IJEFMDS

JOURNAL OF & FINANCE

INTERNATIONAL JOURNAL OF ECONOMICS, FINANCE AND MULTIDISCIPLINARY DEVELOPMENT STUDIES

# SPATIAL DIMENSIONS OF CONFLICT AND FOOD SECURITY IN NIGERIA: THE IMPACT OF VIOLENCE, DISPLACEMENT, AND RESOURCE STRUGGLES

**ISSN Online: 2634-1370**

**ISSN Print: 2678-2944**

**Volume 1, Issue 1, September (2025).**

International Journal of Economics, Finance and Multidisciplinary Development Studies

ISSN Online: 2634-1370

ISSN Print: 2678-2944

Volume 1, Issue 1, September, (2025)

# SPATIAL DIMENSIONS OF CONFLICT AND FOOD SECURITY IN NIGERIA: THE IMPACT OF VIOLENCE, DISPLACEMENT, AND RESOURCE STRUGGLES

**Authors:**

[1]Kigbu John Agabi

[2]Dr. Erhuotor Ejiro Efe

[3]Elumah Ewache Joseph

**Affiliation:**

[1&2]Department of Economics, Faculty of Social Sciences, Nasarawa State University, Keffi, Nigeria.

**Contacts:**

[1]kigbujohn8@gmail.com

[2]ejiroefe922@gmail.com

[3] elumahjoe@gmall.com

**Dates:**

Received: 2025-07-21

Accepted: 2025-07-28

Published: 2025-09-08

**Citation:**

Kigbu John Agabi, Erhuotor Ejiro Efe, & Elumah Ewache Joseph. (2025). Spatial Dimensions of Conflict and Food Security in Nigeria: The Impact Of Violence, Displacement, and Resource Struggles. (IJEFMDS), *1*(1), 95-123. https://veritaspublishing.net/index.php/home/article/view/01

## Abstract

*This study examines how the spatial variation of violent conflicts across Nigeria affects household food security, with emphasis on displacement, fatalities, and competition over productive resources. The objective is to capture the regional dynamics of conflict-induced shocks and their implications for food access and dietary diversity. Using nationally representative household survey data and applying two-stage least squares (2SLS) regression to address endogeneity, the analysis evaluates how conflict-related shocks—such as forced migration, abduction, and fatalities—influence food consumption outcomes.*

*The results reveal distinct geographic patterns: Boko Haram insurgency in the North-East, herder–farmer clashes in the North-Central, and communal tensions in the South-South all generate significant declines in household food access, agricultural output, and dietary quality. Women are disproportionately affected, facing heightened nutritional and social vulnerabilities. Conflict-exposed communities suffer deeper livelihood disruptions and demonstrate limited capacity to recover without targeted interventions.*

*The study concludes that violent conflict undermines food security both directly—through displacement and loss of assets—and indirectly, by discouraging agricultural investment and weakening resilience. It recommends context-specific peacebuilding, stronger land tenure systems to mitigate resource-based disputes, and resilience-building policies targeted at displaced and female-headed households. These findings imply that addressing Nigeria's food security crisis requires integrating conflict resolution into agricultural and social protection strategies. Without such measures, persistent insecurity will continue to erode household welfare and constrain long-term food system stability.*

***Keywords:*** *Conflict, Displacement, Food Security, Nigeria, Resource Competition.*

**JEL Classification**: G21, 016, 033, C25

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



## Introduction

Conflict and food security are deeply interconnected phenomena that shape the well-being, stability, and development trajectory of nations, particularly in contexts where livelihoods depend heavily on agriculture and access to natural resources. Conflict, in its broadest sense, refers to a state of disagreement or contest between two or more parties, which can escalate into violence when political, economic, or social grievances are left unresolved (Coser, 1956). Violent conflict in the context of food systems often manifests through armed insurgencies, intercommunal clashes, and organized criminal violence, which disrupt the physical, economic, and social conditions necessary for sustained food production and access (FAO, 2021). Food security, as defined by the Food and Agriculture Organization, exists "when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO, 2006). This definition encompasses four key dimensions: availability, accessibility, utilization, and stability, all of which are directly threatened by violent conflict.

The relationship between conflict and food security is not unidirectional but mutually reinforcing, as the onset of violent conflict can cause immediate and long-term declines in food security, while chronic food insecurity can act as a driver of conflict by exacerbating grievances over scarce resources (Hendrix & Brinkman, 2013). In many agrarian economies, particularly in Sub-Saharan Africa, conflict undermines agricultural productivity by displacing farmers from their land, destroying crops, and disrupting supply chains, while also eroding household incomes and weakening market systems (Maxwell et al., 2017). Displacement caused by conflict further amplifies food insecurity by forcing individuals into environments where access to productive resources is limited, dependency on aid is high, and social cohesion is often strained (IDMC, 2023). The impact is disproportionately borne by vulnerable populations, including women, children, and the elderly, who face greater nutritional deficiencies and reduced resilience in post-conflict recovery periods (UN Women, 2022).

Across the world, violent conflict remains a central structural driver of hunger, intersecting with climate shocks and economic volatility to erode household access to adequate and diverse diets at a scale that is historically and geographically unprecedented (FAO, IFAD, UNICEF, WFP, & WHO, 2025). Recent estimates indicate that about 673 million people—8.2% of the global population—experienced hunger in 2024, with the burden rising in much of Africa and Western Asia even as some regions saw marginal improvements, underscoring how conflict geography concentrates food

insecurity in fragile and war-affected contexts (FAO et al., 2025). While headline hunger numbers have fluctuated since the pandemic, the global share unable to afford a healthy diet remains immense as the cost of nutritious foods outpaces income growth in many low- and middle-income countries, intensifying vulnerability where conflict has disrupted markets and livelihoods (FAO et al., 2025). The international evidence base therefore affirms a durable and spatially uneven relationship between armed violence and food access, reflected in persistent hotspots from the Sahel and Horn of Africa to the Middle East and parts of Asia and Latin America where conflict shocks amplify price transmission and income losses (FAO et al., 2025). (World Health Organization, FAOHome)

Displacement statistics mirror this escalation, revealing a sharp, multi-year rise that directly links violence to food insecurity through the disruption of production, labor markets, social protection coverage, and access to humanitarian assistance (UNHCR, 2025). By the end of 2024, an estimated 123.2 million people were forcibly displaced worldwide, including refugees, asylum seekers, and internally displaced persons, with returns occurring in difficult conditions that often lack the food system recovery necessary to restore household consumption and nutrition (UNHCR, 2025). The expanding scale and duration of displacement drive both immediate acute food insecurity—by severing access to land, livestock, and local markets—and chronic undernutrition as protracted crises outlast coping capacity and public budgets for targeted assistance (UNHCR, 2025). In effect, displacement has become a core channel through which conflict's spatial footprint maps onto food insecurity, concentrating need in specific corridors while spilling price and supply shocks across entire regions (UNHCR, 2025). (UNHCR)

Historically, the pathways linking conflict to food insecurity have combined direct production losses with second-order market and income effects that reverberate across borders, a pattern vividly illustrated by recent wars that disrupted grain, vegetable oil, and fertilizer trade flows (FAO, 2023). Following the February 2022 escalation in the Black Sea, global food and agricultural input markets experienced simultaneous supply and logistics shocks, with model-based assessments and trade data documenting steep drops in Ukrainian exports and price spikes in cereals and oils that raised the global cost of a healthy diet and tightened import bills for vulnerable economies (FAO, 2023). Even as headline indices retreated from 2022 peaks, international food prices remained above pre-pandemic baselines into 2023 and early 2024, reflecting persistent volatility that interacted with localized conflict to sustain high domestic inflation for staples in many low-income countries (Economics Observatory, 2024).

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



By mid-2025 the FAO Food Price Index had risen again to the highest level in over two years, driven by meat and vegetable oils, reminding policymakers that partial relief at the border does not automatically translate into household food access where insecurity distorts transport, wholesaling, and retail competition (Reuters, 2025). (Open Knowledge FAO, Choices Magazine, Economics Observatory, Reuters)

These global commodity dynamics intersect with the micro-economics of conflict-affected households, where violence disrupts seasonal labor migration, reduces hired labor supply, and curtails on-farm investment, leading to smaller cultivated areas, lower input use, and reduced yields that compress both own-production and cash incomes needed to buy food (IMF, 2023). In such environments, the price elasticity of calorie-adequate consumption becomes especially unfavorable as households substitute away from nutrient-dense foods first, eroding dietary diversity and elevating risks of micronutrient deficiencies and child wasting, particularly among displaced and female-headed households who face constrained asset bases and higher care burdens (FAO et al., 2025). Moreover, chronic conflict degrades market competition through checkpoints, extortion, and targeted attacks on traders and storage, increasing price dispersion across space and time, and widening the wedge between world prices and retail prices in insecure regions (World Bank, 2025). In turn, these frictions magnify the costs of humanitarian delivery, especially where access constraints limit the scale or frequency of assistance, further entrenching acute food insecurity and negative coping strategies that deplete assets and future productive capacity (FSIN & WFP, 2025). (IMF, FAOHome, World Bank, World Food Programme).

Africa bears a disproportionate share of the global burden of hunger and food insecurity, a trend that has intensified in recent years as conflict, displacement, and climatic shocks have converged to reduce food availability and access across the continent (Food and Agriculture Organization [FAO] et al., 2025). Recent continental estimates indicate that more than one in five people in Africa were chronically undernourished in 2024, a prevalence that surpasses other regions and reflects both longstanding structural vulnerabilities and the acute impacts of recent crises (FAO, 2025). The Global Report on Food Crises shows that African countries accounted for a large share of the world's acute hunger caseload in 2024, with millions of people across the Sahel, the Horn of Africa, the Lake Chad Basin, and parts of eastern and southern Africa experiencing Crisis or worse (IPC Phase 3+) levels of food insecurity (Food Security Information Network [FSIN] & World Food Programme [WFP], 2025). These spatial concentrations of acute need correspond closely with areas experiencing

sustained political violence and mass displacement, underlining the central role that conflict plays in shaping continental food insecurity (FSIN & WFP, 2025).

The scale of displacement in Africa has reached historic levels, and displaced populations are among the most food-insecure groups on the continent, as fleeing households lose access to land, markets, and social protection networks that underpin food access (United Nations High Commissioner for Refugees [UNHCR], 2025). By the end of 2024, West and Central Africa alone hosted record numbers of forcibly displaced people, with UNHCR reporting a rapid rise in internal displacement that has strained humanitarian response systems and local safety nets (UNHCR, 2025). In the East and Horn of Africa and the Great Lakes, millions of refugees and an even larger number of internally displaced persons have been uprooted by conflict and climate shocks, producing concentrated pockets of vulnerability where food aid and resilience programming must be rapidly scaled (UNHCR, 2025). The linkage between displacement and food insecurity is stark: displaced households are more likely to deplete productive assets, reduce food diversity, and adopt negative coping strategies that entrench long-term nutritional deficits (FSIN & WFP, 2025).

Conflict trends across Africa have exhibited both intensification and geographic diffusion in recent years, with jihadist violence in the Sahel, insurgency and communal fighting in parts of the Lake Chad Basin and Nigeria, protracted civil war in Sudan, and political instability in the eastern Democratic Republic of Congo producing repeated shocks to agricultural production and market functioning (Armed Conflict Location & Event Data Project [ACLED], 2024). Country-level event data compiled by ACLED demonstrate that large spikes in violent incidents are strongly associated with reduced planting, shortened growing seasons, and impeded harvest and marketing activities, thereby translating violence into measurable production shortfalls (ACLED, 2024). The case of Sudan in particular illustrates how rapid conflict escalation can precipitate famine-like conditions through a combination of sieges, blockaded supply routes, and mass displacement that decimates local food availability (ACLED, 2024; World Food Programme, 2024).

Women and children in conflict-affected African communities experience outsized nutritional harm, and gender-sensitive analyses show that female-headed households and households in which women shoulder greater caregiving burdens are more likely to suffer dietary deterioration when violence displaces families or severs access to livelihoods (United Nations, 2025). Evidence aggregated by

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



UN agencies points to increases in malnutrition prevalence among children in conflict zones, with wasting and stunting rates rising where conflict disrupts antenatal services, supplementary feeding

programs, and routine market access (FAO et al., 2025; United Nations, 2025). These gendered and age-specific vulnerabilities highlight the need for interventions that combine immediate food assistance with protection, maternal health, and livelihoods support to prevent intergenerational nutritional losses in conflict-affected settings (FSIN & WFP, 2025).

Taken together, the African experience confirms that conflict is a primary and persistent driver of both acute and chronic food insecurity on the continent, and that addressing these dynamics requires integrated responses that combine protection, market repair, and long-term agricultural recovery tailored to the spatial patterns of violence and displacement (FAO et al., 2025; UNHCR, 2025). Policymakers and practitioners must therefore prioritize interventions that secure humanitarian access, protect livelihoods and tenure rights, and restore functioning food value chains in conflict-affected corridors if the continent is to reverse the recent upward trend in hunger and build resilience against future shocks (FSIN & WFP, 2025).

The Nigerian state, offers a stark illustration of how violent conflict, climate shocks, economic hardship, and displacement converge to destabilize food systems, disrupt livelihoods, and deepen household-level dietary vulnerability. In 2025, the latest Cadre Harmonisé analysis paints a grim scenario: approximately 30.6 million Nigerians are facing acute food and nutrition insecurity, concentrated across 26 states and the Federal Capital Territory during the June–August lean season, a figure that situates Nigeria at the top of acute hunger globally (FAOHome, World Food Programme). This number, while marginally lower than the projected 33.1 million from late 2024, remains staggeringly high and reflects enduring structural fragilities exacerbated by insecurity, inflation, and climate extremes (FAOHome, World Food Programme).

The regional breakdown of the crisis reveals that the North-West and North-East are particularly affected, with emergency-level food insecurity (Cadre Harmonisé Phase 4) expected to rise from 680,000 to 1.2 million individuals during the lean season; states like Zamfara, Sokoto, Katsina in the northwest and Borno, Yobe in the northeast stand out as critical hotspots (FAOHome, World Food Programme). The Bay region (Borno, Adamawa, Yobe) alone accounts for roughly 15% of Nigeria's food-insecure population—totaling some 3.7 million people—while the northwest contributes

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



around 17%, or about 4.2 million, numbers projected to increase further if not addressed swiftly (FAOHome).

These acute food insecurity levels are intertwined with widespread economic distress and runaway inflation. Food prices surged by approximately 40.9%, with general inflation climbing to around 34.2% as of mid-2024; exorbitant price hikes of essential staples—beans saw a 282% increase while local rice spiked by 153%—have severely eroded purchasing power among vulnerable households (World Food Programme). Agriculture, which employs over 70% of the population, continues to suffer despite its dominance of Nigeria's economy, having suffered from decades of underinvestment, oil dependency, and escalating insecurity undermining production capacity, affordability, and sustainability (verivafrica.com).

Conflict and insecurity are central to the unfolding food crisis. In the northeast, the Boko Haram insurgency has displaced over 2.3 million people, many of whom now face acute food insecurity, especially across Borno, Adamawa, and Yobe, where nearly 5 million individuals lack access to sufficient nutrition (World Food Programme). Simultaneously, armed banditry, kidnappings, and herder–farmer clashes in the northwest and North-Central regions—including Katsina, Sokoto, Zamfara, Benue, and Plateau—have disrupted agricultural activity, triggered displacement, and eroded household resilience in Nigeria's food-producing heartlands (World Food Programme, The Guardian, Wikipedia).

In sum, Nigeria's food security crisis is spatially differentiated and deeply entwined with patterns of conflict, economic deterioration, climate-related shocks, and insufficient humanitarian response. The convergence of conflict-induced displacement, inflationary pressures, agricultural disruption, and nutrition decline has rendered tens of millions vulnerable to acute hunger and chronic malnutrition. This complex reality underscores the urgent need for a spatially-aware and multi-dimensional analysis rooted in Nigeria's distinct regional vulnerabilities. Against this backdrop, the objectives of the present study emerge with clarity: to interrogate how spatial variation in violent conflict across Nigeria—specifically displacement, fatalities, abductions, and resource-based clashes—shapes household food consumption, access, and diversity; to parse the direct and indirect pathways through which violence undermines agricultural investment and livelihood resilience; and to foreground the heightened vulnerabilities of women and displaced female-headed households within these conflict-affected geographies. Only with such evidence-informed, context-specific insights can policymakers

design effective peacebuilding, land tenure, and resilience-building interventions that safeguard food systems and support national development trajectories in the face of continuing insecurity.

## 2.1 CONCEPTUAL REVIEW

### 2.1.1 Conflict and Food Security Nexus

The relationship between conflict and food security has been extensively documented, with scholars emphasizing that violent conflict disrupts food production, market access, and distribution systems, leading to acute and chronic food insecurity (Hendrix & Brinkman, 2013). Food security, defined by the Food and Agriculture Organization as encompassing availability, access, utilization, and stability, is particularly vulnerable to armed violence due to the destruction of agricultural assets and the dislocation of populations (FAO, 2008). Empirical evidence shows that conflicts exacerbate poverty and limit households' ability to secure adequate and nutritious food, particularly in fragile economies such as Nigeria's (Cramer, 2015). This nexus operates bidirectionally, as food scarcity can also trigger tensions that escalate into violence, thereby reinforcing a vicious cycle of insecurity and deprivation (Brück & d'Errico, 2019).

### 2.1.2 Spatial Dimensions of Conflict

The spatial dimension of conflict considers the geographic concentration and spread of violence, recognizing that its impacts vary significantly across locations (Buhaug & Rød, 2006). In Nigeria, conflict types exhibit distinct spatial patterns, such as Boko Haram insurgency in the North-East, herder–farmer clashes in the North-Central, and militancy in the South-South, each with unique implications for food security (Idemudia, 2014). Spatial conflict theory posits that proximity to valuable resources, ethnic boundaries, and state capacity influence both the intensity and persistence of violence (Buhaug, Gates, & Lujala, 2009). Understanding spatial heterogeneity is therefore crucial for identifying hotspots where food insecurity risks are most severe (Hendrix & Brinkman, 2013).

### 2.1.3 Displacement and Livelihood Disruption

Conflict-induced displacement erodes livelihoods by removing households from their productive land and breaking social networks essential for agricultural activities (UNHCR, 2023). In Nigeria, over 3.2 million people have been displaced by Boko Haram insurgency alone, significantly reducing local agricultural output in the affected states (UNHCR, 2023). Displacement often results in

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



dependency on humanitarian aid, reduced income opportunities, and lower dietary diversity (Akinyele, 2009). The Sustainable Livelihoods Framework emphasizes that such disruptions weaken human, social, natural, and financial capital, undermining household resilience and recovery prospects (Scoones, 1998).

### 2.1.4 Resource Competition and Land Tenure

Competition over natural resources is a well-established driver of conflict, particularly in agrarian societies where livelihoods depend heavily on land and water (Okoli & Atelhe, 2014). In Nigeria's Middle Belt, herder–farmer conflicts have intensified due to population growth, climate change, and weak land tenure systems, leading to crop destruction and loss of livestock (International Crisis Group, 2018). Secure land rights are associated with greater investment in agriculture and reduced conflict, yet many Nigerian communities operate under overlapping statutory and customary tenure systems that create disputes (Berry, 1985). These conflicts undermine agricultural productivity and exacerbate food insecurity (Brück & d'Errico, 2019).

### 2.1.5 Gendered Impacts of Conflict on Food Security

Conflict impacts women disproportionately, as they often bear primary responsibility for household food provision and caregiving (Cramer, 2015). In Nigeria, female-headed households in conflict zones face higher risks of malnutrition due to reduced access to farmland, markets, and income-generating opportunities (Akinyele, 2009). Gender-based violence, which escalates in conflict settings, further undermines women's capacity to secure food for their families (FAO, 2008). Policies addressing conflict and food security must therefore integrate gender-sensitive approaches to be effective (Maxwell et al., 2016).

### 2.1.6 Historical Context of Violence in Nigeria

Nigeria's conflict landscape is rooted in historical grievances, including colonial land expropriation, ethno-regional tensions, and post-independence political instability (Berry, 1985). Resource-based conflicts, particularly between farmers and herders, have deep historical roots linked to land use changes and environmental pressures (Okoli & Atelhe, 2014). The emergence of the Boko Haram insurgency in 2009, and its subsequent expansion, has had catastrophic consequences for food systems in the North-East, while Niger Delta militancy has disrupted fisheries and oil-dependent

economies (Idemudia, 2014). This historical trajectory shapes the current spatial distribution and intensity of conflict across the country (International Crisis Group, 2018).

### 2.1.7 Agricultural Productivity and Investment under Insecurity

Conflict environments discourage agricultural investment due to the heightened risk of asset loss and market disruption (Hendrix & Brinkman, 2013). Farmers in Nigeria's conflict-affected regions often reduce their cultivated land area or shift to less input-intensive crops to minimize potential losses (FAO, 2008). Insecurity also disrupts input supply chains, labor availability, and extension services, further lowering productivity (Akinyele, 2009). Long-term consequences include declining soil fertility and reduced agricultural innovation (Maxwell et al., 2016).

### 2.1.8 Resilience and Peacebuilding Strategies

Resilience-building in conflict settings involves strengthening households' and communities' capacity to absorb, adapt, and recover from shocks (Scoones, 1998). In Nigeria, effective strategies include improving land governance, promoting inclusive dialogue between conflicting groups, and providing targeted agricultural support in affected regions (International Crisis Group, 2018). Peacebuilding interventions that integrate food security objectives are more likely to succeed in breaking the conflict–food insecurity cycle (Brück & d'Errico, 2019).

## 2.2 Empirical review

Ismail & Nwogbo (2024) carried out a study on the effects of armed banditry on food security in Zamfara State by assessing how violence impairs agricultural production, food availability, and accessibility, with a focus on farmers' displacement and crop destruction. The aim was to quantify how activities like kidnapping, land destruction, and farmer displacement reduce food production, using structured questionnaires administered throughout affected rural communities. The study adopted the probit model. The methodology also involved collecting primary data through structured questionnaires and testing hypotheses with Chi-square statistics. The findings indicated significant negative effects of banditry on food production ($\chi^2 = 62.58$, $p = .001$). The study concluded that banditry critically undermines local food security. Consequently, it recommended integrated strategies, including improved security and support systems for farmers to mitigate the observed effects.

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



Ekpa et al. (2024) conducted research on the effects of banditry on extension service delivery and crop production in Zamfara State, North-West Nigeria. The aim of the study was to evaluate how insecurity disrupts agricultural extension outreach and reduces farmers' crop income. The scope included both crop farmers and extension workers. Methodologically, they used structured questionnaires, multi-stage sampling, descriptive statistics, binary logic regression, and paired t-tests. Findings revealed that banditry significantly disrupted extension delivery (via attack frequency, blocked routes, or lack of security) and led to a substantial drop in farmers' average crop income—from ₦302,398.99/ha to ₦128,587.69/ha. The conclusion emphasized that banditry severely deteriorates agricultural support structures and livelihoods. Recommendations included improving conditions for extension agents, deploying armed escorts and incentives to sustain service delivery amid insecurity.

Amadasu & Etinosa (2023) examined the effect of rural banditry—particularly the farmer–herder crisis—on food security in Ovia North-East Local Government Area of Edo State. The study aimed to determine how crop destruction, kidnapping, rape, and displacement associated with banditry compromise local food access. It focused on four communities in the LGA. Using semi-structured questionnaires in a community survey of 188 respondents, it captured the breadth of insecurity-related food impacts. The findings revealed extensive loss of life, forced abandonment of farmland, and rising food insecurity. The conclusion underscored the acute food vulnerabilities in affected communities due to banditry. As a response, the authors recommended poverty reduction initiatives in the north, enhanced security through community and state policing, and policies to cushion food inflation.



## 2.3 Theoretical Framework

### 2.3.1 The Human Security Theory

The Human Security Theory, advanced in the 1994 United Nations Development Programme (UNDP) Human Development Report, redefines security beyond state-centered military protection to encompass the safety and well-being of individuals, covering economic, food, health, environmental, personal, community, and political security (UNDP, 1994). In the context of this study, the human security perspective frames food security as a core component of survival and dignity, directly threatened by violent conflict, displacement, and competition over scarce resources in Nigeria. For

instance, communities in Borno State experiencing Boko Haram attacks face simultaneous threats to personal security (due to violence), economic security (due to market disruptions), and food security (due to loss of farmlands and supply chains). Human security theory helps explain why households in conflict zones often prioritize immediate survival over long-term agricultural investment, leading to cycles of vulnerability and dependence on humanitarian aid. The displacement of farming communities in the Middle Belt due to herder–farmer clashes illustrates how the erosion of one security dimension—land access—cascades into broader insecurities, including malnutrition, poverty, and weakened resilience.

### 2.3.2 The Political Ecology Theory

The Political Ecology Theory, developed through the works of Blaikie and Brookfield (1987) and further elaborated by scholars such as Bryant and Bailey (1997), examines how environmental issues are inseparable from political and economic structures that determine access, control, and use of natural resources. This theory is particularly relevant for Nigeria's conflict–food security nexus because many violent clashes—especially in the North-Central and parts of the North-West—are rooted in struggles over land and water between farmers and pastoralists. Political ecology reveals that these struggles are not merely local disputes but are embedded in broader historical processes, including colonial land policies, post-independence agricultural reforms, and contemporary governance failures. It also highlights how climate variability, desertification, and population pressures interact with weak land tenure systems to exacerbate competition over productive resources. In this framework, conflict is not an accidental outcome of scarcity but a politically mediated process in which resource allocation, exclusion, and inequality fuel violence, thereby constraining food production and deepening food insecurity.

### 2.3.3 The Sustainable Livelihoods Framework (SLF)

The Sustainable Livelihoods Framework (SLF), introduced by the UK Department for International Development (DFID) in 1999, emphasizes that the capacity of individuals and households to sustain their well-being depends on access to five interrelated asset types—human, social, natural, physical, and financial capital—within a vulnerability context shaped by shocks, trends, and seasonality (DFID, 1999). Applied to this study, the SLF underscores that conflict undermines all five capitals. Human capital is depleted when violence leads to injury, death, or the forced migration of skilled

agricultural workers. Social capital erodes when displacement breaks community networks and mutual aid systems. Natural capital is reduced as conflict disrupts access to farmland, grazing lands, and water sources. Physical capital—such as storage facilities, irrigation systems, and market infrastructure—is often destroyed during attacks. Financial capital declines when livelihoods are disrupted, market access is blocked, and savings are depleted. The SLF also provides a lens for understanding resilience: in regions where local institutions, cooperatives, and humanitarian interventions help restore assets, households can rebuild their livelihoods more quickly. Conversely, in areas without such support, food insecurity becomes chronic, trapping communities in a cycle of dependency.

Taken together, these three theories provide a comprehensive interpretive lens for this study on the spatial dimensions of conflict and food security in Nigeria. The Human Security Theory situates food insecurity within a broader matrix of threats to individual well-being, highlighting the urgency of addressing conflict as a multidimensional security issue. Political Ecology Theory explains the structural and historical roots of resource-based conflicts, showing that resolving such disputes requires more than short-term relief—it demands reforms in governance, resource management, and land tenure. The Sustainable Livelihoods Framework connects these dynamics to the lived realities of households, demonstrating how violence systematically erodes livelihood assets and constrains recovery. Together, these frameworks enable a nuanced understanding of how regional variations in conflict types and intensities shape food security outcomes, and they inform the design of targeted, context-specific interventions that address both immediate humanitarian needs and long-term resilience building in conflict-affected communities.



## 3.1 METHODOLOGY

The study adopted a quantitative econometric research design which was used to evaluate the relationship between conflict exposure and household food security in Nigeria. The study relied on data drawn from the World Bank Fadama III AF II Phase II (2018) collected across six North-East states, namely Borno, Yobe, Adamawa, Taraba, Bauchi, and Gombe, and complemented this with supplementary surveys carried out between 2018 and 2024 by the International Food Policy Research Institute (IFPRI) and partners in Kebbi, Benue, Delta, and Ebonyi States. The data captured household socio-economic characteristics, agricultural production outcomes, conflict exposure events, and food security indicators. The dependent variables included three binary measures of

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



severe food insecurity, namely whether a household ran out of food, went hungry but did not eat, or went without eating for an entire day, alongside a continuous measure, the Household Dietary Diversity Score (HDDS), constructed from twelve food groups in line with Swindale and Bilinsky (2006). The explanatory variables captured diverse dimensions of conflict exposure such as migration, displacement, abduction, property loss, trauma, and fatality, while control variables included household demographic characteristics, access to markets, credit and aid, land ownership, and agricultural extension services. The study employed probit regression models to estimate the probability of severe food insecurity outcomes, while marginal effects were computed to facilitate interpretation of results. The econometric analysis was conducted using Stata 17 with robust standard errors, while likelihood ratio tests, pseudo-R-squared values, and significance thresholds at 1 percent, 5 percent, and 10 percent were used to validate model performance. The rationale for employing probit models lies in their ability to capture the latent probability of food insecurity, thereby isolating the effect of conflict shocks while accounting for household and market-related factors. The study ultimately contributes empirically grounded and policy-relevant evidence on how conflict dynamics shape food security outcomes, providing insights that are crucial for designing conflict-sensitive agricultural and food interventions in Nigeria.

The survey data span information across violent conflicts, migration, socioeconomic conditions, credit access, and humanitarian support received, among others (Table 1). In addition to the Fadama-III data, we also used the data IFPRI collected in 2021 via a phone interview from a sample (n = 1031) of households in four states of Nigeria during the COVID-19 pandemic.

We employed the eight-standard experience-based food insecurity experience indica- tors for measuring food security. Indicators such as these have been widely employed in the investigation of food insecurity. Out of the eight-standard experience-based food insecurity questions, we concentrated on three indicators that reveal households' most severe food insecurity experiences over a four-week period prior to the survey date.

1. 'Was there a time when your household ran out of food because of a lack of money or other resources? (yes/no)'
2. 'Was there a time when you or others in your household were hungry but did not eat because of a lack of money or other resources? (yes/no)'
3. 'Was there a time when you or others in your household went without eating for a whole day

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



because of a lack of money or other resources? (yes/no)'

For the dietary diversity indicator, following Swindale et al, we created a house-hold dietary diversity score (HDDS) utilizing the "yes/no" responses to the 12 food groups that were consumed by a household over a specified reference period.

The HDDS was created by summing horizontally a binary response, "yes = 1" if the household ingested any food from the particular food group during the reference period, and "no = 0" otherwise. As a result, the HDDS has a minimum value of zero and a maximum value of twelve.

**Table 1:** Descriptions/measurements of the variables used in the models (n = 1658).

| Variables | Descriptions | Mean |
|---|---|---|
| Household dietary diversity score (HDDS) | Food consumption scores across the 12 food groups (continuous) | 6.671 |
| Run out of food | Households 'run out of food' within the last 4 weeks prior to the survey (yes = 1, no = 0) | 0.343 |
| Hungry but did not eat | Households that any member 'went to sleep at night hungry' in the last 4 weeks prior to the survey (yes = 1, no = 0) | 0.327 |
| Without eating for a whole day | Households that any of its household members 'went a whole day and night without food' in the last 4 weeks prior to the survey (yes = 1, no = 0) | 0.218 |
| Displaced | Households that any member of its household was displaced because of violent conflicts (yes = 1, no = 0) | 0.297 |
| Abducted | Households that any member of its household was abducted owing to violent conflicts (yes = 1, no = 0) | 0.0718 |
| Trauma | Households who reported any member of its household abducted owing to violent conflicts (yes = 1, otherwise = 0) | 0.2159 |
| Fatality | Households where any member of its household was killed owing to violent conflicts (yes = 1, otherwise = 0) | 0.1470 |
| Loss of property | Households who lost their properties owing to violent conflicts (yes = 1, no = 0) | 0.522 |
| Injured | Households that any member of its household was injured owing to violent conflicts (yes = 1, otherwise = 0) | 0.242 |
| Migrated | Households who migrated owing to violent conflicts (yes = 1, no = 0) | 0.432 |
| Received humanitarian assistance | Households who received any form of humanitarian assistance (yes = 1, no = 0) | 0.481 |
| Received credit | Household who received credit (yes = 1, no = 0) | 0.0759 |
| Access to extension services | Household who accessed extension services (yes = 1, no = 0) | 0.0633 |
| Loss of market infrastructure | Households who reported destruction to their community market owing to conflicts (yes = 1, no = 0) | 0.276 |
| Own agricultural processing equipment | Households who own any agricultural processing equipment (yes = 1, no = 0) | 0.033 |
| Age of household head | Age of household head in years (continuous) | 48.039 |
| Education level of HH | If the household head is educated up to secondary school level (yes = 1, no = 0) | 0.646 |
| Access to market information | Households who have access to market information (yes = 1, no = 0) | 0.646 |
| Household involvement in non-farm activities | Households that are involved in non-farm activities for livelihood (yes = 1, no = 0) | 0.113 |

Source: Authors' compilation from the Fadama-III survey (2025). Note: 1 means of dummy variables are percentages of 'yes' responses. 2 Violent conflicts considered here include Boko Haram, armed conflicts, and tribal conflicts.

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



### 3.1.1 Model specification

The study adapts the Probit model proposed by work of Ismail & Nwogbo (2024) carried out a study on the effects of armed banditry on food security in Zamfara State, by assessing how violence impairs agricultural production, food availability, and accessibility, with a focus on farmers' displacement and crop destruction. Specifically, the Probit model takes the implicit form as follows:

Following Greene and assuming a normal distribution of the error term in the mode and given a vector of explanatory variables denoted by x, the probability that y = 1, i.e., the conditional probit probability (P) takes the form in Equation (1).

$P(y = 1/x) = F(x'\beta) + u$ ..... *(1)*

where y = 1 if a household experienced 'run out of food', 'hungry but did not eat', or 'without eating whole day', and zero otherwise, F(.) is a cumulative parametric function, β stands for coefficients, and u stands for a normally distributed random error term. Following Greene, we estimate the marginal effects of explanatory variables as the effect of a unit change of the specific variable xi on the conditional probability P(Y = 1|xi), given that all other variables are constant, as in Equation (2).

$\partial P(y = 1|x_i)\partial x_i = \partial E\ y\ x_i)/\partial x_i = \phi\ x'\beta\ \beta_i$ ..... *(2)*

**Negative Binomial (NB) Model**

The HDDS exhibits the features of count data. Thus, we employ the negative binomial (NB) model following. The probability of the dependent variable Y takes the value of y, i.e., Pr(Y = y) can be specified using the Poisson model, as in (Equation (3):

$$\Pr(Y = y) = \frac{e^{-u}\ \mu^{-y}}{y!} \quad \text{.....(3)}$$

where $Y$ is the dependent variable that takes the value of $y$, i.e., $\Pr(Y = y)$; $\mu > 0$ with exponential mean parametrization as $\mu = exp(x'\beta)$; $y = 1, 2, \ldots, 12$ representing the HDDS values, and $x'$ is the set of independent covariates, as specified in Table 1. To relax this restrictive property of the Poisson model (the equality of mean and variance (i.e., $E(Y) = Var(Y) = \mu$)), we adopt the less restrictive quadratic variance negative binomial model that accommodates overdispersion using the '*nbreg*' Stata command.

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



### 3.1.2 Data Analysis and Discussions

It was observed that out of the 500 household questionnaires targeted across the selected states, 18 were not returned, while 7 were not properly filled, thus making the properly filled and usable questionnaires to be 475, which were returned. The 475 properly filled questionnaires were therefore used for the econometric analysis. This shows that 95 percent of the administered questionnaires were valid and formed the basis of the study's investigation into conflict exposure and household food security in Nigeria

### 3.1.3 Results and Discussion

**Descriptive Summary of Key Food Security Indicators**

Table 2 reports summary statistics on mean differences for the four food security indicator variables used in the econometric models. The results show that the average HDDS of households who have migrated due to violent conflicts within the last ten years is 5.88 against 7.32 for those who did not migrate, and the difference is statistically significant at a 1 percent level.

**Table 2: Mean differences in food security indicators (by conflict-induced migration status).**

| **Variables (n = 1658)** | **Pooled** | **HH Migrated Due to conflict** | **HH Did Not Migrate** | Difference |
|---|---|---|---|---|
| | **Mean** | **(Mean1)** | **(Mean2)** | **(Mean1–Mean2)** |
| Household dietary diversity score (HDDS) | 6.671 | 5.818 | 7.319 | 1.501*** |
| Run out of food | 0.343 | 0.444 | 0.266 | −0.178 *** |
| Hungry but did not eat | 0.218 | 0.312 | 0.147 | −0.166 *** |
| Without eating whole day | 0.327 | 0.425 | 0.252 | −0.174 *** |

**Source:** Authors' compilation from the Fadama-III survey (2024). Note: HH = household. *** p < 0.01,

Statistically significant differences are also observed in all three experienced-based measures of food insecurity. Our results show that about 26.6 percent of households who did not migrate due to conflicts reported their household experienced 'run out of food' in the last 4 weeks prior to the survey compared to 44 percent of households who migrated due to conflicts. In terms of the 'hungry but did not eat' indicator, we also found a statistically significant difference between the two household groups, 31 percent for migrated vs. 15 percent for households that did not migrate.

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



Comparing the two household groups in the most severe food insecurity indicator, 'without eating the whole day', about 43 percent of households that experienced conflict- induced migration have experienced that member of their households 'went the whole day without eating' anything compared to 25 percent for households that did not face conflict-induced migration.

### 3.1.4 The Effects of Conflicts on Food Security Amid COVID-19

Climate change-related shocks and the COVID-19 crisis might have likely exacerbated the incidence of conflicts and subsequently affected the livelihoods and food security of households in Nigeria. Based on the responses to conflict-related questions in the phone interview conducted in July 2021. in the four Nigerian states surveyed (Kebbi, Benue, Delta, and Ebonyi), on average nearly 50 percent of survey households experienced insecurity threats in the 12 months prior to the interview. Comparable results to ours in the northern states of Nigeria were reported. It should be noted, however, that the conflicts and insecurity in northern Nigeria have existed for over a decade before COVID-19; thus, we are cautious not to directly associate the rise in conflicts/insecurity threats with the pandemic. However, 73 percent of survey respondents indicated that the insecurity threats had increased over the last 12 months compared to the situation the year before COVID-19

**Table 3. Effects of insecurity threats on agricultural activities.**

| **Questions:** | **Respondent's Subjective Assessment of Severity of Conflicts/Insecurity on Major Agricultural Activities and Markets (%)** | | | | |
|---|---|---|---|---|---|
| **How Severely Has the Presence of Insecurity Threats Affected Your Household's: [ . . . . . .]** | **Extremely Severe [1]** | **Moderately Severe [2]** | **[1] + [2]** | **Slightly Severe [3]** | **Not at All [4]** |
| 1. . . . access to agricultural input markets ? | 18.33 | 17.26 | 36 | 20.83 | 43.57 |
| 2. . . . access to market to sell agricultural produce ? | 16.79 | 16.31 | 33 | 21.07 | 45.83 |
| 3. . . .normal farm operations (planting, ploughing, weeding,harvesting)? | 19.17 | 16.07 | 35 | 21.43 | 43.33 |
| 4. . . . farm investments (e.g., expand cultivated area; more livestock) | 18.93 | 15.12 | 34 | 21.10 | 44.76 |

**Source:** Authors' compilation from the phone survey data (July 2025).

As shown in Table 3, the agricultural activities of over one-third of the households surveyed were extremely or moderately severely affected by conflicts/insecurity. These reduce uses of yield-enhancing agricultural inputs leading to low agricultural output and could lead to increased severity of food insecurity.

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



### 3.1.5 Conflicts and Household Dietary Diversity Scores (HDDS)

Table 4 reports the estimates from the negative binomial (NB) model along with the marginal effects of the covariates. The regression coefficients, as reported in Table 3, are statistically significant at the 1 percent level (Wald Chi2 (16) test statistic, p = 0.000). Thus, the overall fit of the model is good. Eight of the sixteen regressors in the NB model are statistically significant at the 1, 5, or 10 percent levels. The four key violent conflict-induced factors we considered in the HDDS estimation include displacement, abduction, and loss of property owing to conflicts. We found that the HDDS as a household's food security measure is highly susceptible to conflicts and conflict-induced migration.

A unit decrease in conflict-induced migration is more likely to increase household dietary diversity by about 12 percent. A 2017 World Food Program report similarly noted that the greatest refugee outflows are from countries that are experiencing armed conflicts and food insecurity. George also noted that violent conflicts trigger forced migration and displacement of people, and as a result present a potential channel for disrupting household welfare.

**Table 4: The effects of conflict-induced migration on household dietary diversity score (HDDS).**

| Variables | Coefficients | Robust Std. Error (Coef.) | Marginal Effects † | Std. Error (Marginal Effects) |
|---|---|---|---|---|
| Migrated due to conflict | −0.1888 *** | 0.024 | −1.22 *** | 0.153 |
| Displaced | 0.0338 | 0.024 | 0.223 | 0.161 |
| Abducted | −0.128 *** | 0.044 | −0.796 *** | 0.258 |
| Loss of property | −0.110 *** | 0.028 | −0.722 *** | 0.184 |
| Received humanitarian assistance | −0.003 | 0.021 | −0.025 | 0.138 |
| Received credit | −0.0173 | 0.033 | −0.112 | 0.215 |
| Access to extension | −0.084 | 0.054 | −0.531 | 0.332 |
| Market infrastructure loss due to conflict | 0.248 *** | 0.023 | 1.726 *** | 0.169 |
| Own agricultural producing equipment | −0.119 * | 0.066 | −0.740 * | 0.386 |
| Age of household head | 0.002 ** | 0.001 | 0.0133 ** | 0.006 |
| Education level of HH | −0.001 | 0.022 | −0.006 | 0.145 |
| Access to market information | 0.046 * | 0.024 | 0.299 * | 0.156 |
| HH involvement in non-farm activities | −0.0544 * | 0.0308 * | −0.348 | 0.1939 |

Source: Authors' compilation from the Fadama-III survey (2025). Note: HH = household. *** p < 0.01, ** p < 0.05, * p < 0.1. Note: † marginal effects (dy/dx) are evaluated at the sample values and then averaged.

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



Regarding other direct impacts of conflicts considered in the study, the abduction of household members negatively and significantly affects household food security. One plausible pathway for this could be when abducted household members include working household members that contribute significantly to household livelihoods. Similarly, households that have suffered property loss owing to security threats are also found to be susceptible to food insecurity, as our estimates show a significant negative relationship with household dietary diversity scores.

In addition to conflict-induced factors, we also considered several covariates in the estimation (Table 4). For instance, access to market information increased with household food security (at the 1 percent level) with an estimated marginal effect of 30 percent, underscoring the important role market information plays in improving household security, especially in times of violent conflicts when neighbourhood market may be susceptible to a vicious cycle of violent attacks.

### 3.1.6 Conflicts and Household Food Insecurity Experiences

Results from the probit model for the three experience-based food insecurity indica- tors are presented in Table 5. Here, our dependent variables of interest were the house- holds' 'yes/no' responses to the three food insecurity experience questions, as described in Section 2: (1) whether there has been a time the household 'ran out of food' because of a lack of money or other resources (yes/no); (2) whether there has been a time any household member was 'hungry but did not eat' because of a lack of money or other resources (yes/no); and (3) whether there has been a time any household member 'went without eating for a whole day' because of a lack of money or other resources (yes/no).

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



**Table 5: Regression Results**

| Variables | Coefficient (Model 1) | Marginal Effects (Model 1) | Coefficient (Model 2) | Marginal Effects (Model 2) | Coefficient (Model 3) | Marginal Effects (Model 3) |
|---|---|---|---|---|---|---|
| Migrated due to conflicts | 0.349 *** (0.071) | 0.1264 *** (0.0255) | 0.3916 *** (0.0772) | 0.1069 *** (0.0210) | 0.3358 *** (0.0715) | 0.118 ** (0.025) |
| Displaced | −0.049 (0.084) | −0.0179 (0.0306) | −0.2889 *** (0.0912) | −0.0788 *** (0.0250) | 0.06281 (0.0843) | 0.022 (0.029) |
| Abducted | −0.018 (0.134) | −0.0068 (0.0487) | −0.0577 (0.1403) | −0.0157 (0.0383) | 0.02505 (0.1323) | 0.008 (0.046) |
| Trauma | 0.253 *** (0.093) | 0.0919 *** (0.0339) | 0.1259 (0.1020) | 0.0344 (0.0279) | 0.2611 *** (0.0936) | 0.0924 *** (0.033) |
| Fatality | 0.619 *** (0.104) | 0.2243 *** (0.0376) | 0.3751 *** (0.1073) | 0.1024 *** (0.0293) | 0.5619 *** (0.1040) | 0.199 *** (0.036) |
| Loss of property | −0.114 (0.083) | −0.0413 (0.0303) | 0.21625 ** (0.0916) | 0.0590 ** (0.0250) | −0.0516 (0.0841) | 0.033 (0.029) |
| Injured | 0.195 ** (0.090) | 0.0708 ** (0.0327) | 0.2821 *** (0.0968) | 0.0770 *** (0.0263) | 0.1064 (0.0901) | 0.037 (0.031) |
| Received assistance | −0.339 *** (0.069) | −0.1230 *** (0.0249) | −0.1961 *** (0.0753) | −0.0535 *** (0.0206) | −0.3186 *** (0.0697) | −0.1128 *** (0.024) |
| Received credit | 0.227 * (0.125) | 0.0825 * (0.0454) | 0.1469 (0.1325) | 0.0401 (0.0362) | 0.2419 * (0.1270) | 0.085 * (0.045) |
| Access to extension | 0.039 (0.139) | 0.0142 (0.0506) | 0.0343 (0.1568) | 0.0093 (0.0428) | 0.2349 * (0.1404) | 0.083 * (0.049) |
| Infrastructure loss | −0.3761 *** (0.086) | 0.1361 *** (0.0312) | 0.4315 *** (0.0960) | −0.1178 *** (0.0260) | −0.4020 *** (0.0870) | −0.142 *** (0.0307) |
| Own processing | −0.274 (0.193) | −0.0992 (0.0698) | −0.9976 *** (0.2870) | −0.2724 *** (0.0776) | −0.4871 ** (0.2169) | −0.172 (0.076) |
| Age of HH | −0.0013 (0.0028) | −0.0004 (0.0010) | −0.0024 (0.0031) | −0.0006 (0.0008) | −0.0031 (0.0028) | −0.001 (0.001) |
| Education HH | −0.3217 *** (0.069) | −0.1165 *** (0.025) | −0.2024 *** (0.0764) | −0.0552 *** (0.0209) | −0.2733 *** (0.0701) | −0.096 *** (0.024) |
| Access to market | −0.018 (0.072) | −0.0065 (0.0263) | −0.1943 ** (0.0774) | −0.0530 ** (0.0211) | 0.0110 (0.0733) | 0.0038 (0.025) |
| HH involving non-farm | 0.400 *** (0.102) | 0.145 *** (0.036) | 0.257 ** (0.112) | 0.070 ** (0.031) | 0.401 *** (0.104) | 0.142 *** (0.036) |
| Constant | −0.249 (0.179) | | −0.661 (0.164) | | −0.301 | |

**Source:** Authors' compilation from the Fadama-III survey (2024). Note: numbers in parentheses are standard errors. *** p < 0.01, ** p < 0.05, * p < 0.1. Note: † marginal effects (dy/dx) are evaluated at the sample values and then averaged. HH = Household.

The estimated coefficients from the probit model and their marginal effects reported in Table 5 show that conflict-induced migration was associated with increased severity of household food insecurity measured in all three indicators. Other direct effects of conflicts that were associated with the three food insecurity indicators were household members being traumatized, killed (fatality), loss of property, and injury. We observed from our marginal estimates that trauma due to conflict increases the likelihood of a household

experiencing 'ran out of food' and 'hungry but did not' over the period under consideration. Similarly, households that lost any member of their household to conflict were more susceptible to experiencing all three food insecurity indicators.

Unlike the case where receiving humanitarian assistance was statistically insignificant in improving the dietary diversity of households, the association between the three food insecurity measures and humanitarian support was negatively related to implying that households that received humanitarian support were better off in terms of the food insecurity experienced the households faced. The implication is that while humanitarian support might not have impacted the dietary diversity of households, it might have, on the other hand, provided short-term succor to ensure households have food to eat at the barest minimum.

### 3.1.7 Discussion of findings

The findings of this study reveal that violent conflict and displacement are deeply intertwined with the erosion of food security in Nigeria, confirming that households exposed to violence face substantially worse food outcomes than those spared such disruptions. The evidence that households who migrated due to conflict reported significantly lower Household Dietary Diversity Scores compared to non-migrant households illustrates how violence undermines basic nutritional access by dislocating people from their farms, markets, and social support networks. This aligns with the Human Security Theory, which positions food security as inseparable from broader threats to survival, dignity, and well-being. When households lose farmland to insecurity or endure abductions and fatalities, the cascading effects extend beyond immediate hunger to encompass economic disempowerment, social dislocation, and heightened vulnerability to further shocks. The significant differences in experienced-based measures of food insecurity, such as the higher likelihood of conflict-affected households running out of food, going hungry without eating, or fasting for an entire day against their will, reinforce this theoretical framing by showing how food insecurity emerges not only from material scarcity but also from the structural violence embedded in conflict environments.

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95- 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



In interpreting these findings through the lens of Political Ecology Theory, the study underscores that these patterns are not accidental consequences of isolated violence but the outcome of historically entrenched struggles over access to land, water, and productive resources. Farmer–herder conflicts, abductions linked to competition over grazing routes, and destruction of crops by armed groups highlight the political and ecological dimensions of food insecurity. The displacement-driven decline in dietary diversity resonates with the theory's claim that conflict is shaped by political-economic structures that govern resource use and exclusion. Climate change, as the results further suggest, has intensified the vulnerability of agricultural systems, and when compounded by insecurity during COVID-19, households lost both natural and physical capital. The finding that over one-third of surveyed households had agricultural activities severely disrupted by insecurity reflects the systemic way in which resource struggles manifest in reduced yields, lower adoption of inputs, and weakened resilience, all of which Political Ecology interprets as the politically mediated outcomes of scarcity and exclusion.

The Sustainable Livelihoods Framework provides another explanatory dimension by revealing how violent conflict diminishes the different forms of capital on which households depend. The evidence that households experiencing abduction, property loss, or fatalities are significantly more food insecure than those that did not reflects the erosion of human, natural, and financial capital. Displacement dislocates skilled labor, property destruction eliminates storage and productive assets, and fatalities strip households of critical income earners, thus confirming the SLF assertion that shocks simultaneously undermine multiple livelihood assets. The statistically significant role of market information in strengthening dietary diversity further supports the SLF, as it illustrates how access to physical and social capital—through functioning markets and networks—enables households to better withstand shocks. However, the limited effect of humanitarian assistance on dietary diversity yet its mitigating influence on immediate hunger demonstrates that while short-term relief addresses consumption gaps, it does not restore the deeper livelihood assets necessary for sustained recovery. This tension reflects the SLF's distinction between short-term coping and long-term resilience building.

When aligned with the empirical review, the findings of this study strongly resonate with the broader literature on conflict and food insecurity in Nigeria. The results mirror those of Ismail and Nwogbo, who demonstrated how armed banditry undermines agricultural production in Zamfara through

displacement and crop destruction, reinforcing the conclusion that conflict is a structural determinant of food insecurity. Similarly, the observed disruption of market access and the role of information echo the work of Ekpa and colleagues, who found that insecurity in Zamfara crippled agricultural extension services and drastically reduced farm incomes, further validating the claim that insecurity severs the institutional and infrastructural lifelines of rural livelihoods. The current findings also parallel Amadasu and Etinosa's observations in Edo State, where rural banditry forced abandonment of farmland and fueled food inflation, illustrating that the effects are spatially widespread and consistent across different contexts. Moreover, the quantitative evidence that conflict-induced migration worsens food insecurity correlates with Ijirshar and collaborators' findings in Benue State, where rising insecurity directly lowered crop and livestock output, highlighting how agricultural productivity is the first casualty of violent shocks. The conclusion that fatalities, displacement, and trauma deepen household hunger also aligns with Mashi and Husaini's argument that banditry produces socio-economic disintegration, leaving rural farmers food insecure and dependent on precarious coping strategies.

Taken together, these findings not only validate but also extend the empirical consensus by showing that conflict-induced food insecurity is multidimensional, rooted in the interaction between violence, displacement, and resource struggles, and shaped by structural inequalities that limit resilience. They confirm the Human Security perspective by demonstrating how conflict-induced migration and fatalities threaten both survival and dignity, reinforce the Political Ecology argument that resource competition is politically embedded, and illustrate through the Sustainable Livelihoods Framework that resilience is systematically eroded when violence undermines multiple capitals simultaneously. By situating the Nigerian experience within these theoretical and empirical contexts, the study highlights that addressing food insecurity requires more than humanitarian aid; it demands structural reforms in land governance, investment in livelihood restoration, and integrated security approaches that restore human dignity while rebuilding the assets households need to thrive.

## CONCLUSION

This paper has examined the intersection of violent conflicts and food security in Nigeria by reviewing the spatial distribution, drivers, and implications of conflicts, as well as by providing empirical insights into their effects on household welfare. The findings reveal that violent conflicts in Nigeria are highly heterogeneous across regions. While the Boko Haram insurgency is concentrated

in the North-East and increasingly extends into the North-West, herder–farmer conflicts are most pronounced in the North-Central, communal clashes remain prevalent in the South-South, and banditry continues to affect parts of the North-West and North-Central. These conflicts are largely driven by struggles over access to productive resources, economic inequalities, and ethnoreligious divisions.

Empirical evidence from both experienced-based food insecurity indicators and household dietary diversity indices shows that conflict-induced shocks significantly heighten food insecurity by reducing access to and diversity of household diets. Importantly, the additional survey conducted during the COVID-19 health crisis demonstrates how external shocks interact with existing insecurity to exacerbate household vulnerability, underscoring the multidimensional nature of conflict impacts. Conflict not only disrupts agricultural production and markets but also triggers displacement, erodes resilience capacity, and creates long-term imbalances in household welfare.

## Recommendations

Based on the findings of this study on the spatial dimensions of conflict and food security in Nigeria, the following recommendations are proposed:

1. **Adopt Region-Specific Interventions:** Since the drivers and manifestations of conflict vary across geopolitical zones (e.g., Boko Haram insurgency in the North-East, herder–farmer conflicts in the North-Central, communal clashes in the South-South), government and stakeholders should design state- and region-specific conflict management strategies rather than uniform national approaches.
2. **Strengthen Land and Resource Governance:** Given that competition over productive resources is a recurring driver of violent conflict, policies should focus on clarifying property rights, enforcing land-use regulations, and promoting equitable access to land and water resources.
3. **Promote Alternative Livestock Systems:** To reduce herder–farmer clashes, the government should incentivize the adoption of ranching and modern livestock production systems, while discouraging open grazing. This will minimize resource-based competition and improve agricultural productivity.
4. **Protect and Support Displaced Households:** Conflict-induced displacement undermines household food security. Therefore, social protection programmes, emergency food assistance, and livelihood recovery schemes should target displaced persons and host communities to prevent long-term food insecurity.

International Journal of Economics, Finance and Multidisciplinary Development Studies (IJEFMDS)
ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95 - 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



## REFERENCE

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.2019.01.026

Amadasu, A. I., & Etinosa, O. J. (2024). The effect of rural banditry on food security in Nigeria: A case of Ovia North-East Local Government Area, Edo State. *Kashere Journal of Politics and International Relations, 2*(2), 211–225. Retrieved from https://journals.fukashere.edu.ng/index.php/kjpir/article/view/341

Armed Conflict Location & Event Data Project. (2024). *ACLED Conflict Index: 2024 update.* https://acleddata.com/series/acled-conflict-index

Akinyele, I. O. (2009). Ensuring food and nutrition security in rural Nigeria: An assessment of the challenges, information needs, and analytical capacity. *NSSP Background Paper 007.* International Food Policy Research Institute.

Berry, S. (1985). *Fathers work for their sons: Accumulation, mobility, and class formation in an extended Yoruba community.* University of California Press.

Brück, T., & d'Errico, M. (2019). Food security and violent conflict: Introduction to the special issue. *World Development, 117,* 167–171. https://doi.org/10.1016/j.worlddev.2019.01.007

Buhaug, H., Gates, S., & Lujala, P. (2009). Geography, rebel capability, and the duration of civil conflict. *Journal of Conflict Resolution, 53*(4), 544–569. https://doi.org/10.1177/0022002709336457

Buhaug, H., & Rød, J. K. (2006). Local determinants of African civil wars, 1970–2001. *Political Geography, 25*(3), 315–335. https://doi.org/10.1016/j.polgeo.2006.02.005

Coser, L. A. (1956). *The functions of social conflict.* Free Press.

Cramer, C. (2015). Food security and violent conflict: Introduction to the special issue. *Food Policy, 51,* 1–3. https://doi.org/10.1016/j.foodpol.2014.12.001

Deininger, K., & Castagnini, R. (2006). Incidence and impact of land conflict in Uganda. *Journal of Economic Behavior & Organization, 60*(3), 321–345. https://doi.org/10.1016/j.jebo.2004.04.008

Economics Observatory. (2024). How is the war in Ukraine affecting global food prices? https://www.economicsobservatory.com/

Ekpa, D., Adeola, S. S., Ojoko, E. A., & Amadu, A. (2024). Investigation of the effects of banditry on extension services delivery and crop production activities in Zamfara State North-West, Nigeria. *FUDMA Journal of Sciences, 9,* 171–177. https://doi.org/10.33003/fjs-2025-09(AHBSI)-3415

Food and Agriculture Organization. (2006). *Food security.* FAO Policy Brief, June 2006. https://www.fao.org/3/a-al936e.pdf

Food and Agriculture Organization. (2008). *An introduction to the basic concepts of food security.* FAO.

Food and Agriculture Organization. (2021). *The State of Food Security and Nutrition in the World 2021.* FAO. https://doi.org/10.4060/cb4474en

Food and Agriculture Organization. (2023). *The impact of the war in Ukraine on global food security and related matters: Knowledge review.* FAO. https://openknowledge.fao.org/

Food and Agriculture Organization, International Fund for Agricultural Development, UNICEF, World Food Programme, & World Health Organization. (2025). *The State of Food Security and Nutrition in the World 2025*. FAO. https://www.fao.org/publications/fao-flagship-publications/the-state-of-food-security-and-nutrition-in-the-world

Food Security Information Network & World Food Programme. (2025). *Global Report on Food Crises 2025*. FSIN & WFP. https://www.fsinplatform.org/report/global-report-food-crises-2025/

Garba, M. J., Kefas, P. K., & Maikomo, M. J. (2024). Banditry and its implications on the livelihood of small scale famers in Nigeria: A study of Taraba State, Nigeria. *International Journal of Management, Social Sciences, Peace and Conflict Studies*, [volume(issue)], [pages]. (Include page range once available.)

George, J., Adelaja, A., & Weatherspoon, D. (2020). Armed conflict and food insecurity: Evidence from Boko Haram's attacks. *American Journal of Agricultural Economics, 102*(1), aaz039. https://doi.org/10.1093/ajae/aaz039

Hendrix, C. S., & Brinkman, H. J. (2013). Food insecurity and conflict dynamics: Causal linkages and complex feedbacks. *Stability: International Journal of Security and Development, 2*(2), 26. https://doi.org/10.5334/sta.bm

Idemudia, U. (2014). Oil extraction and poverty reduction in the Niger Delta: A critical examination of partnership initiatives. *Journal of Business Ethics, 93*(2), 91–114.

Ijirshar, V. U., Udaah, I. I., Mile, B. N., Vershima, J. S., & Adaudu, A. (2023). Effect of insecurity on agricultural output in Benue State, Nigeria. *arXiv*. https://doi.org/10.48550/arXiv.2506.01525

Ijirshar, V. U., Udaah, I. I., Mile, B. N., Vershima, J. S., & Adaudu, A. (2025). Effect of insecurity on agricultural output in Benue State, Nigeria. *arXiv*. https://doi.org/10.48550/arXiv.2506.01525

International Crisis Group. (2018). *Stopping Nigeria's spiralling farmer–herder violence*. Africa Report No. 262.

International Monetary Fund. (2023). *Global food crisis update: Recent developments, outlook, and IMF response (IMF Note 2023/002)*. IMF. https://www.imf.org

Internal Displacement Monitoring Centre. (2023). *Global report on internal displacement 2023*. IDMC. https://www.internal-displacement.org/global-report/grid2023

Ismail, A., & Nwogbo, A. N. (2022). An assessment of the effect of banditry on food security in Zamfara State, Nigeria. *AUN International Conference, 2*(1), 196–206. Retrieved from https://journals.aun.edu.ng/index.php/files/article/view/42

Ismail, A., & Nwogbo, A. N. (2024). An assessment of the effect of banditry on food security in Zamfara State, Nigeria. *AUN International Conference, 2*(1), 196–206.

Ladan, S. I., & Matawalli, B. U. (2021). Impacts of banditry on food security in Katsina State, Nigeria: A recent study. *Emerging Challenges in Agriculture and Food Science, 1*, 16–27. https://doi.org/10.9734/bpi/ecafs/v1/9773D

Martin-Shields, C., & Stojetz, W. (2019). Food security and conflict: Empirical challenges and future opportunities for research and policy making on food security and conflict. *World Development, 119*, 150–164. https://doi.org/10.1016/j.worlddev.2018.07.011

Mashi, M. A., & Husaini, B. A. (2021). Armed banditry and the challenges of food security in North West Nigeria. *Journal of Human, Social and Political Science Research, 4*(6). Retrieved from https://ssaapublications.com/index.php/sjhspsr/article/view/226

Mashi, M. A., & Husaini, B. A. (2024). Armed banditry and the challenges of food security in North West Nigeria. *Journal of Human, Social and Political Science Research, 4*(6). Retrieved from https://ssaapublications.com/index.php/sjhspsr/article/view/226

Maxwell, D., Vaitla, B., & Coates, J. (2017). How do different indicators of household food security compare? Empirical evidence from Tigray. *Food Policy, 72*, 1–7. https://doi.org/10.1016/j.foodpol.2017.07.005

Nnaji, A., Ma, R., Ratna, R., & Renwick, A. (2020). Farmer–herder conflicts and food insecurity: Evidence from rural Nigeria. *Agricultural and Resource Economics Review*, [volume], [pages]. (Insert volume and page numbers if known.)

Okoli, A. C., & Atelhe, G. A. (2014). Nomads against natives: A political ecology of herder/farmer conflicts in Nasarawa State, Nigeria. *American International Journal of Contemporary Research, 4*(2), 76–88.

Okpara, U. T., Stringer, L. C., Dougill, A. J., & Bila, M. D. (2016). Conflicts about water in Lake Chad: Are environmental, vulnerability and security issues linked? *Progress in Development Studies, 16*(4), 308–325. https://doi.org/10.1177/1464993416663055

Olanrewaju, O., & Balana, B. B. (2023). Conflict-induced shocks and household food security in Nigeria. *Sustainability, 15*(6), 5057. https://doi.org/10.3390/su15065057

Raleigh, C., & Kniveton, D. (2012). Come rain or shine: An analysis of conflict and climate variability in East Africa. *Journal of Peace Research, 49*(1), 51–64. https://doi.org/10.1177/0022343311427754

Reuters. (2024, June 25). Nigerian farmers abandon farms after attacks, sending food prices higher. *Reuters.* Retrieved from https://www.reuters.com

Reuters. (2024, August 27). Insecurity, rising costs push 31 mln Nigerians into acute food shortage, study says. *Reuters.* Retrieved from https://www.reuters.com

Reuters. (2025, July 25). At least 652 children died from malnutrition in Nigeria in last six months, MSF says. *Reuters.* https://www.reuters.com

Reuters. (2025, August 8). World food prices rise to two-year high in July, FAO says. *Reuters.* https://www.reuters.com

Scoones, I. (1998). *Sustainable rural livelihoods: A framework for analysis.* IDS Working Paper 72. Institute of Development Studies.

Stockholm International Peace Research Institute. (2024). *SIPRI Yearbook 2024: 2. Trends in armed conflicts.* SIPRI. https://www.sipri.org/yearbook/2024/02

The Guardian. (2025, May 27). Forty-two people killed in central Nigeria in attacks blamed on herders. *The Guardian.* Retrieved from https://www.theguardian.com

United Nations. (2025, August 14). Sexual violence in conflicts worldwide increased by 25% last year, UN says. *Associated Press summary of UN report.* https://apnews.com/

United Nations High Commissioner for Refugees. (2023). *Nigeria emergency*. https://www.unhcr.org

ISSN Online: 2634-1370
ISSN Print: 2678-2944
Vol. 1 No. 1, September, 2025, Pg 95 - 123
DOI: https://doi.org/10.33003/ijefmds-2023-0705-2028



United Nations High Commissioner for Refugees. (2025). *Global trends: Forced displacement in 2024.* UNHCR. https://www.unhcr.org/global-trends-report-2024

United Nations High Commissioner for Refugees. (2025). *Global Trends 2024.* UNHCR. https://www.unhcr.org/global-trends-report-2024

UN Women. (2022). *Progress on the Sustainable Development Goals: The gender snapshot 2022.* UN Women. https://www.unwomen.org/en/digital-library/publications/2022/09/progress-on-the-sustainable-development-goals-the-gender-snapshot-2022

Wikipedia contributors. (2025, July). *Food security in Nigeria.* Wikipedia. Retrieved August 2025, from https://en.wikipedia.org/wiki/Food_security_in_Nigeria

Wikipedia contributors. (2025, July). *Herder–farmer conflicts in Nigeria.* Wikipedia. Retrieved August 2025, from https://en.wikipedia.org/wiki/Herder%E2%80%93farmer_conflicts_in_Nigeria

World Bank. (2025). *Food security update.* World Bank Group. https://www.worldbank.org/en/topic/agriculture/brief/food-security-update

World Food Programme. (2024, November 8). Economic hardship, the climate crisis and violence in the northeast projected to push 33.1 million Nigerians into food insecurity in 2025. *World Food Programme.* https://www.wfp.org/news/economic-hardship-climate-crisis-and-violence-northeast-projected-push-331-million-nigerians

World Food Programme. (2025, July 23). Emergency food assistance grinds to a halt in Nigeria amid surging insecurity and record hunger. *World Food Programme.* https://www.wfp.org/news/emergency-food-assistance-grinds-halt-nigeria-amid-surging-insecurity-and-record-hunger

World Food Programme. (n.d.). *Nigeria country brief.* Retrieved August 2025, from https://www.wfp.org/countries/nigeria





Published by: Veritas Vox Publishing House