that corporate social responsibility (CSR) initiatives that increased women's access to land and inputs had significant positive effects on cassava output and economic inclusion. Similarly, Nwaekpe (2024) revealed gendered differences in the uptake of improved cassava technologies across Southeast Nigeria, linking lower adoption rates among women to weaker tenure security and limited decision-making power. Despite their central role in cassava production, women remain systematically marginalised in land allocation and ownership structures, leading to a cascade of productivity losses, inefficient resource utilisation, and entrenched poverty cycles. The implications of gendered land inequality extend beyond individual livelihoods. They pose fundamental barriers to national food security, sustainable agricultural transformation, and economic resilience. FAO (2021) estimates that equalising access to agricultural inputs, including land, between men and women could increase overall farm yields in developing countries by as much as 20–30%. In the Nigerian context, such equity could significantly boost cassava output and enhance rural income, especially in regions like Enugu State, where farming remains the primary occupation and women constitute a substantial proportion of the agricultural workforce.

However, despite the growing recognition of gender in agricultural policy discourse, there remains a lack of regionally focused, empirically grounded research that dissects the specific links between land tenure inequality and cassava productivity outcomes at the local level. Most studies on gender and land access in Nigeria are conducted at the national or zonal level, often glossing over micro-regional dynamics that shape land use, inheritance patterns, and farmer behaviour (Donkor et al., 2022; Doss et al., 2020). Even fewer studies explicitly examine how these gendered constraints manifest in cassava farming systems, a gap that is particularly stark given cassava's importance as both a "women's crop" and an economic driver in southeastern Nigeria. This study seeks to bridge these knowledge gaps by providing a focused empirical analysis of gendered land inequality and its effect on cassava productivity in Enugu State, Nigeria. By examining land access, ownership structures, dispute prevalence, and perceived tenure security among male and female cassava farmers, this research provides a nuanced understanding of how gendered power relations shape agricultural outcomes. It also builds upon recent calls for gender-responsive land policies and development programming that address not only legal reforms but also customary and sociocultural barriers (Meinzen-Dick et al., 2021).

Despite the pivotal role of cassava in household economies and national food systems, women cassava farmers in Enugu State remain disadvantaged by entrenched land tenure systems. These gendered inequalities are compounded by weak institutional enforcement of land rights,

limited credit access, and socio-cultural norms that favour male inheritance and control. While previous studies have acknowledged the existence of these barriers, little is known about their quantitative impact on cassava productivity outcomes. Without this evidence, current policy responses remain inadequate or misdirected. Although there is a broad consensus that land ownership affects agricultural outcomes, few studies rigorously quantify this relationship through gender-disaggregated econometric analysis. Many papers offer descriptive accounts of inequality or general productivity gaps but do not measure the direct effect of land tenure variables, such as ownership status, dispute experience, and tenure security, on output across male and female farmers. Recent studies call attention to this gap. For example, Alabuja et al. (2023) discuss income disparities in female-headed cassava households but stop short of linking these outcomes to land tenure forms. Similarly, while Owoicho et al. (2023) document gendered constraints to land access, they do not provide regression-based analysis on how such constraints directly influence yields or farm output. This weakens the ability to establish causal or correlational pathways needed for targeted interventions.

The broad objective of this study is to examine the effects of gender disparities in agricultural land ownership on cassava productivity in Enugu State, Nigeria. The specific objectives are to:

1. Describe the socio-economic characteristics of male and female cassava farmers in the study area.
2. Examine the extent and nature of gender disparities in agricultural land ownership and tenure.
3. Investigate the effect of land ownership disparities on cassava production across genders.
4. Identify the socio-cultural and institutional factors contributing to gendered land tenure constraints.

2. Materials and Methods

2.1 Study Area

The study was conducted in Enugu State, located in Nigeria's South-East geopolitical zone (Figure 1). It shares boundaries with Ebonyi, Benue, Kogi, Anambra, Abia, and Imo States. The climate is tropical with annual temperatures ranging between 27°C and 28°C, and peak rainfall occurring in July. The state lies within the derived savannah vegetation zone, featuring drought-resistant flora and remnant forest patches. This study focused on Nsukka, Udenu, and Igboeze North LGAs in the northern part of the state. Nsukka covers 463 km² and lies 356m above sea level. Udenu spans 248 km² and consists of 25 autonomous communities across three development centres. Igboeze North, bordering Kogi and Benue States, has a land area of 293 km². Farming and trading are the primary livelihoods, with both genders engaged in cassava, maize, yam, and livestock production. Farmlands are typically accessed via inheritance or lease, with predominant practices including shifting cultivation and mixed cropping (Opata, 2017).

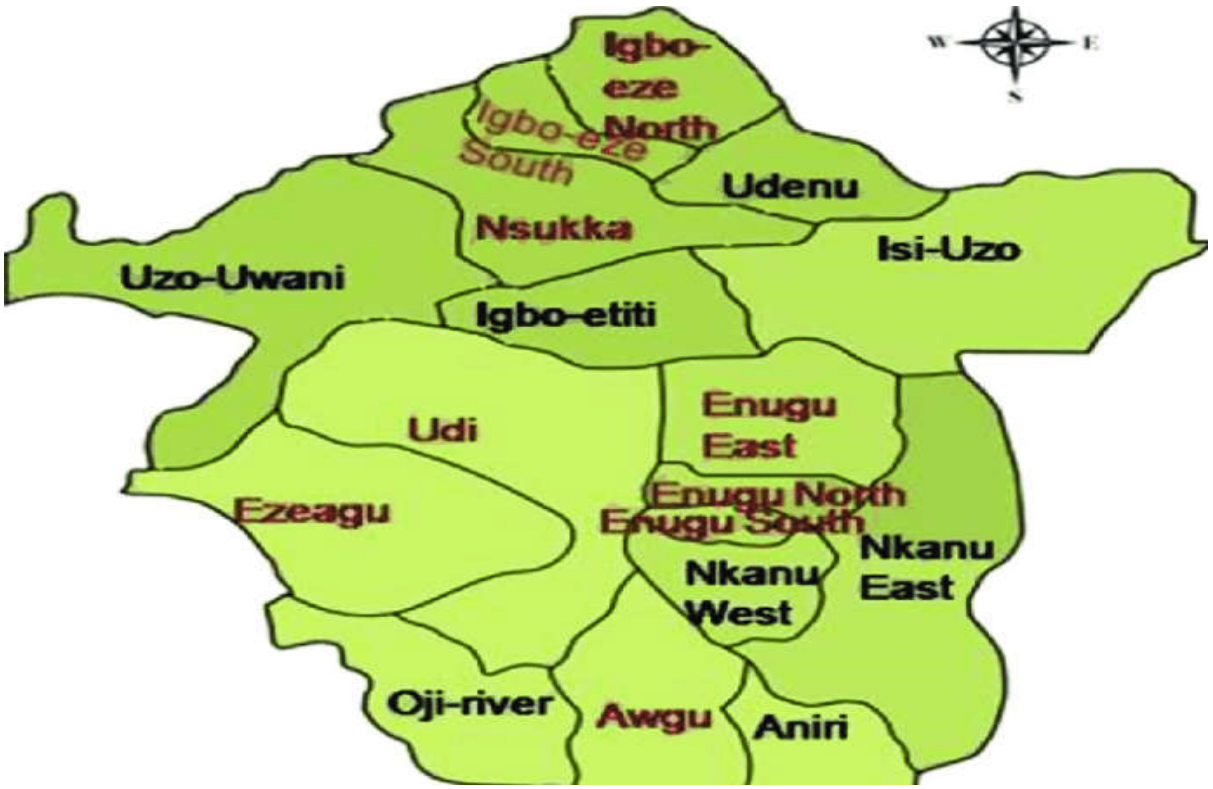

Figure 1: Map of Enugu State.
Source: Adopted from Okoroafor et al. (2020)

2.2 Sampling Technique, Data Collection, and Analysis

A multi-stage sampling technique was adopted to select respondents for this study. First, three Local Government Areas (LGAs) (Nsukka, Udenu, and Igboeze North) were randomly selected from Enugu State. Two communities were then randomly selected from each LGA, yielding six communities. From each community, two villages were randomly chosen, resulting in 12 villages. Finally, ten cassava farmers were randomly sampled from each village, producing a total sample size of 120 respondents.

Primary data were collected through a structured questionnaire designed around the study's objectives. Section A captured socio-economic characteristics; Section B assessed gender disparities in agricultural land ownership; Section C evaluated the impact of these disparities on cassava production; Section D identified contributing factors to tenure inequality; and Section E explored constraints to land tenure security. The instrument was subjected to content, face, and construct validation with expert input from the Department of Agricultural Economics, University of Nigeria, Nsukka.

Data analysis combined descriptive and inferential statistics.

Model Specification

To empirically estimate the effect of gender-disaggregated land ownership variables on cassava productivity, this study employed Ordinary Least Squares (OLS) regression analysis. Given the complex nature of agricultural productivity and its sensitivity to both quantitative (e.g., land size) and qualitative (e.g., ownership security, dispute status) variables, three functional forms were specified to ensure robustness and improve model interpretability: Linear, Semi-log, and Double-log.

Let:

Y_i = Cassava output (measured in tonnes)

X_1 = Land ownership (dummy: 1 = owns land, 0 = does not)

X_2 = Number of agricultural lands owned (continuous)
X_3 = Land acquisition method (categorical proxy recoded numerically)
X_4 = Land dispute experience (dummy: 1 = yes, 0 = no)
X_5 = Security of land rights (dummy: 1 = secure, 0 = not secure)
ε_i = Stochastic error term
The following functional forms were estimated to choose the one that best describes the statistical, theoretical and economic criteria for the production function.

Linear functional form

$$Yi = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + Ui$$

Double Log functional form

$$\text{Log } Yi = b_0 + b_{1\log}X_1 + b_{2\log}X_2 + b_{3\log}X_3 + b_{4\log}X_4 + b_{5\log}X_5 + Ui$$

Semi-log functional form

$$Yi = b_0 + b_{1\log}X_1 + b_{2\log}X_2 + b_{3\log}X_3 + b_{4\log}X_4 + b_{5\log}X_5 + Ui$$

Based on empirical diagnostics, the Linear model was chosen as the lead equation for interpretation due to its superior goodness-of-fit and alignment with a priori expectations. However, results from the Semi-log and Double-log models are presented to validate the consistency and robustness of findings.

3. Results and Discussion

3.1 Socio-Economic Characteristics of Respondents

The socio-economic characteristics of cassava farmers in the study area provide a critical context for understanding gender disparities in agricultural land ownership and productivity as presented in Table 1. A balanced sample of 120 respondents (60 males and 60 females) reveals that the majority of farmers (60%) are between 31–45 years, indicating a predominantly active working-age population. Similar results were reported by Olutumise et al. (2024), Afolayan et al. (2024) and Bello (2025), that most farmers are in their productive age. Educational attainment is similar across genders, with over half of both male and female respondents completing secondary education, and 25% attaining tertiary education, reflecting improved but not universal access to education. Farming remains the primary occupation (40%), followed by trading and artisan work. While income levels are generally comparable, a slightly higher proportion of males earn above ₦1,000,000 annually, whereas more females fall within the lowest income bracket. This marginal income disparity mirrors broader trends of gendered wage gaps in agrarian communities (Fatuase et al., 2017; UNDP, 2021; Olutumise et al., 2023; Oparinde et al., 2023). Household sizes are largely consistent between genders, with most households having 4–6 members. Notably, males are slightly more likely to reside in larger households, potentially reflecting extended family structures. Farm size distribution indicates that men are more likely to control larger plots, with 13.3% cultivating above 5 hectares compared to 10.0% of women. Conversely, more women operate on plots below 0.5 hectares, reinforcing findings on gendered land access inequalities (Agarwal, 2020; Olutumise et al., 2023). While 50% of both male and female respondents report access to credit, sources vary subtly by gender. Women tend to rely more on informal credit channels such as family/friends and government schemes, whereas men report slightly higher access to formal sources like bank loans, an observation supported by FAO (2021) and Demirgüç-Kunt et al. (2021). These patterns collectively suggest that although socio-economic indicators appear gender-balanced in some respects, persistent differences in land size and income reflect deeper structural inequalities affecting women's agricultural potential.

Table 1: Distribution of respondents according to their Socio-economic characteristics

Socio-economic characteristics	Male		Female		Pooled	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Age						
18-30	5	8.3	5	8.3	10	8.3
31-45	36	60.0	36	60.0	72	60.0
46-60	19	31.7	18	30.0	37	30.8
Above 60	0	0.0	1	1.7	1	0.8
Gender						
Male	60	50.0	-	-	60	50.0
Female	-	-	60	50.0	60	50.0
Religious						
Christian	45	75.0	45	75.0	90	75.0
Islam	5	8.3	5	8.3	10	8.3
Traditional	4	6.7	4	6.7	8	6.7
Others	6	10.0	6	10.0	12	10.0
Marital Status						
Married	39	65.0	39	65.0	78	65.0
Single	7	11.7	7	11.7	14	11.7
Divorced	4	6.7	4	6.7	8	6.7
Widow/Widower	5	8.3	6	10.0	11	9.2
Other	5	8.3	4	6.7	9	7.5
Highest Level of Education						
No formal education	6	10.0	6	10.0	12	10.0
Primary	8	13.3	8	13.3	16	13.3
Secondary	30	50.0	31	51.7	61	50.8
Tertiary	15	25.0	15	25.0	30	25.0
Other	1	1.7	0	0.0	1	0.8
Primary Occupation						
Farming	24	40.0	24	40.0	48	40.0
Trading	14	23.3	15	25.0	29	24.2
Civil Servant	8	13.3	8	13.3	16	13.3
Artisan	13	21.7	13	21.7	26	21.7
Others	1	1.7	0	0.0	1	0.8
Annual Income						
Below ₦100,000	6	10.0	7	11.7	13	10.8
₦100,000 - ₦500,000	37	61.7	37	61.7	74	61.7
₦500,000 - ₦1,000,000	9	15.0	9	15.0	18	15.0
₦1,000,000 and above	8	13.3	7	11.7	15	12.5
Household Size						
1-3 members	10	16.7	10	16.7	20	16.7
4-6 members	26	43.3	27	45.0	53	44.2

7-9 members	20	33.3	20	33.3	40	33.3
10 members and above	4	6.7	3	5.0	7	5.8
Farm size (hectares)						
Below 0.5 ha	9	15.0	10	16.7	19	15.8
0.5 - 1.0 ha	15	25.0	16	26.7	31	25.8
1.1 - 2.0 ha	10	16.7	10	16.7	20	16.7
2.1 - 5.0 ha	18	30.0	18	30.0	36	30.0
Above 5.0 ha	8	13.3	6	10.0	14	11.7
Access to Credit						
Yes	21	50.0	18	50.0	39	32.5
No	39	50.0	42	50.0	81	67.5
Source of credit						
Personal savings	13	21.7	13	21.7	26	21.7
Family/friends	10	16.7	11	18.3	21	17.5
Bank loan	15	25.0	14	23.3	29	24.2
Government loans	8	13.3	9	15.0	17	14.2
Cooperative societies	14	23.3	13	21.7	27	22.5

3.2 Extent of Gender Disparities in Agricultural Land Ownership

Findings from the study in Table 2 reveal profound gender-based disparities in agricultural land ownership across the study area. Of the total respondents, 83.3% of female farmers reported no land ownership, compared to 35.0% of males, highlighting a systemic imbalance rooted in socio-cultural and legal constraints (Meinzen-Dick et al., 2019; Agarwal, 1994). Among those who own land, men disproportionately control larger parcels. For example, 21.7% of males own 4–6 hectares compared to just 1.7% of females, and 11.7% of males own more than 6 hectares compared to 1.7% of females, reinforcing previous evidence that women not only own less land but also smaller plots (FAO, 2018; Doss et al., 2015).

Acquisition methods further demonstrate structural disadvantages: while 20.0% of men acquired land through inheritance, only 1.7% of women did. Financial barriers may explain why fewer women purchase land (6.7%) relative to men (13.3%), as documented by Quisumbing et al. (2001). In contrast, women rely more heavily on informal or temporary arrangements such as leasing, reflecting their precarious tenure status (Doss & Meinzen-Dick, 2020). Notably, 100% of female respondents reported lacking secure rights to the land they use, compared to 38.3% of males. This absence of tenure security undermines women's incentives and ability to make long-term agricultural investments (Meinzen-Dick et al., 2019; FAO, 2021). Despite this, reported experiences with land disputes were lower among women (13.3%) than men (26.7%), likely due to their reduced formal claims or limited land control, rather than greater security (Deere & León, 2001; Lastarria-Cornhiel, 1997). These findings emphasise the urgent need for gender-sensitive land reforms, particularly in strengthening legal protections, inheritance rights, and secure tenure systems for women farmers in Nigeria.

Table 2: Distribution of respondents according to the extent of gender disparities in agricultural land ownership

Variables	Male		Female		Pooled	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Land ownership						
Do not own land	21	35.0	50	83.3	71	59.2
Own land	39	65.0	10	16.7	49	40.8
Land size						
Less than 1 hectare	5	8.33	5	8.3	10	8.3
1-3 hectares	14	23.33	3	5.0	17	14.2
4-6 hectares	13	21.67	1	1.7	14	11.7
More than 6 hectares	7	11.67	1	1.7	8	6.7
Land acquisition method						
Inherited	12	20.0	1	1.7	28	23.3
Purchased	8	13.3	4	6.7	15	12.5
Gifted	10	16.7	Nil	Nil	13	10.8
Rented/Leased	4	6.7	1	1.7	30	25.0
Communal/Family Land	4	6.7	3	5.0	8	6.7
Government Allocation	1	1.7	1	1.7	2	1.7
Secure Rights to the Land						
Secure rights	37	61.7	Nil	Nil	37	30.8
No-secure	23	38.3	60	100.0	83	69.2
Experienced any dispute						
Disputes	16	26.7	8	13.3	24	20.0
No dispute	44	73.3	52	86.7	96	80.0

3.3 Effect of Land Ownership Factors on Cassava Production Across Gender

An Ordinary Least Squares (OLS) regression was conducted in Table 3 to examine how land ownership dynamics affect cassava production among male and female farmers in Enugu State. Three functional forms (Linear, Semi-log, and Double-log) were tested, with the Linear model selected as the lead equation based on its statistical robustness, theoretical consistency, and superior fit (highest number of significant variables, favourable R^2 and F-statistics).

For male farmers, the model explains 34.84% ($R^2 = 0.348$) of the variance in cassava output, while for female farmers, it explains 46.49% ($R^2 = 0.465$), suggesting a stronger model fit for females. F-statistics were significant at the 5% level for both models, validating their overall reliability.

Among female farmers, land ownership (coefficient = 0.050454, $p < 0.01$) emerged as a strong positive determinant of cassava output. Secure land tenure enables women to invest confidently, access credit, and adopt sustainable practices, echoing findings by Doss et al. (2018) and Njuki et al. (2022).

For males, the number of agricultural lands owned (coefficient = 0.381022, $p < 0.05$) was significantly positive, indicating scale advantages in production. This supports Wekesah & Mutua (2019), who found land consolidation crucial for productivity and investment efficiency. Conversely, land disputes had a significant negative effect among female farmers (coefficient = -1.207354, $p < 0.01$), deterring long-term investments due to insecurity and exclusion from dispute resolution systems, as emphasised by Meinzen-Dick & Pradhan (2020).

Additionally, the lack of equal land rights negatively impacted women's productivity (coefficient = -0.234612, $p < 0.05$). This finding aligns with Fatuase et al. (2017) and Quisumbing et al. (2021), who highlight how legal and customary barriers to gender equality restrict women's agricultural potential.

Table 3: OLS Multiple Regression Results for the Effect of Land Ownership Factors on Cassava Production by Gender

Variables	Male Farmers		Female Farmers	
	Coefficient	t-Statistic	Coefficient	t-Statistic
Constant	2.029***	3.074	3.514***	3.287
Land ownership	-0.0039	-0.008	0.050***	5.020
Agricultural lands owned	0.381**	2.540	0.253	0.242
Land acquisition method	-0.090	-0.745	0.042	0.153
Land dispute experience	-0.464	-1.094	-1.207***	-4.339
Secure land rights	-0.748*	-1.845	-1.592	-1.561
Model Summary				
R-squared	0.348		0.465	
Adjusted R-squared	0.278		0.422	
F-statistic	4.919***		5.750***	
Prob (F-statistic)	0.001		0.008	
S.E. of regression	0.939		2.221	
Mean dependent variable	2.615		3.550	
Durbin-Watson stat	2.382		2.050	

Notes:
Significance levels: *p < 0.01, p < 0.05, *p < 0.1*
Dependent Variable: Cassava Production

3.4 Factors Contributing to Gender Disparities in Land Ownership

The persistence of gender disparities in land ownership is influenced by a range of socio-cultural, institutional, and economic factors. Table 4 presents the distribution of respondents' perceptions across six key contributing domains: cultural/traditional practices, legal restrictions, economic constraints, education levels, inheritance norms, and awareness of land rights. A majority of respondents (58.3%) identified cultural and traditional practices as central to gendered inequalities in land access. These norms, deeply embedded in patriarchal customs, often prioritise male inheritance and land control, relegating women to dependent roles. As noted by Agarwal (2021), these customs not only restrict women's access to land but also limit their decision-making power in agricultural production. This finding highlights the critical need for community-based sensitisation programs to challenge entrenched gender norms and promote inclusive land governance.

While only 14.2% of respondents acknowledged legal restrictions, this may reflect a perception that statutory laws are gender-neutral. However, the gap between policy and practice is significant. Legal frameworks in many African countries may affirm women's land rights, but poor enforcement and cultural overrides often render them ineffective (Njuki et al., 2022). This suggests a need to strengthen institutional enforcement and enhance women's legal literacy.

Economic factors were cited by 53.3% of respondents as a barrier. Many women in rural areas lack access to financial resources, credit, and income-generating opportunities, making it difficult to purchase or lease land. These findings are supported by Quisumbing et al. (2021), who emphasise the financial marginalisation of women in land markets. Addressing these disparities requires targeted interventions in financial inclusion and women's economic empowerment.

Although education levels were noted by only 15% of respondents, the role of education in empowering women to claim and defend land rights is well-documented. Education enhances awareness, negotiation capacity, and legal navigation skills (Masamha et al., 2019). The low recognition of this factor points to the need for greater investment in female education and rural awareness campaigns. Inheritance laws were identified by 51.7% as a significant constraint. Customary inheritance systems often exclude women, favouring male heirs despite statutory provisions guaranteeing equality. This duality of legal systems exacerbates gender gaps in land

access (Agarwal, 2021). Legal harmonisation between statutory and customary systems is essential to protect women's rights. Lastly, a lack of awareness of land rights was highlighted by 59.2% of respondents. Many women remain uninformed about their entitlements under the law, especially in rural contexts, making them less likely to assert or defend their claims (Njuki et al., 2022). Legal education initiatives and community-based rights campaigns can help bridge this gap and promote equitable land access.

Table 4: Perceived Factors Contributing to Gender Disparities in Land Ownership

Factor	Yes (frequency)	Yes (%)	No (frequency)	No (%)
Cultural/Traditional Practices	70	58.3%	50	41.7%
Legal Restrictions	17	14.2%	103	85.8%
Economic Factors	64	53.3%	56	46.7%
Education Levels	18	15.0%	102	85.0%
Inheritance Laws	62	51.7%	58	48.3%
Lack of Awareness of Land Rights	71	59.2%	49	40.8%

4. Conclusion and Recommendations

This study has empirically demonstrated that gender disparities in agricultural land ownership significantly constrain cassava productivity in Enugu State, Nigeria. Despite cassava's critical importance to food security, household income, and industrial supply chains, especially in the southeastern region, women remain systematically disadvantaged in accessing and owning land. The findings reveal that female farmers not only own less land compared to their male counterparts but also experience lower land tenure security, more frequent access via temporary arrangements, and diminished rights to land inheritance. These disparities are rooted in entrenched socio-cultural norms, ineffective legal frameworks, and economic marginalisation. OLS regression results further reinforce the central role of secure land rights in agricultural productivity. For female farmers, land ownership is positively and significantly associated with cassava output, while experiences of land disputes and lack of equal rights have significant negative effects. Conversely, male farmers benefit from scale economies through the number of agricultural lands owned. These results confirm that land tenure inequality is not merely a rights issue; it is a productivity and economic inclusion issue that reinforces structural disadvantages in rural livelihoods. Moreover, the study identifies cultural norms, lack of awareness of land rights, inheritance laws, and economic barriers as the major drivers of gender inequality in land ownership. The low acknowledgement of legal and educational factors highlights a critical gap in policy implementation and awareness. The persistence of these constraints not only undermines women's agency in agriculture but also hampers broader efforts toward sustainable development, gender equality, and national food security.

To address the systemic challenges unveiled in this study, government and legislative bodies should harmonise statutory and customary land laws to ensure women's land rights are not just theoretically affirmed but practically enforceable. Specialised land tribunals should be established in rural areas to expedite gender-sensitive land dispute resolution. Also, the federal and state-level land reforms must include provisions that guarantee and monitor equitable land access for women. Policies should mandate the inclusion of women in local land allocation committees and community decision-making structures. Targeted cultural sensitisation programs should be deployed to challenge patriarchal norms that limit women's land ownership. These initiatives must engage traditional rulers, local leaders, and religious authorities as change agents. Civil society organisations and government agencies should run consistent legal education campaigns, especially in rural communities, to inform women about their land rights and the legal avenues available for redress. Again, financial inclusion

initiatives should be expanded to provide women farmers with access to credit, land purchase grants, and subsidised lease schemes. Establishing women's land cooperatives may also strengthen collective bargaining power and tenure security. Agricultural extension services should incorporate modules on land rights and tenure security, ensuring that productivity-enhancing interventions (e.g., improved inputs and technologies) are accompanied by rights-based support systems.

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