

Research Article

Socio-demographic Factors Influencing Land Ownership Documents' Possession Among Male-Headed Farming Households in Nigeria

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Abstract

This study examines the socio-demographic factors influencing the possession of land ownership documents among male-headed farming households in Nigeria using secondary data sourced from 2018/2019 Nigeria Living Standards Survey (NLSS), conducted by the National Bureau of Statistics (NBS) in Nigeria. A sample size of 2062 male-headed households with required information was retained for analysis. Data were analysed using descriptive statistics and Pearson chi-square correlation analytical techniques. Results show that the average age of the farmers was 49 years and were majorly married ruralite who had no formal education. Tittle deed was mostly held, many possessed the right to sell and to bequeath land and were not likely to lose ownership or right in the land. Pearson chi square results shows a significant influence of male-headed households farmers' age on title deed ($p < 0.05$), customary certificate of occupancy (C of O) ($p < 0.10$), survey plan ($p < 0.01$) and rental contract ($p < 0.05$). Being educated influenced the possession of title deed ($p < 0.01$), survey plan ($p < 0.01$) and rental contract ($p < 0.05$). Marital status influenced the possession of survey plan ($p < 0.01$). Further, sector significantly influenced the possession of certificate of occupancy, title deed, and survey plan at $p < 0.01$ and geopolitical zones were related to all forms of land documents at $p < 0.01$. Therefore, socio-demographic features significantly influenced the kind of land documents held by male-headed farming households in Nigeria. Farming households are thus implored to strive towards obtaining a legal land document to safeguard and promote their level of production.

Keywords

Male-Headed Households, Survey Plan, Land Right, Socio-Demographic Features

1. Introduction

Land ownership documents, such as title deed or occupancy certificates, provide legal recognition of farmers' right to land and offer crucial security and stability. This security enables farmers to make long-term investments in land, im-

prove productivity and access financial resources like loans and credit. Secure land tenure, often evidenced by land documents, is crucial for agricultural productivity and rural development, impacting farmers' investment decisions, access

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to credit, and overall livelihoods. Conversely, insecure land tenure can hinder agricultural development and result to reduced investment, land degradation, and potential conflicts [1]. Nigeria has a complex land tenure system, with both traditional and modern systems of land ownership. The traditional system is based on communal ownership, where land is held in trust by community leaders for the benefit of their members. In contrast, the modern system is based on individual ownership, where land is acquired through purchase or lease [1].

Land tenure can be referred to as the mode by which land is held or owned or the set of relationships among people concerning land or its product [2]. The system of land tenure in Nigeria is determined by several actors including the government, community leaders, families, and middlemen, but the government controls the activities of other actors through regulations and programs. It is an institutional framework within which decisions are made about the use of land, embodying that legal or customary arrangement by which farmers, groups, or organizations gain access to economic and social opportunities through land [3]. The idea of tenure is a social construct that establishes the interactions between persons and groups of individuals by which rights and obligations are established concerning the possession and use of land [2]. Land ownership is a critical factor in agricultural development, as it provides farmers with the security and incentive to invest in their land, thereby increasing productivity and food security [4].

In Nigeria, agriculture is the mainstay of the economy as it provides employment for over 70% of the population [5]. However, land ownership among farming households in Nigeria is influenced by various socio-demographic factors such as age, sex, education, and other factors that can affect their access to land, productivity, and overall well-being [6]. Understanding the interplay of socio-demographic factors like age, education and gender in shaping land ownership patterns is vital for designing effective policies and interventions to promote equitable land access and sustainable agricultural practices.

Despite the importance of land ownership in agricultural development and the interconnection between land document and land ownership, there is limited research on the socio-demographic factors influencing the kinds of land ownership document held by farming households in Nigeria. Although, array of studies have been carried out on land tenure system, the impact of land ownership on agricultural productivity and food security and related topics [1]. However, there is a need for research that examines the socio-demographic factors influencing land ownership documents held by farming households in Nigeria. This study aims to fill this research gap by investigating the relationship between socio-demographic factors and land ownership documents held by male-headed farming households in Nigeria.

1.1. Objectives of the Study

The main objective of this study is to examine the socio-demographic factors influencing the possession of land ownership documents among male-headed farming households in Nigeria. Specific objectives are:

- 1) To profile various land ownership documents held by the households.
- 2) To assess households perception of the likelihood of losing ownership in land.
- 3) To examine the relationship between households' socio-demographic features and land ownership documents held.

1.2. Research Hypothesis

H₀: There is no significant relationship between socio-demographic features and land ownership documents held by male-headed farming households in Nigeria.

2. Literature Review

2.1. Conceptual Review

In the context of this study, the following terminologies are defined as follows:

2.1.1. Certificate of Occupancy (C of O)

This is the highest form of land ownership document that provides evidence of legal title. It is obtained from the state government through a process that involves an application, payment of fees, and meeting certain requirements.

2.1.2. Households

A household typically comprises several people who live in the same house or portion of the house, share food, and possibly other necessities of life.

2.1.3. Land

Land is an area of earth with clearly designated spatial boundaries. In the context of this study, land is a factor of production, found at the uppermost layer of the earth which supports plant growth and other agricultural activities for the benefit of mankind.

2.1.4. Land Leasing

This includes creating provisions for long-term land leases, establishing agricultural estates, and providing incentives for private investment in agriculture. The government has made efforts to facilitate land acquisition for commercial agriculture.

2.1.5. Land Ownership Documents

These are documents held by households such as title deed,

certificate of occupancy, customary certificate of occupancy, right of occupancy, survey plan, lease registered and registered contract. These documents determine and validate the rights that farmers possess on land, which could either be the right to bequeath or the right to sell.

2.1.6. Land Right

This entails the right to sell the land which warrants the right to bequeath, the right to bequeath does not warrant the right to sell off any land.

2.1.7. Registered Survey Plan

A survey plan is a document that shows the exact boundaries, measurements, and other details of a piece of land. It is usually required during land transactions and is registered with the government's Surveyor General's Office.

2.2. Empirical Review

An investigation was carried out on land tenure and agricultural intensification by women farmers in Nigeria, and their effects on crop commercialization using the Nigeria General Household Survey (GHS) 2018 [7]. About 1,962 women farmers' data were retained and analyzed using descriptive statistics, Ruthenberg Index, Labour Use Intensity, and Fertilizer Use Intensity, Crop Commercialization Index (CCI) and Tobit Regression Model. It was found that the average farm size cultivated by women was 0.43 hectare and access to land was mainly through inheritance (42.9%). Further, the mean land use intensity was 0.26 (± 0.26), the average labor use was 55 mandays/hectare and fertilizer use was 728 kg/hectare. Majority (71.10%) of the women were market oriented at different levels ($0\% < \text{CCI} < 100\%$), 28.9% were fully subsistent ($\text{CCI} = 0\%$) and 2.30% fully commercialized their produce ($\text{CCI} = 100\%$). Only 29.5% of the quantity produced was commercialized. Regression results indicated that land tenure systems and agricultural intensification had a significant and direct relationship with crop commercialization among women farmers in Nigeria.

A study assessed the relationship between land tenure systems and investment decision in farm inputs and evaluate factors influencing the land tenure decision of cocoa farmers using cross-sectional data from 400 cocoa farmers in southern Ghana [8]. Data were analysed using generalised structural equation model. Socio-demographic features like status of residence, ethnicity and location differences were found to influence land tenure choices of the farmers. Farmers who did not possess land title, operate on family lands or sharecropping invest less in hybrid cocoa seedlings, fertiliser, land, and Labour compared to farmers who owned land title.

The effect of tenure security and farmers socio-economic characteristics on farm investment of arable crop farmers in Imo State, Nigeria was assessed [9]. 80 respondents used for the study. Primary data were collected from 80 respondents

and were analyzed using descriptive statistics and multiple regression analysis. The major socio-economic factors found to influence land tenure security were age, sex, norms/belief, tribe, position in the family, and the state of the economy and credit. Tenancy status, education, credit and income were positive and significant at $p < 0.01$ and years of experience and farm size were positively significant at $p < 0.05$.

A research investigated the effects of land tenure and property rights on smallholder farmers' adoption of climate-smart practices (CSPs) among cereal farming households in Nigeria [10]. The data used were collected from maize and rice farmers in a Nation-wide Farm Household Survey conducted in Nigeria and were analysed using Multivariate Probit model. The CSPs considered are agroforestry, zero/minimum tillage, farmyard manure, crop rotation and residue retention and were generally low. Farmers with transfer right were more likely to adopt farmyard manure, crop rotation and residue retention and the likelihood of adopting agroforestry reduced with having transfer right. The control right increased the likelihood of adopting zero/minimum tillage and adoption of agroforestry. Also the adoption of zero/minimum tillage reduced with control and transfer rights.

An evaluation of the determinants of land tenure security among small-holder farmers was carried out in rural Kenya [11]. Primary data were collected from 366 respondents in Narok country, Kenya using a multistage sampling procedure. Data were analyzed using ordered probit model Results show that household heads in the high land tenure security category were older, more educated, owned relatively larger land sizes, and had higher maize productivity than household with somewhat low tenure security.

Land tenure security perceptions amongst Nigerian rural communities in Atiba Local Government Area, Oyo State was examined [12]. The study adopted multistage procedure to sample 125 respondents and the key informants were subjected to an in-depth interview. Data were analysed using content analysis, descriptive and inferential statistics. It was found that the perception of land tenure security differs across settlement categories and residents' perception of tenure security was majorly influenced income, length of stay, culture, and education.

2.3. Theoretical Review

The theories underpinning this study are the Ricardo land rent theory and adaptation land theory.

2.3.1. Ricardo Land Rent Theory

Ricardo land rent theory was proposed in 1817 by David Ricardo. Based on his assumption, the concept of economic rent arises from the scarcity of land and the law of diminishing returns. Land rent is the payment to land used as a factor of production, and its value is determined by the difference in fertility or productivity between different plots of land. The

type of rent arises due to differences in fertility or productivity between different plots of land. Further, as more capital and labor are applied to a plot of land, the rate of growth of total product will eventually diminish.

2.3.2. Adaptation Theory of Land

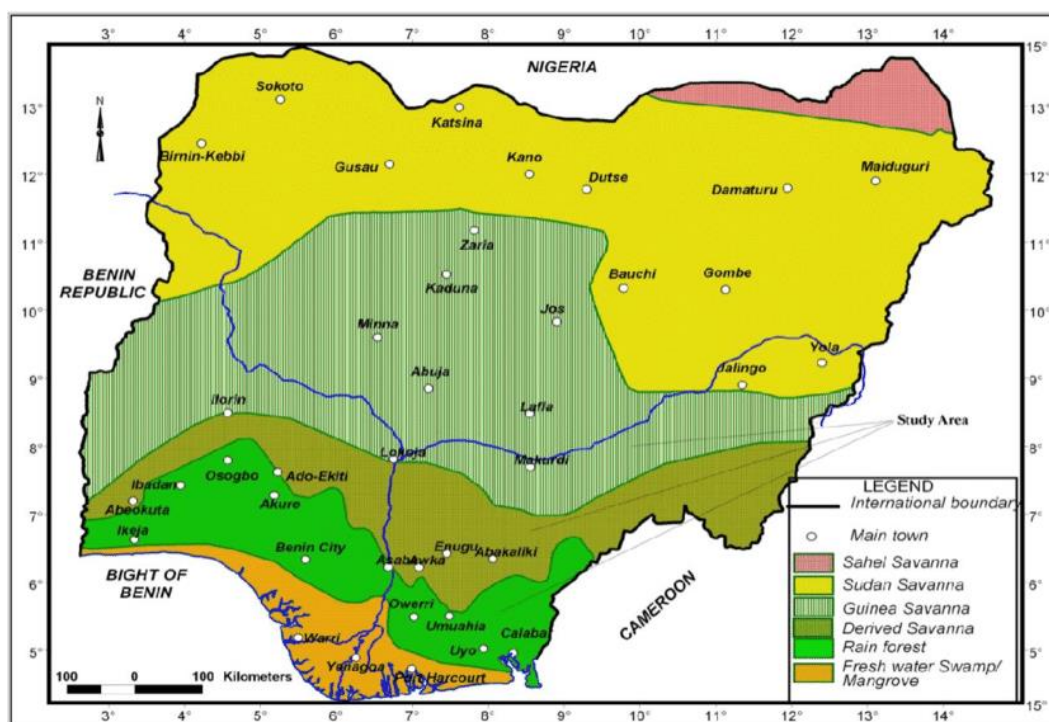
The adaptation theory of land was proposed by Charles Darwin in 1859. Darwin proposed that the land tenure system should gradually modify or introduce hybrid tenure systems to accommodate local and changing demands. This tactic can be referred to as an act renovating customary tenure systems, which acknowledges the importance of current customary tenure systems. It was further argued that creative adjustments and modifications to the traditional tenure system can rectify its flaws [13]. The two primary categories of adaptation theory are the democratic and hybrid adaptation theory. The democratic adaptation theory places significant emphasis on the necessity of democratization, fairness, and accountability. It emphasizes the protection of legitimate land rights recognized by African customary law and ensure that land tenure security is maintained in places where customary tenure systems are weak. Hybrid adaptation theory on the other hand advocate enabling communities to determine which rights are significant and should be documented through a participative approach [14]. This strategy fosters an ownership sense about

the formalization process while also allowing for adaptability, creativity, and the use of affordable and functional technology and instruments to document land tenure data.

3. Methodology

3.1. The Study Area

The study area is Nigeria. It is located on the western coast of Africa, with a diverse geography and climate ranging from humid to arid equatorial. The Gulf of Guinea in the Atlantic Ocean borders Nigeria to the south, Benin to the west, Niger to the north, and Chad and Cameroon to the east. Nigeria is blessed with both human and natural resources, with a current live population of 238,097,455 as of Tuesday, August 12, 2025, based on the Worldometer elaboration of the latest United Nations data [15]. The population density in Nigeria is 261 per km² (675 people per mi²). The total land area is 910,770 km² (351,650 sq mi). Nigeria has a favourable climatic condition and is blessed with fertile soil occupied by 70% small-scale farmers who produce about 90% of the nation's food [16]. Presented below is the map of Nigeria showing different agro-ecological zones in Nigeria.



Source: [17]

Figure 1. Map of Nigeria showing different agro-ecological zones in Nigeria.

3.2. Sample and Sampling Techniques

This study utilized secondary data obtained from the Nigeria Living Standards Survey (NLSS) 2018-2019 which was conducted by the National Bureau of Statistics (NBS) in Nigeria. A total of 2062 farming households headed by males with required information on land ownership documents were retained and analysed after data cleaning.

3.3. Methods of Data Analysis

The analytical methods adopted in this study are descriptive statistics and Pearson chi-square correlation analysis.

3.3.1. Descriptive Statistics

Descriptive statistics such as frequency and percentages was used to profile the socio-demographic characteristics of the households, examine various land ownership documents held by the households and to describe farmers' perception of losing land ownership and right. The socio-demographic characteristics considered in the study are age, marital status, educational level, residence (rural/urban), and geopolitical zone. The land ownership documents include title deeds, certificates of occupancy, customary certificate of occupancy, rights of occupancy, survey plan, registered rental contract and registered lease.

3.3.2. Pearson Chi-square Correlation Analysis

Pearson chi-square correlation analysis was developed by Karl Pearson in 1896 as a measure of linear correlation be-

tween two categorical data set. This analytical tools was adopted to examine the relationship between households' socio-demographic features and land ownership documents held as adopted by [18] to examine the correlation between socio-economic factors and land use/land cover change in Western Ethiopia. The predicting variables are the households' socio-demographic characteristics (age, marital status, education and sector) and the predicted variables are the land documents possessed by the households.

4. Results and Discussion

4.1. Socio-demographic Characteristics of Male-headed Farming Households in Nigeria

As indicated in Table 1, Majority of the farmers were between 31-60 years of age, married (93.79%) and reside in the rural area (70.76%). In consonant with these results, the majority of the farmers who reside in the helmet and village settlement in Atiba local government of Oyo state were between the age ranges of 31-60 years, married and reside in the rural area of the local government [12]. Results show further that majority had no formal education (77.35%) and were many (35.69%) in the Northwest geopolitical zone. This suggests that majority of the male-headed farming households in Nigeria could neither read nor write. In contrary, most of the farmers in Atiba local government attained at least primary education level.

Table 1. Socio-demographic Characteristics of Male-Headed Households in Nigeria.

Socio-demographic variables	Male-headed household (n=2062)	
	Frequency	Percentage
Respondent age (years)		
<30	201	
31-60	1456	9.75
>60	405	70.61
Mean	48.67±(14.30)	19.64
Marital status		
Single	55	2.67
Married	1934	93.79
Divorced	34	1.65
Widowed	39	1.89
Level of education		
No formal education	1595	77.35

Socio-demographic variables	Male-headed household (n=2062)	
	Frequency	Percentage
Primary education	186	9.02
Secondary education	83	4.03
Higher education	198	9.60
Sector		
Urban	603	29.24
Rural	1459	70.76
Geopolitical zone		
North central	269	13.05
Northeast	418	20.27
Northwest	736	35.69
Southeast	124	6.01
South-South	193	9.36
Southwest	322	15.62

Source: Computed from 2018/2019 NLSS

4.2. Land Ownership Documents and Rights Possessed by Male-Headed Farming Households

Table 2 describes different land ownership documents held by male-headed farming households in Nigeria. About 59.21% held title deed, 11.30% held certificate of occupancy, and about 11.59% held customary C of O. Since many of the households held title deed which confers legal ownership to land owners, there is guaranteed tenure security over such

land. Right of occupancy and survey plan were respectively held by 14.65% and 14.50% of the households. Additionally, a very small proportion of households held registered rental contracts (3.98%) and lease registered documents (1.60%). The right to sell (87.68%) and the right to bequeath (91.03%) were respectively possessed by the majority of the households. Similarly, the majority of the smallholder farmers in Nigeria held the right to sell and to bequeath their land especially among the Northeast farmers [19].

Table 2. Land documents and Rights Possessed by Male-headed Households in Nigeria.

Land ownership documents	Male-headed farming household (n=2062)	
	Yes (%)	No (%)
Title deed	1221(59.21)	841(40.79)
C of O	233(11.30)	1829(88.70)
Customary C of O	239(11.59)	1823(88.41)
Right of occupancy	302(14.65)	1760(85.35)
Survey plan	299(14.50)	1763(85.50)
Rental contract registered	82(3.98)	1980(96.02)
Lease registered	33(1.60)	2029(98.40)

Land ownership documents	Male-headed farming household (n=2062)	
	Yes (%)	No (%)
Other forms of document	20(0.97)	2042(99.03)
Right to sell	1808(87.68)	254(12.32)
Right to bequeath	1877(91.03)	185(8.97)

Source: Computed from 2018/2019 NLSS

Note: Figures in parentheses are percentages

4.3. Households' Perception on the Likelihood of Losing Land Ownership or Rights

The likelihood of losing land ownership or right by male-headed farming households are presented in Table 3. The results were based on the perception of the respondents.

Majority from the households (70.66%) agreed that they were not likely to lose their land ownership or right, while very few (4.07%) believed that they were extremely likely to lose ownership or rights to their land. This result can be affirmed with the fact in Table 2 where many of the households held title deed, indicating legal ownership over their farm land.

Table 3. Perception on the Likelihood of Losing Land Ownership or Right by Male-Headed Farming Households in Nigeria.

Likelihood of losing ownership or right on agricultural land				
Not likely (%)	Slightly likely (%)	Moderately likely (%)	Very likely (%)	Extremely likely (%)
1457 (70.66)	112 (5.43)	45 (2.18)	364 (17.65)	84 (4.07)

Source: Computed from 2018/2019 NLSS

Note: Figures in parentheses are percentages

4.4. Relationship Between Socio-Demographic Characteristics and Land Ownership Documents Held by Male-Headed Farming Households in Nigeria

Table 4 presents the of Pearson's chi-square analysis results of the relationship between socio-demographic characteristics and the kind of land documents possessed by male-headed farming households in Nigeria. The predicting variables are the households' socio-demographic characteristics (age, marital status, education and sector) and the predicted variables are the land documents possessed by the households.

Results show that respondent's age significantly influenced the possession of title deed ($\chi^2 = 5.5033$, $p < 0.05$), customary certificate of occupancy ($\chi^2 = 5.0935$, $p < 0.10$), survey plan ($\chi^2 = 44.6309$, $p < 0.01$) and rental contract ($\chi^2 = 7.2083$, $p < 0.05$) at

df = 2. Also, being educated influenced the possession of title deed ($\chi^2 = 15.8552$, $p < 0.01$), survey plan ($\chi^2 = 79.7698$, $p < 0.01$) and rental contract ($\chi^2 = 8.0002$, $p < 0.05$) at df = 3. This result corroborate the findings [12] that level of education attained significantly influenced the land tenure security which is determined by the kind of document held in land.

However, marital status significantly influenced only the possession of survey plan ($\chi^2 = 20.0488$, $p < 0.01$). The table showed further that at 1% ($p < 0.01$), sector significantly influenced the possession of C of O ($\chi^2 = 42.9619$), title deed ($\chi^2 = 21.4948$) and survey plan ($\chi^2 = 73.9933$) at df=1, while the zones ($p < 0.01$) where individual household lives influenced the possession of all forms of land documents at df=5. Therefore, socio-demographic factors significantly influenced the possession of land document by male-headed house.

Table 4. Chi-square Analysis of Socio-demographic Factors Influencing the Possession of Land Documents among Male-Headed Households in Nigeria.

Land documents	Age		Marital status		Education		Sector		Zones	
	X ² (df)	P-value	X ² (df)	P-value	X ² (df)	P-value	X ² (df)	P-value	X ² (df)	P-value
Title deed	7.5033 (2)	0.023 **	4.1339 (3)	0.247	15.8542 (3)	0.001 ***	21.4948 (1)	0.000 ***	288.8691 (5)	0.000 ***
C of O	3.6700 (2)	0.160	0.5768 (3)	0.902	3.3908 (3)	0.335	42.9619 (1)	0.000 ***	80.5129 (5)	0.000 ***
Customary C of O	5.0935 (2)	0.078 *	1.6075 (3)	0.658	4.9185 (3)	0.178	0.5473 (1)	0.459	42.6424 (5)	0.000 ***
Right of occupancy	4.0874 (2)	0.130	1.5622 (3)	0.668	0.0550 (3)	0.997	0.2061 (1)	0.650	95.7549 (5)	0.000 ***
Survey plan	44.6309 (2)	0.000 ***	20.0488 (3)	0.000***	79.7698 (3)	0.000 ***	73.9933(1)	0.000 ***	580.7859 (5)	0.000 ***
Rental contract	7.2083 (2)	0.027 **	2.6594 (3)	0.447	8.0002 (3)	0.046 **	1.5470 (1)	0.214	36.3219 (5)	0.000 ***
Lease registered	0.4502 (2)	0.798	2.1909 (3)	0.534	3.5058 (3)	0.320	0.2711 (1)	0.603	39.9807 (5)	0.000 ***

Source: Data Analysis, 2024

Note: ***, ** and * significant at 1%, 5% and 10% level respectively

5. Conclusion

This study has empirically examined the socio-demographic factors influencing land ownership documents held by male-headed farming households in Nigeria. In light of the findings of this study, it can be concluded that the majority of male-headed farming households in Nigeria are in their active farming age, married and had no formal education. Many possessed legal land documents, especially title deed, as well as the right to sell and to bequeath. Thus are not likely to lose ownership or right in their farmland. It can also be concluded that socio-demographic features of the households significantly influenced the kind of documents held, especially geopolitical zones which has a significant influence on all land ownership documents. The null hypothesis which states that there is no significant relationship between socio-demographic features and land ownership documents held by male-headed farming households in Nigeria was therefore rejected.

6. Recommendations

Based on the findings of the research, the following recommendations are suggested to ensure equal access to land by farming households in Nigeria.

- 1) Farmers should be more enlightened on the importance of legal land documents which guarantee ownership to

enhance their empowerment level and contribute to greater food security.

- 2) Efficiency and transparency of land administration systems should be improved upon to reduce corruption and ensure fair access to land.
- 3) Farming households should also strive towards obtaining a legal land title document to safeguard and promote their level of production.

7. Suggestions for Further Studies

This study examines the socio-economic factors influencing the kind of land ownership document held by male-headed farming households in Nigeria. Other studies may investigate land ownership documents and gender disparity among households in Nigeria, exploring the role of socio-demographic features in shaping the outcome. Study may also be conducted on how formal land titles and customary land ownership documents influence farmers' investment decision and land use practices in a specified farming community.

8. Policy Implication

By understanding the socio-demographic factors influencing land ownership in Nigeria, policymakers can design targeted interventions to promote more equitable and secure land tenure systems especially in Nigeria.

Abbreviations

NLSS	Nigeria Living Standard Survey
NBS	National Bureau of Statistics
C of O	Certificate of Occupancy
GHS	General Household Survey
CCI	Crop Commercialization Index
CSPs	Climate Smart Practices

Conflicts of Interest

The authors declare no conflicts of interest.

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