

DOI: <https://doi.org/10.57125/FEL.2024.09.25.08>

How to cite: Adofu, I., Okwanya, I., Adofu, S. O., & Eraye, C. (2024). Land Tenure Insecurity and Agricultural Recovery: Evidence from Displaced Farmers in North-Central Nigeria. *Futurity Economics&Law*, 4(3). 118-138.
<https://doi.org/10.57125/FEL.2024.09.25.08>

Land Tenure Insecurity and Agricultural Recovery: Evidence from Displaced Farmers in North-Central Nigeria

Ilemona Adofu

Professor of Economics, Department of Economics, Federal University of Lafia, Nasarawa State, Nigeria, <https://orcid.org/0009-0000-7184-0363>

Innocent Okwanya*

PhD in Economics, Department of Economics, Federal University of Lafia, Nasarawa State, Nigeria, <https://orcid.org/0000-0002-8398-5372>

Sophia O. Adofu

PhD in History, Department of History and International Studies, Federal University of Lafia. Nasarawa State, Nigeria, <https://orcid.org/0009-0000-7184-0363>

Christopher Eraye

PhD in Sociology, Department of Sociology, Federal University of Lafia Nasarawa State, Nigeria, <https://orcid.org/0000-0003-2775-0891>

***Corresponding Author:** ilemonaadofu@yahoo.com.

Received: March 2, 2024 | **Accepted:** July 4, 2024 | **Available online:** July 18, 2024

Abstract: North-central Nigeria is currently dealing with a difficult situation as farmers who have been forced from their land are finding it hard to regain their ability to grow crops because of uncertain land ownership. This study examined the effect of the land rights violation on agricultural output among

displaced returnees in the region. Using a multistage sampling method, we collected data from 854 respondents in conflict-affected states in north central Nigeria. The data was then analysed using descriptive statistics and ordinary least squares regression analysis. Drawing from the data collected across the selected states affected by farmers-herders conflict in North-central Nigeria, the study revealed that unclear land ownership and the lack of formal land titles affect returnees' willingness to invest in agricultural land. The findings of this study indicated that violations of the land rights, whether through conflict or land encroachment, result in lower income and productivity levels for displaced individuals returning to their land. Surprisingly, the study revealed that assistance provided during displacement did not have a significant impact on the ability of returnees to resume economic activities. Based on these findings, this study recommends enhancing property rights policies on land and resources in rural communities to promote agricultural recovery and food security in conflict-affected areas such as North-central Nigeria. This study adds to current knowledge by analysing quantitative data to explore the connection between land tenure insecurity and agricultural output among displaced farmers. The results highlight the importance of secure land rights in influencing the recovery and economic activities of displaced farmers when they return.

Keywords: Land tenure insecurity, displaced farmers, agricultural productivity, displaced returnees.

Introduction

The ongoing dispute over resources and territory remains a critical issue, especially in conflict-ridden regions such as Nigeria, where land disputes often serve as a primary catalyst. Several studies linked the land rights as one of the main causes of conflict and displacement (Besley, 1995; De Walque, 2006; Fagen et al., 2003). The conflict in Nigeria has resulted in the displacement of about 2.7 million people as of 2020, with farmers making up roughly 97 percent of this population (International Organisation Migration, 2021). The main causes are recognised as land scarcity, population pressure, and illegal land seizure (Apata, 2016; National Bureau of Statistics, 2018; Policy and Legal Advocacy Centre, 2019). While resettlement programs aim to improve IDP productivity, the crucial role of secure the land rights in this process remains understudied. This study aimed to fill this gap by investigating how land rights insecurity impacts the agricultural productivity of displaced individuals returning to Nigeria.

New research on displaced persons in Nigeria is centred on conflict resolution and peacebuilding efforts (Chukwuma et al., 2018; Johnson, 2023; Kamta et al., 2020; Nwokolo, 2020; Usman et al., 2023) primarily focusing on social stability. However, the achievement of the long-term reintegration requires addressing the economic challenges faced by returnees. According to Platteau (2015), the nature of the land rights directly influences the investment and productivity in agriculture. Unfortunately, customary the land tenure systems prevalent in rural Nigeria is weak in effectively resolving land conflict (Chigbo, 2013; Mugizi & Matsumoto, 2020). This is further exacerbated by contradiction within the Nigerian land law. For instance, the Land Use Act allows for open grazing on farmland that is historically owned by communities (Nwocha, 2016). This creates a system with multiple, often conflicting users leading to free riding, land rights violations and violence between traditional owners and trespassers. This complex property ownership structure poses a significant challenge to displaced farmers in North-central Nigeria, significantly hindering agricultural activities and sustainability of the local economy. The lack of secure land rights discourages investment in farming activities, leading to lower crop yields and reduced overall productivity.

In the North-central states of Nigeria, the government has made efforts to ensure that a significant number of returnees resettle and begin economic activities by providing security and other economic incentives (International Organisation on Migration, 2019). Although many of the displaced persons have returned to their place of origin, yet extensive discussions on the productivity of displaced

returnees are scant in Nigeria due to a lack of empirical data. Evidence indicates that many of these returnees continued to struggle financially, potentially due to challenges in accessing land or a belief that they were entitled to land (Adekola et al., 2022; Lenshie et al., 2022; International Organisation on Migration, 2021). This paper explored the conjectures that well-defined the land rights is a precursor to integrating displaced returnees using the case of North-central Nigeria where the displaced persons started returning to their place of origin since 2018.

In this paper, two contributions were made. First, the impact of land rights violations on the productivity of displaced returnees in the north-central states of Nigeria was quantified. Secondly, the level of assistance provided to displaced individuals that greatly aids in their integration into economic activities was examined (Besley & Ghatak, 2010; Mugizi & Matsumoto, 2020; Deininger et al., 2007), as well as the land right and women's productivity (Meinzen-Dick et al., 2019), and the land rights and yield in agriculture (Adelman & Peterman, 2014; Oparinde, 2021). The given research on the land rights and productivity of displaced returnees in Nigeria aimed to quantify the impact of land rights violations on the agricultural productivity of individuals who have been forced to leave their land due to conflict or other reasons. Given that agriculture is a primary source of income in rural Nigeria, understanding how disruptions in land access affect the ability of returnees to sustain themselves is critical for government and stakeholders working towards successful reintegration of displaced persons. Additionally, insights into the relationship between land rights and productivity can inform policies and interventions aimed at promoting economic stability and resilience in areas prone to displacement.

Research Aim and Research Questions

This study aimed to examine the effect of the land rights insecurity on agricultural productivity of displaced returnees in north-central Nigeria. To achieve this, the study rose the following research questions: To what extent do violations of land rights impact the agricultural productivity of displaced returnees in North-Central Nigeria? Additionally, does the provision of assistance or intervention to displaced persons influence the economic reintegration of returnees? The subsequent sections of this paper were structured as follows: "Empirical Literature Review" contains a review of empirical studies, followed by "Methodology and Data" which outlines the methodology and data utilized in this study. The results of this survey are presented and analysed in "Results and Analysis," with concluding remarks and policy recommendations provided in "Discussion and Implication for Displaced Returnees."

Empirical Literature Review

The aim of this literature review was to analyse the relationship between the property right and its effect on productivity and investment of displaced persons. The essence of this review was to enable establishing a theoretical foundation for understanding the relationship between the land rights, farmers' investment decisions and agricultural productivity. The review of literature begins by examining the concept of property rights and land rights, then followed by the empirical studies review on the land tenure security, investments in agricultural and productivity.

Property rights have long been linked to a rise in investment and efficiency, particularly in free-market systems. Ostrom and Hess (2007) define property rights as a legally-backed power that allows an individual to manage and utilise a specific resource. Land rights, a type of property right, grant individuals the ability to own, access, and utilize land for economic purposes (Hanstad, 2010; Wickeri & Kalhan, 2010), including the right to transfer ownership (Besley & Ghatak, 2010). The influence of land rights on individual willingness to invest is well-established. For instance, a Meta-analysis by Carter and Olinto (2003) found that tenure security is the main determinant of the quantity and composition of investment among rural farmers in Paraguay. Lawry et al (2014) also established a similar fact that countries with well-defined customary land rights experienced high investment in land and productivity per hectare.

The theoretical proposition on property rights posits that an economy rooted on a well-defined property right engenders investment and effective utilisation of resources (Alchian & Demsetz, 1973; Besley, 1995). Besley (1995) opines a theoretical framework that gives credence to the security of property rights. He maintained that the security of the property rights influences the incentives to invest and improve productivity among individuals, communities and ethnic groups in conflict-prone areas. Several empirical studies used this postulation to examine the effect of land right on productivity; Aragon (2015) observed that improved the property rights reform had a positive effect on local government among Aboriginal communities in Canada. Carter and Olinto (2003) found tenure security as the main determinant of the quantity and composition of investment among rural farmers in Paraguay. The property rights serve as collateral securities that enable them to assess credit facilities. Lawry et al (2014) found that countries that allow farmers to have customary rights or land titling experienced high investment in land and tend to have high productivity. Farmers in such countries invest due to the sense of security of the land ownership.

The increase in commercialisation and population pressure is causing the land rights to evolve from communal ownership to individual rights. Studies by Firmin-Sellers and Sellers (1999) and Ali et al. (2019) have strongly recommended the implementation of land titling in regions where customary the land rights are in place. For example, Ali et al. (2019) noted that obtaining land title can improve the transferability and security of property in Zambia. They asserted that the land titling serves as a crucial motivation for investment in land, leading to increased productivity among farmers. Contrary to some studies, other research has shown little to no connection between investments in the land rights and increased productivity. Similarly, Ali and Deininger (2022) noted in Zambia that land rights had no impact on farmers' investment decisions or their productivity levels.

Research on the effect of property rights has supported the effect of property rights on investment in Zambia (Ali et al., 2019) and Ethiopia (Deininger et al., 2007). Using a pilot-fixed-effects approach, Newman et al. (2015) found that relative to those without land rights, the yield of farmers with the land rights increased by 13 percent in Vietnam. The land rights are found to strongly determine the bargaining power of farmers (Meinzen-Dick et al., 2019). In Malawi, insecure land rights are associated with a 9 percent loss in productivity of female landowners and affect households' ability to take risk as it becomes difficult to give land as collateral for loans (Deininger et al., 2019).

Cao et al. (2020) investigated the impact of farmland property rights security on investment in rural China. Their study revealed a positive correlation between the land rights and farmers' willingness to invest, with the type of property right influencing the specific investments made by farmers. In a related study, Huntington and Shenoy (2021) utilised a randomised controlled trial to examine the effect of the land tenure security on investment decisions. The results showed that secure land titles significantly boost investment in agriculture, especially in long-term crops like trees. Additionally, Kugbega and Aboagye (2021) delved into the impact of farmer-herders conflict and tenure insecurity on investment decisions in Ghana. Their research indicated that tenure insecurity stemming from conflicts hinders farmers from investing in their land. There had been mixed evidence on the role of land rights on investment and productivity among scholars in Nigeria. In a study of the effects of land tenure, land fragmentation and property rights on agricultural productivity in Southern rural Nigeria, Apata (2016) found that about sixty percent of farmers have no emotional attachment to the land they cultivate as such make little investment in the improvement of the land and low productivity. Oparinde (2021) however, observed that the use and transfer rights is found to positively increase investment and productivity among Southwest farmers in Nigeria. Other studies however showed that the influence of the land rights on productivity was relative to countries and types of land reforms. Using a systemic review search by Meinzen-Dick et al. (2019) found a weak relationship between women's land rights and empowerment, consumption and food security. Similarly, Ali and Deininger (2022) found the land rights to have no positive effect on productivity and investment in Zambia.

Adelman and Peterman (2014) estimated the effect of conflict-related displacement on land yield in northern Uganda. The study found that female-headed households were particularly disadvantaged in yield per hectare of land. Using logistic regression analysis, Mugizi and Matsumoto (2020) found that the poor land rights policy negatively affects farmers' incentive to invest in post-war northern Uganda because of the uncertainty on return on investment. This highlights the importance of considering access to and use of land as an economic challenge, rather than solely a political issue (Grajales, 2020). Therefore, it is crucial not to underestimate the importance of post-conflict intervention, as peace policies play a significant role in ensuring economic stability for affected communities.

Apart from the humanitarian disaster of conflict in Nigeria, conflict creates food shortage, disrupts the production process and reduced farm investment (Adelaja & George, 2019). However, whether productivity picked up in the post-conflict period remains an issue of concern.

Through a series of empirical studies, we have observed a consistent correlation between investment in land and the presence of secure land rights. This relationship has been shown to significantly enhance productivity levels, as individuals feel assured of their land ownership and the returns on their investments. However, in regions grappling with conflicts stemming from land grabbing, the traditional free market approach to property rights may no longer be enough in explaining investment behaviours. Rather, it is the perceived sense of security in land ownership that appears to drive productive outcomes. Therefore, our study aims to investigate the impact of a subjective sense of land ownership on the productivity of displaced returnees in the North-central region of Nigeria.

Methodology and Data

Data Collection and Sampling

The North-central region of Nigeria consists of six states and the Federal Capital Territory (FCT). The States are Benue, Nasarawa, Plateau, Niger, Kwara and Kogi. According to the last population census, the region has an estimated population of 23.5 million National Bureau of Statistics (2020). Agriculture is the cornerstone of the region's economy, attracting nomadic herders due to its abundant pastures. However, this dynamic relationship has also fuelled frequent clashes between farmers and herders. This study focused on three of the States (Benue, Nasarawa and Plateau) most affected by conflicts and displacement in recent years. Apart from north-east Nigeria, these states witnessed the highest displacements figures within the region during the period of interest with most internally displaced persons (IDPs) returning to their communities as at 2018.

In this study, we utilised the technique of ordinary least squares robust regression to analyse the relationship between land right violations and crop yield of returnees in the north-central region of Nigeria. The research methodology involves conducting a survey in three states severely affected by conflict, where data was collected through questionnaires.

This approach involved comparing the farm output of households when their land rights are perceived to be violated versus when they are not violated. A land right violation is defined as when respondents feel threatened or afraid to access their farms due to a perceived threat to their lives.

We controlled for state fixed effects in our analysis and assume that, conditional on these fixed effects, the unobserved determinants of crop yields are consistent across all households in the states. This allowed examining the impact of land right violations on crop yields, providing valuable insights into the effects of conflict on agricultural productivity in the region.

The data for this study was collected through a cross-sectional survey conducted between August to October 2022. The target population comprised IDPs who had returned to their places of origin or communities. Following the United Nations Statistics Division's (2005) household sample size determination formula, a target of 864 households was established. The selection of respondents followed a multistage sampling technique. First, the selection of the three states was based on the incidence of farmers-herdsmen crises and inter-communal crises. Four local governments were

randomly selected from each chosen state to achieve appropriate sample distribution of the affected areas. Next, the lists of villages with high concentration of returnees were obtained from State Emergency Management Agencies (SEMA) and key informants that are familiar with the region. This strategy mirrored that of International Organisation Migration (2019) in northeast Nigeria. Three communities were randomly selected from each local government based on two criteria: (a) villages where all residents were displaced due to crises, and (b) villages where the crises have occurred within the past 6 years. These criteria ensured respondent were formerly displaced and could provide insights into the pre-and post-crisis economic impacts. Lastly, within each selected community, 24 households were chosen using systematic random sample, resulting to a total of 864 surveyed households.

Household heads or representatives from 15 years and above served as respondents. Semi-structured questionnaires guided by previous research on internally displaced persons (Bozzoli et al., 2012; Yamano & Deininger, 2005) were administered. Additionally, interviews with community leaders in order to explore their perspectives on land right violation and it impact on productivity and the community they oversee. This qualitative data obtained from the discussion further served to corroborate findings the quantitative analysis.

Model Specification

This study employed the ordinary least square (OLS) regression model adopted from the work of Besley (1995) and Yamano and Deininger (2005) to investigate the impact of the land rights violation on the productivity of displaced returnees. Our model departs from Besley's (1995) broader definition of property rights by focusing specifically on land access rights of displaced returnees.

Given that households had experienced three different yields, taking into cognizing the potential for varying effects over time, we estimate separate regressions to isolate the influence of land rights violation on productivity before, during and after conflict periods. Following Yamano and Deininger (2005), the OLS model is specified as follows:

$$PROD_{ij,before} = \beta_0 + \beta_1 OWNFL_{ij} + \beta_2 PLR_{ij} + \beta_4 Farmsize_{ij,before} + \beta_5 Distfarm_{ij} + \beta_6 HC_{ij} + \zeta_j + \varepsilon_{ij} \quad (1)$$

$$PROD_{ij,during} = \beta_0 + \beta_1 OWNFL_{ij} + \beta_2 PLR_{ij} + \beta_4 Farmsize_{ij,during} + \beta_5 Distfarm_{ij} + \beta_6 HC_{ij} + \zeta_j + \varepsilon_{ij} \quad (2)$$

$$PROD_{ij,after} = \beta_0 + \beta_1 OWNFL_{ij} + \beta_2 PLR_{ij} + \beta_3 DURD_{ij} + \beta_4 Farmsize_{ij,after} + \beta_5 Distfarm_{ij} + \beta_6 HC_{ij} + \zeta_j + \varepsilon_{ij} \quad (3)$$

Where:

$PROD_{ij}$ = monetary value of crop yield produced by household i in state j .

$OWNFL_{ij}$ = ownership of farmland by household i in state j . This is captured as yes if farmland belongs to household or no if farm land is rented or households those does not have farm land. The answers are coded yes for 1 and no for 0.

PLR_{ij} = land right violation a dummy for land right- whether farmers suffer from land violation; (coded 1= violated, 0= not violated).

$DURD_{ij}$ = length of time household i in state j stayed displaced. This is the total number of months without engaging in economic activities.

$Farmsize_{ij}$ = land size cultivated in hectares.

$Distfarm_{ij}$ = average walking distance of farm from the home.

HC_{ij} = household characteristics such as education, years of experience in farming and/or other economic activities, and gender of household heads for household i in state j .

ζ_j account for basic state difference.

ε_{ij} = the random term that includes other variables that are not included in the equation.

ε_{ij} is assumed to be independently and identically distributed (iid) and normally distributed.

β_s = parameters to be estimated. This study employed separate regression analyses for pre-conflict, during conflict, and post-conflict time periods in order to examine how the effect of land rights violations on productivity may change over time. This methodology allows for a more nuanced exploration of the intricate interplay between land violations and agricultural output, ultimately enhancing our comprehension of this relationship.

Results and Analysis

Preliminary Analysis

Having described the methodology employed in this study, the characteristics of the 854 surveyed households across the three states of North-central Nigeria were examined. Table 1 provides a breakdown of the demographic and socioeconomic information of respondents by state.

Table 1

Demographic and Socioeconomic Characteristics of Respondents

Variable	Frequency				
	Benue	Nasarawa	Plateau	Total	Percentage
<i>Number of Respondents</i>					
Respondents per State	282	298	274	854	-
Proportion of Respondents per State	33.02	34.9	32.08	100	-
<i>Gender</i>					
Male	186	235	202	623	72.95
Female	96	61	74	231	27.05
<i>Age</i>					
Age less than 19	1	3	0	4	0.47
Age 20 to 29	37	52	51	140	16.39
Age 30 to 39	93	107	76	276	32.21
Age 40 to 49	78	64	103	245	28.68
Age 50 to 59	61	67	35	163	19.09
Age 60 above	13	5	9	27	3.16
<i>Marital Status</i>					
Married	205	242	221	668	78.22
Single	19	23	9	51	5.98
Divorced	17	12	8	37	4.34
Widow	31	17	29	77	9.01
Widower	10	4	7	21	2.45
<i>Level of Education</i>					
No Education	83	97	44	224	26.24
Primary Education	52	76	65	193	22.59
Secondary Education	106	91	108	305	35.71
Tertiary Education	41	34	57	132	15.46
<i>Occupation</i>					
Farmer	257	235	210	702	82.20
Civil Servant/Farmer	13	27	21	61	7.14

Artisan/Farmer	7	6	4	17	1.99
Business/Farmer	5	30	39	74	8.67

Source: Field work (2022).

Table1 shows the sociodemographic characteristics of the respondents surveyed. The sample distribution across the three states was relatively balanced, with Benue 282 (33.02 per cent), Nasarawa 298 (34.9 per cent) and Plateau 274 (32.08 per cent) represented proportionally. In terms of gender representation, male comprised the majority 623 (72.95 per cent) with female 231 (27.05 per cent), reflecting the patriarchal structure of the rural communities where men typically head households. In cases where females assume heads of household, it is either the male partner is dead or divorced. The primary livelihood among respondents was farming 702 (82.2 percent), with some engaging in additional economic pursuits. This data aligns with the predominantly agrarian nature of the region.

In terms of education level, most respondents reported having some formal education, with 26.24% reporting no formal education. Education level plays a significant role in how respondents interpret and understand the questionnaire content, as those with some formal education are more likely to comprehend the questions. For illiterate respondents, our research assistants assisted in interpreting the questions to ensure understanding before filling out the questionnaires. Additionally, Table 1 illustrates the age distribution of respondents, showing that the majority fall within the 30 to 59 age range. This demographic aligns with the average age of active household heads in rural Nigerian communities.

The presented data also show the nature of conflict in the region, the initial responses of respondents when the conflicts occurred and access to work place during and after conflict in Table 2.

Table 2

Descriptive Statistics: Respondents' Response to Conflicts

Variable	Frequency			Combined	
	Benue	Nasarawa	Plateau	Total	Percentage
<i>Cause of Conflicts</i>					
Farmers-Herders	235	247	274	756	88.52
Inter-Communal	47	51	0	98	11.48
<i>Initial Response to Conflicts</i>					
Stayed in Govt. Camp	53	126	33	212	24.82
Stayed in Comm. Camp	68	55	42	165	19.32
Stayed with Relative	158	87	194	439	51.41
Stay Other Places	3	30	5	38	4.45
<i>Access to Workplace During conflicts</i>					
Access to Work Place	67	80	34	181	21.19
No Access to work Place	215	218	240	673	78.81
<i>Access to work place after conflicts</i>					
Full access to Work Place	147	179	69	395	46.25
Partial Access to work Place	91	111	137	339	39.70
Yet to access Work Place	44	8	68	120	14.05

Source: Field work (2022).

Table 2 confirms farmer-herder clashes as the primary cause of displacement 756 (88.52 per cent), aligning with the National Bureau of Statistics (2018) reports that the farmers-herders' conflicts constitute about 80 per cent of cases of displaced persons in the North-central region. Inter-Communal conflicts due to land encroachment were reported by small group of respondents 98 (11.48 per cent).

Specific case in point Ekaida community and Aduge Communities in Agatu Local Government Area of Benue State and Angwan-Sule in Obi LGA of Nasarawa State.

The information presented in Table 2 shows that many displaced persons chose to seek shelter with relatives (51.41 per cent) or in rented accommodation (19.32 per cent), rather than staying in government camps (24.82 per cent). This preference for alternative accommodations may be attributed to reports from the International Organisation for Migration (2019) indicating poor conditions and lack of proper care in IDP camps in Nigeria, particularly in regions affected by the Boko Haram insurgency.

Table 2 further shows that 673 (78.81 per cent) of respondents were unable to access their workplaces during the conflicts, while 181 (21.19 per cent) had access to their workplaces. Respondents who had access to their workplace are mostly those whose place of refuge may not be far from their workplace. However, upon return, most respondents 734 (86 per cent) resumed economic activities either fully 395 (46.25 per cent) or partially 339 (39.7 per cent). Only 120 (14.05 per cent) are yet to start full-time economic activities. This implies that about more respondents have either return to economic activities or partially engaged in economic activities.

Next, in Table 3, a descriptive summary of variables used to analyse how property rights violation affects the productivity of returnees is present. Here the hypothesis that undefined land rights negatively impact harvest yields beyond the displacement itself is explored. The pre-conflict, during conflict and post-conflict harvest values using average product prices is quantified.

Table 3

Descriptive Summary of Variables

Variables	Mean	Std. Dev.	Min.	Max.
Duration of displacement	18.55	19.71	1	108
Production before Conflicts (PROD ₁)	525,199.1	537,650.6	200,000	4,500,000
Production during Conflicts (PROD ₂)	47,166.29	186,897.6	0	1,200,000
Production after Conflicts (PROD ₃)	203,955.5	270,408.1	0	2,000,000
Farmsize before conflict	4.17	2.19	0.5	18
Farmsize during conflict	0.90	1.57	0	10
Farmsize after conflict	2.63	1.69	0	12
Distance to farm (Distfarm)	1.96	1.06	0.5	6
Family size (NumFam)	11.49	7.92	1	34
Ownership of farmland (OWNFL)	0.98	0.15	0	1
Perceived land right violation (PLR)	0.56	0.49	0	1

Source: Field work (2022).

Table 3 summarises the duration of displacement of returnees. The average displacement period was 18.55 months, with a range of one month to 108 months. This signifies a potential loss of a year's harvest for average displaced household. Prolong displacement translates to decrease agricultural workforce and lost productivity. The average household output before, during and after the conflicts were 525,199.1, 47,166.3 and 203,955.5 naira respectively. The data shows that productivity decreased during conflicts and increased after the conflicts ended. This could be since respondents were unable to access their farms or land during the conflicts, leading to lower yields. Once the conflicts were over, respondents were able to resume their farming activities, resulting in higher productivity. However, productivity has not yet reached pre-conflict levels.

The pairwise correlations matrix is presented in Table 4. The highest value of correlation is 0.661 and it is between land size before conflict and land size after conflict. The correlation coefficient for all

the variables shows that no correlation between the explanatory variables, suggesting that multicollinearity do not pose threat to the estimation.

Table 4

Pairwise Correlations

Variable	lcropy~t	Own-FL	GENC	Educ1	Dist-Farm	Num-Fam	Yrs-Wrk	Land-size	landsi~u	landsi~f	Sen-selr
Lcropyaft	1.000										
OwnFL	0.061	1.000									
GENC	0.190	-0.013	1.000								
Educ1	-0.052	-0.027	0.224	1.000							
DistFarm	0.002	-0.038	-0.088	-0.054	1.000						
NumFam	0.194	0.015	0.073	-0.230	0.149	1.000					
Yrsexp	0.231	0.139	-0.043	-0.295	0.100	0.413	1.000				
Landsize	0.339	0.016	0.108	0.080	0.100	0.155	0.169	1.000			
landsizeDu	0.168	-0.042	0.125	0.201	0.073	0.028	-0.060	0.287	1.000		
landsizeAf	0.587	0.031	0.136	0.070	-0.053	0.045	0.107	0.661	0.249	1.000	
Senselr	-0.046	0.003	0.185	0.118	-0.598	-0.220	-0.062	-0.094	-0.085	0.092	1.000

The study conducted regression analysis to examine the impact of land right violations on crop yield of respondents in the context of conflict. Using OLS robust regression method, the researchers estimated the effect of property rights on the productivity of displaced returnees before, during, and after the conflict. Table 4 presents the regression results, illustrating the relationship between land right violations and crop yield.

Table 5

Estimates of the Impact of Property Right on Productivity

VARIABLES	Dependent Variable: Crop yield (PROD _i)		
	PROD ₁ Before (1)	PROD ₂ During (2)	PROD ₃ After (3)
Own farm land	0.468* (1.922)	0.121 (0.187)	0.253 (0.782)
GENC (Male)	0.198** (2.506)	0.403 (1.306)	0.287*** (2.894)
EDUC	-0.0304 (-0.930)	0.0638 (0.536)	-0.0303 (-0.728)
Distance to farm	-0.0173 (-0.388)	0.0986 (0.564)	-0.0424 (-0.854)
Family size	0.00541 (1.331)	-0.0111 (-0.888)	0.00497 (0.813)
Years of Experience	0.0184*** (4.965)	0.0236** (2.512)	0.0112*** (2.717)
Land size before Displacement	0.228*** (13.29)		
Land size during Displacement		0.376*** (4.614)	
Land size after Displacement			0.369***

			(13.50)
Perceived land right (PLR)	0.151*	-0.116	-0.342***
	(1.787)	(-0.438)	(-3.306)
Length of Displacement			0.0344
			(0.382)
Benue	0.141	0.552	0.310**
	(1.342)	(1.630)	(2.004)
Nasarawa	0.127	0.518	0.594***
	(1.152)	(1.535)	(3.683)
Constant	10.74***	9.205***	10.06***
	(39.24)	(10.41)	(26.22)
Observations	834	504	718
R-squared	0.689	0.516	0.444

Source: Field work, 2022. Robust t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 5 presents the empirical analysis of the impact of property rights on the productivity of respondents in the context of conflict. The data includes measurements of productivity before, during, and after conflict, as well as the effects of land ownership, violation of perceived land rights, gender, years of agricultural experience, and land size on productivity.

Before the onset of conflict, ownership of farm land had a positive effect on farm yield, with owners experiencing a higher yield by 0.468% compared to those who rented or did not own land. Additionally, the perception of land rights being respected led to a further increase in crop yield by 0.151%. These findings suggest that clearly defined and respected property rights can lead to higher productivity among rural farmers.

However, the results also indicate that during and after conflict, the effect of land ownership on productivity diminishes, with no significant differences observed between owners and non-owners. Furthermore, the violation of perceived land rights during conflict led to a significant decrease in productivity by 0.342%.

Gender, respondents' years of experience, and land size were found to have significant positive effects on productivity both before and after conflict. Interestingly, the coefficient of land rights was negative and significant during the conflict period, indicating that productivity decreases when property rights are not well-defined in times of conflict. This highlights the importance of secure and respected property rights in maintaining and enhancing agricultural productivity, particularly in the face of conflict.

Next, it is further examined how land right violation affect displaced returnees' investment in agriculture. Table 6 shows the effect of land right violation on displaced farmers investment before displacement, during displacement and upon return to the community.

Table 6

Estimates of the Effect of Land Right Violation on Investment

Dependent Variable: Investment						
Variable	Before		During		After	
	Coef	P-Value	Coef	P-Value	Coef	P-Value
GENC (Male)	0.165**	(0.030)	0.450	(0.159)	0.337**	(0.001)
Educ	0.097	(0.294)	0.241	(0.541)	-0.171	(0.139)
Family size	0.008*	(0.058)	-0.008	(0.586)	0.007	(0.230)
Years of Experience	0.019***	(0.000)	0.028**	(0.010)	0.011**	(0.013)

Distance to farm	0.004	(0.894)	0.052	(0.688)	-0.062	(0.231)
Perceived land right (PLR)	0.518**	(0.029)	-0.158*	(0.053)	-0.240**	(0.036)
Land size before Displacement	0.232***	(0.000)				
Land size during Displacement			0.343***	(0.000)		
Land size after Displacement					0.378***	(0.000)
Length of Displacement					0.002	(0.374)
Constant	10.31***	0.000	9.64***	0.000	10.61***	0.000
F-test	6121.1		121.1		235.1	
P-value	0.000		0.000		0.000	
Observations	757		457		731	
R-squared	0.81		0.56		0.76	

Source: Field work, 2022. Robust t-statistics in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 6 presents the effect of the land tenure security on agricultural investment decisions among displaced farmers. The outcome shows that there is positive and statistically significant effect of land right on investment prior to displacement. This suggests that that farmers are more likely to invest in their farms if they have a strong sense of secure land rights. This aligns with existing literature Cao et al. (2020), Huntington and Shenoy (2021), and Kugbega and Aboagye (2021) that highlight the importance of secure land rights for agricultural investment especially in conflict prone areas. Farmers who feel they have secure access to their land are more likely to invest in activities that can improve their productivity, such as buying better seeds, fertilizers or equipment.

However, the impact of perceived land rights on investment appears to be negative both during displacement and upon return to place of origin. This finding suggests that land right violation discourages farmers' willingness and ability to invest in farm, potentially due to reduced confidence in reaping the benefits of such investments. The result in Table 6 highlights the disruptive impact of displacement and land tenure insecurity on farmers' investment decisions potentially hindering their agricultural recovery efforts. The Table also suggest that experience and size of farm land play a role in investment decisions. This suggests that farmers who had larger land holdings before being displaced are more likely to make significant investments upon returning. These results underscore the significance of having secure land rights for encouraging agricultural investment, particularly in areas prone to conflict. When farmers are confident in their access to land, they are more inclined to invest in measures that can enhance their efficiency and yields, such as purchasing high-quality seeds, fertilizers, or machinery.

Additional Analyses

We further the quantitative analysis by investigating the various factors that potentially influence the engagement of respondents in economic activities upon their return to their place of origin. A notable trend observed among the selected states is the significant number of displaced individuals who have returned to their original residences, with governmental support being cited as a key facilitator of this process. Our study seeks to assess the impact of such interventions and aid on both the return rates and economic reintegration of these displaced individuals, as outlined in Table 4. To achieve this objective, data were gathered on the duration taken by respondents to return to their place of origin, as well as the time taken to initiate economic activities post-return. Subsequently, regression analysis was employ to examine the influence of governmental assistance on the likelihood of returning to economic activities and the speed of economic reintegration in their place of origin.

Table 7*Estimates of the Impact of Intervention on Return to Economic Activities*

VARIABLES	Dependent Variable: Return to Economic Activities (RET)				Dependent Variable: Return to Place of Origin			
	All	Benue	Nasarawa	Plateau	All	Benue	Nasarawa	Plateau
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Security	1.697*	1.036	0.381	2.333	9.520***	11.74***	2.712*	-3.931
	(1.79)	(1.15)	(0.47)	(1.06)	(5.66)	(4.36)	(1.96)	(-1.29)
GEND(Male)	1.368*	0.555	1.701*	3.798*	-3.105	-5.988*	3.308**	4.960
	(1.70)	(0.49)	(1.66)	(1.70)	(-1.49)	(-1.87)	(2.25)	(1.22)
EXP	0.0413	-0.0178	0.104*	0.0534	0.221**	0.271	0.202**	-0.420*
	(1.29)	(-0.37)	(1.94)	(0.48)	(2.17)	(1.52)	(2.40)	(-1.73)
EDUC (PRI)	-0.673	1.225	-2.063	-0.319	-4.545**	-3.950	-1.887	-7.069
	(-0.70)	(0.76)	(-1.57)	(-0.12)	(-2.07)	(-1.10)	(-1.07)	(-1.52)
EDUC (SEC)	-1.625*	-1.231	-2.487**	1.502	-5.834***	-9.483***	-4.568**	-0.218
	(-1.88)	(-0.90)	(-2.11)	(0.59)	(-2.83)	(-2.80)	(-2.47)	(-0.04)
EDUC (TER)	-1.565	-2.915*	-0.654	2.806	-0.163	-2.470	-3.302	-0.223
	(-1.52)	(-1.80)	(-0.43)	(1.18)	(-0.05)	(-0.39)	(-1.27)	(-0.04)
SKILL	1.248	0.644	1.053	-2.383	-1.240	-0.841	1.782	6.513
	(1.26)	(0.33)	(0.94)	(-0.68)	(-0.57)	(-0.22)	(0.79)	(1.23)
Cash Assistance	-0.00001	-0.0000103	-0.000023**	0.000136	-0.0000766**	-0.000266**	-0.000008	-0.000071
	(-0.56)	(-0.16)	(-2.09)	(1.32)	(-2.37)	(-2.41)	(-0.04)	(-0.52)
Distance to Farm	0.222	0.138	-0.537	2.245*	3.765***	5.531***	-0.376	2.124
	(0.66)	(0.29)	(-1.01)	(1.84)	(4.27)	(3.46)	(-0.65)	(1.26)
Family size	0.0604	0.240**	-0.0201	-0.451*	0.389***	0.687***	-0.00744	-0.282
	(1.08)	(2.38)	(-0.49)	(-1.85)	(3.73)	(3.555)	(-0.11)	(-0.79)
Benue	2.518*				7.259**			
	(1.89)				(2.16)			
Plateau	1.463				-0.988			

	(0.98)				(-0.26)			
Nasarawa	2.274				-0.394			
	(1.47)				(-0.11)			
Constant	2.642	4.730	-3.870		2.861	8.791***	15.49***	
	(1.56)	(1.57)	(-1.19)		(0.55)	(3.14)	(2.71)	
F-test	29.67	16.73	14.02	13.5	53.65	28.75	3.88	3.77
P-value	0.0000	0.0089	0.0001	0.0019	0.0000	0.0000	0.0001	0.0006
Observations	832	274	294	268	831	274	294	267
R-squared	0.515	0.312	0.285	0.294	0.730	0.549	0.293	0.384

Source: Field work 2022. Note: Robust t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The results in columns 1, 2, 3 and 4 examine the effect of the independent variables on return to economic activities (the outcome of interest); while results in columns 5, 6, 7 and 8 examine the same effect on return to place of origin.

Column 1 to 4 of Table 7 depicts the results of the effect of intervention on return to economic activities. The t-values of the OLS result in column 1 shows that the perceived sense of security (PSEC), gender (being male) and education of household head (having a secondary certificate) significantly affect the return to economic activities of respondents. While years of experience of household head (EXP), education of household (with primary and tertiary education), acquired skill (SKILL), relief material/cash assistance received, the average distance of farm from home and family size are not significant in determining return to economic activities of displaced persons in North-central states of Nigeria.

The results of Table 7 (column 1) reveal that holding other variables constant, it took respondents 1.697 months (51 days) to return to economic activities even when the respondents perceive a sense of security in their places of origin. The result also shows that it took male respondents 1.368 months (40 days) to return to economic activities compared to female household heads. The combined result in column 1 further indicates that households with secondary school certificates return to economic activities faster by 1.625 months (48 days) than those with no education. Compared to the other two States, the result revealed that displaced persons from Benue State are more likely to stay without returning to economic activities for 2.518 months (75 days).

Running the regression model across different States provides insights into how intervention impacts the return to economic activities in each State. The OLS robust estimates in columns 2 to 4 of Table 6 highlight the outcomes. Among the three States analysed, only Nasarawa State shows a significant effect of the assistance received, while Benue and Plateau States do not exhibit significant impacts. The significance of intervention in Nasarawa State could be attributed to the additional efforts made by the state government to ensure the economic integration of returnees, a factor that may be lacking in the other two States. Overall, the cash assistance received by respondents does not significantly influence their return to economic activities across the states.

To conduct a more in-depth analysis of the impact of aid provided to displaced individuals in the area, regression analysis is used to assess whether interventions affect the likelihood of respondents returning to their original place of residence. This analysis will focus on columns 5 to 8 in the presented dataset. In column 5, in addition to security, distance to farm and other household characteristics, cash assistance significantly affects the willingness to return to place of origin. The disaggregated results for the states (column 6 to 8) indicate that the effect of cash assistance to respondent's willingness to return to place of origin is only significant in Benue. The significance of cash assistance in Benue may probably be due to the high number of non-governmental organisations such as charity organisations. In addition to the government effort, some of the non-governmental organisations go the extra mile to ensure displaced persons return to their places of origin.

The outcome of the OLS result in Table 7 is intuitive. The results revealed in column 1 (the combined results) implies that providing security at the place of origin remains an important factor respondent consider before returning to place of origin and economic activities. However, the result indicates that even when there is relative security or peace, respondents do not immediately return to economic activities. The combined result further revealed that as a whole security plays a significant role in return to place of origin and economic activity, the results of the various three States show the contrary; the provision of security is insignificant in determining return to economic activities of displaced persons. One possible explanation for this contradiction is the over-centralization of security in Nigeria. The provision of security in remote areas particularly in farms that are far-flung from roads and residential areas is crucial in displaced persons return to economic activities. The structure of security service in Nigeria makes it difficult to provide security in remote places-especially in farms that are far from villages.

The analysis of this study showed that although interventions are necessary to meet the needs of IDPs, their return to economic activities is not significantly affected by intervention but instead affected

by perceived sense of security, years of experience and gender of respondents. This suggests that IDPs eventually engage in economic activities out of necessity, even without external incentives. In Nasarawa State, the impact of interventions on encouraging the return to economic activities is noticeable but minimal. This implies that returnees are somewhat responsive to intervention, albeit on a small scale. However, some returnees hesitant to fully resume economic activities cite concerns about poor security in farming areas

Discussion and Implication for Displaced Returnees

This study utilised robust regression analysis to quantify the impact of land right violations on agricultural yield among displaced returnees. The findings indicate that respondents experience an increase in crop yield when they perceive that they hold legitimate land rights. Conversely, the violation of land rights has a detrimental and statistically significant effect on crop yield post-conflict. Furthermore, a portion of respondents have not regained access to their land or resumed economic activities following the conflict. The observed negative impact of the land rights violations suggests that limited investment is anticipated in the presence of such violations. The result is consistent with other studies that demonstrate that the property rights increase productivity and return on investment (Besley & Ghatak 2010; Goldstein & Udry, 2008).

The outcome of this study is in tandem with the theoretical position of Besley (1995) who hypothesised that investment is a function of property rights, cost of investment and expected return on investment. Besley (1995) postulated that an individual will not invest if there is the possibility that profit from their investment will be appropriated by others. Thus, the property right positively affects the investment and productivity of an individual. As the results in this study indicate, access to land positively and significantly affect the productivity of respondents before their displacement. However, when the access to the land is not guaranteed and there is uncertainty in appropriating harvest productivity falls. This is because landowners feel they do not have the freedom to utilize and reach their farmlands. As a result, their investment does not yield the expected productivity. For example, some landowners expressed concern that portions of their farmlands are either occupied or inaccessible.

I cannot go to my farm because it is dangerous to do so. I am afraid I may lose my life; herdsmen can attack without notice (Iorza Community Head, Logo LGA of Benue State, In-depth, Interview, 2022).

The effect of security on return to economic activities was also evident in Plateau State. The response of one of the leaders shows that insecurity constitute delays in return to economic activities.

Some of the farmlands are still occupied. We have families that have not stepped in their communities for more than three months, some six months for fear of being attacked. People are still here with us, some in primary schools and some with their relatives. How do you expect such persons to farm or harvest? They mainly depend on donations from charity organisations (Lobirng Community Head, Basa LGA of Plateau State, In-depth Interview, 2022).

In Benue State, respondents whose farmlands are far away from home fear starting full-time activities.

I cannot access my farmland because it is far away from the village. I cannot farm a large expanse of land that I use to because the land I am cultivating now belongs to my mother. The land is not enough for me but I cannot go to my land because I may be attacked or killed on the farm (Respondents from Oweto community in Agatu LGA of Benue State).

The presence of insecurity and poor land rights affect the return on investment - as some of the respondents indicated that they are afraid of losing their harvests.

I cannot do much because even after you farm there is no guarantee that you can harvest your crop. Last time all my yams were eaten up by cattle. The herders can lead cattle into

your farms at night and finish your harvest and when you confront the herders, they will either deny or start a fight (Respondents from Jimimi Community in Keana LGA of Nasarawa State).

The results of this research support the statements made by the participants. Farmers' production is hindered when they lack access to resources. According to Farrell (2019), having secure land ownership leads to higher productivity. On the other hand, ownership of land through informal means discourages investment due to the risk of property rights being violated.

Sert (2010) in the study of the effect of property right on IDPs return to place of origin across different countries affected by conflicts in South America, established that return to place of origin of IDPs is high in countries with effective property right policies. The findings of this current study also suggest that the feeling of ownership to land increases owner's investment thus leading to increase productivity. Displacement erodes such feelings of land rights and thus affects the productivity of returnees. It is clear from the findings of this study that property rights have a minimal impact on the productivity of respondents following conflicts. However, the effects of land rights on the productivity of returnees may not become significant immediately, but rather take some time to manifest.

As expected, education and gender play a crucial role in the productivity of returned IDPs. Gender difference in productivity calls for improvement farming method that limits manual labour in favour of mechanised farming. The effect of sense of security on the productivity of returned IDPs is insignificant through the period. Implying that the provision of security does not affect the productivity of the individual. The findings on the effect of property rights on productivity are consistent with the theoretical underpins based on the Demstzian theory of property rights in that households decreases investment when there are not sure of returns on investment. It is important to highlight that humanitarian aid focused solely on providing temporary relief without addressing the economic needs of displaced individuals has limited long-term impact. The results of this empirical study demonstrate that cash aid and relief supplies have minimal effect on encouraging displaced individuals to return to their original homes and resume economic activities. These findings hold important implications for stakeholders involved in humanitarian aid efforts.

The findings of this study focused on displaced returnees in north-central Nigeria. The experiences of returnees in other conflict-affected regions suggest that the findings of this study may not be generalisable. This limitation is especially significant for other regions of Nigeria facing varying forms of conflict like Boko Haram attacks, banditry, or other unique conflict zones.

Conclusion and Policy Implications

The land rights in Nigeria has been a complex issue of national debate in Nigeria. State actors play a crucial role in facilitating the social and economic integration of displaced returnees in Nigeria. One of the primary concerns in this process is the violation of land rights, which can lead to fear of attacks and negatively impact the productivity of displaced individuals.

This study aimed to analyse how the perception of the land rights influences productivity before, during, and after displacement events. The findings indicate that the land rights violations have a significant impact on household productivity prior to conflicts. Regression analysis reveals that property rights have a negative effect on productivity during and after conflicts, with respondents reporting increased productivity when they feel they have secure rights to land. Additionally, the land rights violations have a negative, albeit insignificant, effect on the productivity of returnees, as poor land rights can reduce incentives to invest in productive activities. These results highlight the importance of addressing land rights issues in order to promote the successful reintegration of displaced individuals in Nigeria.

The outcome of our studies implies that the productivity of displaced returnees falls or remains low when the land rights remains undefined. This could explain why despite the return of IDPs to their

place of origin their living standard remained poor. Since the land rights directly influence productivity, this paper recommends the need for a targeted policy intervention aimed at addressing land tenure insecurity among displaced farmers in North-Central Nigeria. Such policy should encourage proper land and resources demarcation among individuals, herdsman and communities. Furthermore, the land rights need to be strengthened especially in the rural areas to enable returnees to have access to land and appropriate the benefit of investments on farmland. This should involve strengthening local government and traditional institutions on dispute resolution and effective enforcement of land rights. This study highlights the limited impact of intervention on displaced persons. The findings suggest that focusing solely on their place of origin does not significantly improve their economic situation. To better integrate displaced individuals upon returning, government agencies should prioritize support for their economic activities.

Suggestions for Future Research

The findings of this study suggest that some internally displaced persons who return to their place of origin may still struggle with low productivity, even after multiple farming periods of resettlement. However, the study's use of a cross-sectional design restricts its ability to definitively link land tenure security with agricultural productivity. Future research should incorporate longitudinal studies to track changes over time and establish causal relationships. Moreover, the study is limited to north-central Nigeria, which may restrict the generalizability of the findings to other regions with varying political and sociological dynamics. Including all crisis-affected regions of Nigeria in future research would offer a more comprehensive understanding of the situation.

Acknowledgements

None.

Conflict of Interest

None.

Funding

The Authors received no funding for this research.

References

- Adekola, P. O., Azuh, D. E., Amoo, E. O., Brownell, G., & Cirella, G. T. (2022). Economic drivers of voluntary return among conflict-induced internally displaced persons in Nigeria. *Sustainability*, 14(4), Article 2060. <https://www.mdpi.com/2071-1050/14/4/2060>
- Adelaja, A., & George, J. (2019). Effects of conflict on agriculture: Evidence from the Boko Haram insurgency. *World Development*, 117, 184–195. <https://doi.org/10.1016/j.worlddev.2019.01.010>
- Adelman, S., & Peterman, A. (2014). Resettlement and gender dimensions of land rights in post-conflict northern Uganda. *World Development*, 64, 583–596. <https://doi.org/10.1016/j.worlddev.2014.06.031>
- Alchian, A. A., & Demsetz, H. (1973). The property right paradigm. *The Journal of Economic History*, 33(1), 16–27. <https://doi.org/10.1017/S0022050700076403>
- Ali, D. A., & Deininger, K. (2022). Institutional determinants of large land-based investments' performance in Zambia: Does title enhance productivity and structural transformation?. *World Development*, 157, Article 105932. <https://doi.org/10.1016/j.worlddev.2022.105932>
- Ali, D. A., Deininger, K., Hilhorst, D. H. M., Kakungu, F., & Yi, Y. (2019). *Making secure land tenure count for global development goals and national policy: Evidence from Zambia* (Working paper, No. 8912). World Bank. <https://ssrn.com/abstract=3430524>

- Apata, T. (2016). Small farms and agricultural productivity in Nigeria: Empirical analysis of the effects of land tenure, fragmentation and property rights. *Academia Journal of Agricultural Research*, 4(12), 691–697. <http://academiapublishing.org/journals/ajar/pdf/2016/Dec/Apata.pdf>
- Aragón, F. M. (2015). Do better property rights improve local income?: Evidence from First Nations' treaties. *Journal of Development Economics*, 116, 43–56. <https://doi.org/10.1016/j.jdeveco.2015.03.004>
- Besley, T. (1995). Property rights and investment incentives: Theory and evidence from Ghana. *Journal of political Economy*, 103(5), 903–937. <https://doi.org/10.1086/262008>
- Besley, T., & Ghatak, M. (2009). Property rights and economic development. LSE discussion paper. In D. Rodrik & M. Rosenzweig (Eds.), *Handbook of Development Economics*. EOPP. https://eprints.lse.ac.uk/25428/1/property_rights_and_economic_development.pdf
- Bozzoli, C., Bruck, T., & Muhumuza, T. (2012). *Movers or stayers? Understanding the drivers of IDP camp decongestion during post-conflict recovery in Uganda* (DIW discussion papers, No. 1197). German Institute for Economic Research. <https://www.econstor.eu/bitstream/10419/61397/1/72223581X.pdf>
- Cao, Y., Bai, Y., & Zhang, L. (2020). The impact of farmland property rights security on the farmland investment in rural China. *Land Use Policy*, 97, Article 104736. <https://doi.org/10.1016/j.landusepol.2020.104736>
- Carter, M. R., & Olinto, P. (2003). Getting institutions “right” for whom? Credit constraints and the impact of property rights on the quantity and composition of investment. *American Journal of agricultural Economics*, 85(1), 173–186. <https://doi.org/10.1111/1467-8276.00111>
- Chigbo, C. C. (2013). The nature of land ownership and the protection of the purchaser. *Journal of Sustainable Development Law and Policy (The)*, 1(1), 1–20. <https://www.ajol.info/index.php/jsdlp/article/view/122514>
- Chukwuma, O. G., Aghedo, G. U. & Okah, P. S. (2018). Pentecostal Churches in Nsukka Local Government Area, Enugu State and the challenges of internally displaced persons in Nigeria: Need for social work intervention. *International Journal of Arts and Commerce*, 9(6), 1–15.
- Deininger, K., Ali, D. A., Holden, S., & Zevenbergen, J. (2007). *Rural land certification in Ethiopia: Process, initial impact, and implications for other African countries*. <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=29c495c9836828adb9745e0af41108c844660f7e>
- Deininger, K., Xia, F., & Holden, S. (2019). Gendered incidence and impacts of tenure insecurity on agricultural performance in Malawi's customary tenure system. *The Journal of Development Studies*, 55(4), 597–619. <https://doi.org/10.1080/00220388.2018.1425395>
- De Walque, D. (2006). The socio-demographic legacy of the Khmer Rouge period in Cambodia. *Population Studies*, 60(2), 223–231. <https://doi.org/10.1080/00324720600684767>
- Fagen, P. W., Fernandez, A. J., Stepputat, F., & Lobe, R. V. (2003). *Internal displacement in Colombia: National and international responses* (Working paper). Copenhagen: Institute for International Studies. <https://www.cabidigitallibrary.org/doi/full/10.5555/20033138415>
- Farrell, P. (2019). Titles for me but not for thee: Transitional gains trap of property rights extension in Colombia Growth is hampered. *Public Choice*, 178, 95–114. <https://doi.org/10.1007/s11127-018-0617-2>
- Firmin-Sellers, K., & Sellers, P. (1999). Expected failures and unexpected successes of land titling in Africa. *World Development*, 27(7), 1115–1128. [https://doi.org/10.1016/S0305-750X\(99\)00058-3](https://doi.org/10.1016/S0305-750X(99)00058-3)

- Goldstein, M., & Udry, C. (2008). The profits of power: Land rights and agricultural investment in Ghana. *Journal of political Economy*, 116(6), 981–1022. <https://doi.org/10.1086/595561>
- Hanstad, T. (2010). *Secure land rights*. Seattle, Washington, USA: Rural Development Institute.
- Huntington, H., & Shenoy, A. (2021). Does insecure land tenure deter investment? Evidence from a randomized controlled trial. *Journal of Development Economics*, 150, Article 102632. <https://doi.org/10.1016/j.jdeveco.2021.102632>
- International Organisation on Migration. (2019). *DTM Nigeria — North Central And North West Zones Site Assessment Round 2*. Nigeria: IOM. <https://dtm.iom.int/datasets/nigeria-%E2%80%94-north-central-and-north-west-zones-site-assessment-round-2>
- International Organisation Migration. (2021). Nigeria displacement tracking matrix : North-East Nigeria displacement report 38. Nigeria: IOM. https://reliefweb.int/sites/reliefweb.int/files/resources/DTM%20Report%20Round%2038_compressed.pdf
- Johnson, H. (2023). Exploring the elements and phases of peacebuilding in post-conflict communities in Nigeria. *Jalingo Journal of Social and Management Sciences*, 5(1), 1–14. <https://oer.tsuniversity.edu.ng/index.php/jjsms/article/view/356>
- Kamta, F. N., Schilling, J., & Scheffran, J. (2020). Insecurity, resource scarcity, and migration to camps of internally displaced persons in northeast Nigeria. *Sustainability*, 12(17), Article 6830. <https://doi.org/10.3390/su12176830>
- Kugbega, S. K., & Aboagye, P. Y. (2021). Farmer-herder conflicts, tenure insecurity and farmer's investment decisions in Agogo, Ghana. *Agricultural and Food Economics*, 9(1), Article 19. <https://doi.org/10.1186/s40100-021-00186-4>
- Lawry, S., Samii, C., Hall, R., Leopold, A., Hornby, D., & Mtero, F. (2014). The impact of land property rights interventions on investment and agricultural productivity in developing countries: A systematic review. *Campbell Systematic Reviews*, 10(1), 1–104. <https://doi.org/10.4073/csr.2014.1>
- Lenshie, N. E., Ojeh, V. N., Oruonye, E. D., Ezeibe, C., Ajaero, C., Nzeadibe, T. C. ... Osadebe, N. (2022). Geopolitics of climate change-induced conflict and population displacement in West Africa. *Local Environment*, 27(3), 287–308. <https://doi.org/10.1080/13549839.2022.2040461>
- Meinzen-Dick, R., Quisumbing, A., Doss, C., & Theis, S. (2019). Women's land rights as a pathway to poverty reduction: Framework and review of available evidence. *Agricultural Systems*, 172, 72–82. <https://doi.org/10.1016/j.agsy.2017.10.009>
- Mugizi, F. M., & Matsumoto, T. (2021). From conflict to conflicts: War-induced displacement, land conflicts, and agricultural productivity in post-war Northern Uganda. *Land Use Policy*, 101, Article 105149. <https://doi.org/10.1016/j.landusepol.2020.105149>
- National Bureau of Statistics. (2018). *Conflict and violence in Nigeria: Results from the North-East, North-Central, and South-South zones*. Nigeria: NBS. <http://www.nigerianstat.gov.ng/nada/index.php/catalog/55/download/503>
- Newman, C., Tarp, F., & Van Den Broeck, K. (2015). Property rights and productivity: The case of joint land titling in Vietnam. *Land Economics*, 91(1), 91–105. <https://doi.org/10.3368/le.91.1.91>
- Nwocha, M. E. (2016). Impact of the Nigerian Land Use Act on economic development in the country. *Acta Universitatis Danubius*, 8(2), 23–31. <https://journals.univ-danubius.ro/index.php/administratio/article/view/3976/3876>

- Nwokolo, N. N. (2020). Peace-building or structural violence? Deconstructing the aftermath of Nigeria/Cameroon boundary demarcation. *African Security Review*, 29(1), 41–57. <https://doi.org/10.1080/10246029.2020.1734644>
- Oparinde, L. O. (2021). Gender differentials in livelihood security among aquaculture fish farmers in Southwest Nigeria. In W. Leal Filho, R. Pretorius, & L. O. de Sousa (Eds.), *Sustainable Development in Africa: Fostering Sustainability in one of the World's Most Promising Continents* (pp. 337–355). Cham: Springer. https://doi.org/10.1007/978-3-030-74693-3_19
- Ostrom, O., & Hess, C. (2007). *Private and common rights* (Research paper No. 2008-11-01). Indiana University. <http://ssrn.com/abstract=1304699>
- Platteau, J. (2015). *Institutions, social norms and economic development*. London: Routledge.
- Policy and Legal Advocacy Centre. (2019). *IDPs and the 2019 Election. Abuja: Election fact sheet*. http://www.placng.org/situation_room/sr/wp-content/uploads/2019/02/IDPs-and-the-2019-Elections.pdf
- Sert, D. S. (2010). Internal displacement: Return, property, economy. *International Migration*, 52(5), 227–244. <https://doi.org/10.1111/j.1468-2435.2010.00629.x>
- United Nations Statistics Division. (2005). *Designing household survey samples: Practical guidelines*. New York: United Nations. <https://unstats.un.org/unsd/demographic/sources/surveys/handbook23june05.pdf>
- Usman, H., Abdullahi, I. A., & Musa, U. (2023). Strategic administration of post conflict peace building activities in Nigeria: An analysis of post Boko Haram insurgency peacebuilding activities in north-east Nigeria. *Arts and Social Science Research*, 13(1), 69–80. <https://fassjassr.com.ng/index.php/assr/article/view/95>
- Wickeri, E., & Kalhan, A. (2010). Land rights issues in International Human Rights Law. *Malaysian Journal on Human Rights*, 4(1), 16–25. <https://ssrn.com/abstract=1921447>
- Yamano, T., & Deininger, K. (2005). *Land conflicts in Kenya: Causes, impacts, and resolutions*. World Bank.