

Coping Strategies and Livelihood Sustainability of Rural Farm Households in Banditry-Affected Communities of North Central Nigeria

Zakari, M.^{1,2*}, Olorunsanya, E.O.¹, Bwala, M.A.¹, & Ahmed. AG.¹

¹Department of Agricultural Economics and Extension Services,
Ibrahim Badamasi Babangida University, Lapai, Niger State, Nigeria.

²Department of Agricultural Education, Federal University of Education, Kontagora, Niger State,
Nigeria.

* Corresponding author: dezakx@gmail.com (ORCID;0000-0001-8691-0942)

DOI: <https://doi.org/10.5281/zenodo.22880615>

Abstract

Banditry has emerged as a major threat to rural livelihoods in North Central Nigeria, disrupting agricultural production, displacing farming populations, and eroding household assets. However, limited empirical evidence exists on the nature and effectiveness of coping strategies adopted by affected households. This study examines coping strategies and livelihood status among 399 rural farm households (194 affected, 205 non-affected) selected through multistage sampling techniques. Data were collected using a structured questionnaire administered via Kobo Toolbox, pre-tested with a reliability coefficient of 0.82. The Coping Strategy Index (CSI) and Simpson Livelihood Index were employed for analysis. Most common coping strategies included reduction in meal frequency (CSI=28.4), consumption of less preferred foods (CSI=24.6), borrowing food/money (CSI=19.8), selling productive assets (CSI=16.2), livelihood diversification (CSI=14.5), and temporary migration (CSI=12.3). The Simpson Livelihood Index revealed that 62.4% of affected households had low livelihood status compared to 31.7% of non-affected households, while only 15.5% of affected households had high livelihood status versus 38.5% of non-affected households. Financial and physical capitals were the most severely affected asset dimensions. Banditry significantly destabilized livelihood sustainability, forcing households into coping strategies that erode long term resilience. The study recommends establishing farmer centred early warning and telephone alert systems, expanding access to agricultural credit and extension services, and strengthening community based coping mechanisms through cooperative support and livelihood restoration programmes to protect assets and build household resilience.

Keywords: Coping Strategies, Livelihood Sustainability, Banditry, Simpson Index, North Central Nigeria, Rural Households

Introduction

Rural livelihoods comprise the capabilities, assets, resources and income-generating activities through which households meet their basic needs and sustain well-being. In agrarian economies, livelihood sustainability depends on access to land, labour, agricultural inputs, markets, finance and social networks. The Sustainable Livelihoods Theory explains this relationship by viewing livelihoods in

terms of human, social, physical, financial and natural capital within a vulnerability context shaped by shocks and institutional conditions. Thus, households' capacity to withstand shocks depends not only on their asset endowment but also on their ability to diversify economic activities and adapt to changing circumstances. Evidence from Niger State highlights the importance of agripreneurship and diversified agricultural enterprises in creating income opportunities and strengthening rural livelihoods (Etim *et al.*, 2023). Conversely, insecurity can restrict these opportunities by disrupting production and access to productive resources.

Armed banditry has become a major source of livelihood vulnerability among rural farming households in North Central Nigeria. Through armed attacks, kidnapping, farm invasions, cattle rustling and destruction of property, banditry disrupts agricultural production, restricts access to farmland and markets, discourages farm investment and increases production and transportation costs. These disruptions can reduce agricultural output and household income while increasing exposure to food insecurity and poverty. Olorunsanya *et al.* (2019) similarly demonstrated the importance of household socioeconomic and livelihood conditions in understanding food security outcomes, indicating that the ability of rural households to secure adequate food is closely associated with their available resources.

The effects of banditry extend beyond immediate production losses to displacement and depletion of livelihood assets. Displaced farmers may lose access to farmland, livestock, farm equipment, stored produce and established market networks, while relocation can limit employment and income opportunities. Within the Sustainable Livelihoods framework, such losses weaken the human, social, physical and financial capital required for livelihood recovery. Reduced access to these resources can also constrain households' participation in agripreneurial and diversified activities that could otherwise strengthen resilience households' respond to insecurity through adaptive, compensatory and consumption-based coping strategies. Mohammed *et al.* (2021) identified non-farm livelihood diversification as an important survival mechanism, while cooperative participation and relocation may provide alternative means of reducing vulnerability. However, strategies such as reducing food consumption, borrowing and selling productive assets can provide short-term relief while undermining future productive capacity. This is particularly important for food security, as households with depleted livelihood resources may increasingly depend on consumption-reducing strategies rather than productive investment (Olorunsanya *et al.*, 2019).

The security environment therefore remains central to livelihood recovery. Okoli & Okpaleke (2014) emphasised community based security mechanisms for protecting agricultural activities, while

Adewumi (2024) highlighted the contribution of community organisations to livelihood support and early-warning systems. Attah *et al.* (2021) further stressed the potential of technology in strengthening security, whereas Gulbi *et al.* (2024) advocated pragmatic conflict management approaches. These findings suggest that sustainable livelihood recovery requires the integration of agricultural support with effective security, early warning and community based interventions.

Despite increasing scholarly attention to armed banditry in Nigeria, empirical evidence remains limited on how insecurity simultaneously affects **livelihood assets, overall livelihood status and household food security coping responses**, particularly among rural farm households in Niger and Plateau States. Previous studies have largely examined the effects of insecurity on agricultural production, displacement, food insecurity or individual livelihood responses, with comparatively less emphasis on the interconnected dimensions of household livelihood vulnerability (Mohammed *et al.*, 2021; Olanrewaju *et al.*, 2022). This gap is important because prolonged insecurity can restrict access to farmland and institutional services, accelerate depletion of productive assets and compel households to rely on short-term coping mechanisms, thereby weakening their capacity for sustainable livelihood recovery.

This study therefore examines the livelihood consequences of armed banditry among rural farm households in North Central Nigeria. Specifically, it identifies food security coping strategies, assesses household livelihood status and examines the effects of banditry on the livelihood asset portfolio. Using the Simpson Livelihood Index, the study compares livelihood outcomes across banditry-affected and non-affected households and provides evidence for designing security sensitive agricultural policies, livelihood restoration programmes, agripreneurship interventions, social protection and resilience building strategies.

Methodology

Study Area

The study was conducted in **Niger and Plateau States, North Central Nigeria**, purposively selected because of their predominantly agrarian economies and exposure of some rural farming communities to armed banditry. **Niger state**, located approximately between **8°00'–11°30' N and 3°30'–7°40' E**, covers about **76,470 km²** and had a 2006 census population of **3,950,249**. Agriculture is the dominant livelihood, with major crops including rice, maize, millet, yam, cassava and sorghum. The major ethnic groups include **Nupe, Gbagyi and Hausa**, with English as the official language and Hausa and Nupe

widely spoken (Ahmed *et al* 2020). **Plateau State**, located approximately between **8°24'–10°30' N and 8°32'–10°38' E**, covers about **26,899 km²** and has an estimated population of over four million. The state has a highly diverse population comprising more than 40 ethno linguistic groups, including **Berom, Afizere, Anaguta, Goemai, Irigwe and Kofyar**, alongside other Nigerian ethnic groups (Fulus 2016). Agriculture, comprising crop and livestock production, is an important livelihood activity. Both states have substantial rural farming populations whose access to farmland, productive assets and markets has been affected by insecurity National Bureau of Statistics (NBS 2022). Their contrasting geographical, agricultural and socio-economic characteristics therefore provide an appropriate setting for assessing the effects of armed banditry on agricultural livelihoods and household coping strategies.

A **multistage sampling technique** was employed to select 399 rural farm households from Niger and Plateau States. In the first stage, the two states were purposively selected based on the prevalence of armed banditry and the importance of agriculture to rural livelihoods. In the second stage, agricultural zones with reported banditry incidents were identified, followed by the purposive selection of Local Government Areas (LGAs) with affected farming communities. In the third stage, farming communities were selected to represent **banditry-affected and non-affected locations**. In the final stage, rural farm households were selected from the sampled communities using random sampling procedures and proportionate allocation to obtain **399 respondents, comprising 194 households from banditry-affected communities and 205 households from non-affected communities**. The affected and non-affected households constituted the treatment and comparison groups, respectively for analysis.

Data were obtained through a field survey using a set of structured questionnaire administered via Kobo Toolbox. Information collected included socio-economic characteristics, livelihood activities, asset ownership, coping strategies, and the effects of banditry on household welfare. The instrument was validated through content and face validity procedures, which involved extensive literature review, adaptation of established measurement scales (CSI and Simpson Livelihood Index), and expert review by three agricultural economists and research methodologists. A pilot study was conducted with 30 households in non-sampled communities to pre test the questionnaire, leading to refinement of ambiguous items and response categories. The reliability of the instrument was ascertained using Cronbach's alpha coefficient, which yielded a value of 0.82, indicating acceptable internal consistency.

The survey data were analysed using **descriptive and inferential statistical techniques**, including the **Coping Strategy Index (CSI)** and the **Simpson Livelihood Index (SLI)**. The CSI was used to assess the frequency and severity of food security coping strategies adopted by rural farm households, while

the Simpson Livelihood Index was used to measure household livelihood diversification and to classify livelihood status.

Coping Strategy Index (CSI)

The Coping Strategy Index (CSI) was used to assess household responses to food insecurity (Yaqoob 2023) :

$$CSI = \sum_{i=1}^n (F_i \times S_i) \text{ -----(1)}$$

Where

F_i =is the frequency of the coping strategy used,

S_i = is the severity weight assigned to the strategy, and

n =is the total number of coping strategies assessed.

Simpson Livelihood Index

The Simpson Diversification Index (SDI) was used to assess livelihood status adopted from (Onoja *et al.* 2024):

$$D = 1 - \frac{\sum n(n-1)}{N(N-1)} \text{ -----(2)}$$

Where

D = is the Simpson index,

n = is each diversified activity, and

N = is the total diversified activity.

Livelihood status was classified as:

Table 1: Livelihood Status Classification

Livelihood status	Livelihood index	Score
High	0.67 – 1.00	3
Mode rate	0.34 – 0.66	2
Low	0 – 0.33	1

Source: Umar *et al*, 2021

Results and Discussion

Result of the socio-economic characteristics of the respondents.

Table 2: Socio-economic Characteristics of Rural Farm Households by Banditry Status

Socio-economic characteristic	Banditry-affected (n=194)	Non-affected (n=205)	Pooled (N=399)
Age of household head (years), mean	37	40	39
Male household head (%)	82.1	83.2	82.7
Married household head (%)	75.7	76.6	76.2
Household size (persons), mean	8	10	9
Household size of 6–10 persons (%)	60.8	52.2	56.4
Educational attainment (years), mean	8	7	7.5
Farming experience (years), mean	20	20	20
Farm size (ha), mean	1.25	2.25	1.76
Farm size of 1–3 ha (%)	97.9	78.5	87.9
Access to agricultural credit (%)	7.8	28.2	18.3
Mean amount of credit accessed (₦)	37,365.06	136,845.99	—
Extension contact (%)	14.9	51.2	33.5
Cooperative membership (%)	69.6	66.5	68.0

Source: Field Survey, 2025

Table 2 indicates that household heads were predominantly male in both affected (82.1%) and non-affected (83.2%) communities. Mean age was 37 and 40 years, respectively, while married heads accounted for 75.7% and 76.6% respectively. Mean household size was 8 persons among affected households and 10 among non-affected households, whereas mean education and farming experience were 8 and 7 years, and 20 years in both groups, respectively. A marked difference was observed in farm size, averaging **1.25 ha among affected households compared with 2.25 ha among non-affected households**. Access to agricultural credit was also considerably lower among affected households (7.8%) than non-affected households (28.2%), with corresponding mean credit amounts of **₦37,365.06 and ₦136,845.99**, respectively. Similarly, extension contact was substantially lower among affected households (14.9%) than non-affected households (51.2%). These differences suggest that insecurity may constrain access to productive resources and institutional services required for agricultural production and livelihood recovery. Cooperative membership was relatively high in both groups, involving **69.6% of affected and 66.5% of non-affected households**, indicating that cooperatives constitute an important institutional and social-capital resource that could be leveraged to improve access to inputs, credit, extension and markets among vulnerable farming households.

Coping Strategies Adopted by Rural Farm Households

Table 3, presents the coping strategies adopted by rural farm households in response to banditry.

Table 3: Coping Strategies Adopted by Rural Farm Households in the study area.

S/N	Coping Strategy	Frequency (Affected)	Severity Weight	CSI (Affected)	CSI (Non-Affected)
1	Reduction in meal frequency	4.7	6	28.4	12.6
2	Consumption of less preferred foods	4.1	6	24.6	10.8
3	Borrowing food or money	3.3	6	19.8	8.4
4	Selling of productive assets	2.7	6	16.2	6.3
5	Livelihood diversification	2.9	5	14.5	9.8
6	Temporary migration	2.1	6	12.3	4.2
7	Reduction in meal size	2.4	5	12.0	5.6
8	Skipping meals	1.8	6	10.8	3.9
9	Relying on less expensive foods	2.6	4	10.4	7.2
10	Seeking assistance from relatives	2.3	4	9.2	6.8
11	Selling of non-productive assets	1.9	4	7.6	3.5
12	Child labour	1.2	6	7.2	1.8
13	Begging	0.8	6	4.8	1.2
	Total	30.6	—	177.8	81.9

Source: Field Survey, 2025

Respondents' access to indicators under each asset category was used to generate livelihood diversification scores based on the **Simpson Livelihood Diversification Index (SLDI)**. The index ranges from **0 to 1**, where values between **0.00 and 0.33** indicate **low livelihood status**, **0.34 to 0.66** indicate **moderate livelihood status**, and **0.67 to 1.00** indicate **high livelihood status**. Higher index values reflect greater livelihood diversification and stronger household resilience.

The most commonly adopted coping strategies in the study area included reduction in meal frequency (CSI = 28.4), consumption of less preferred foods (CSI = 24.6), borrowing food or money (CSI = 19.8), selling of productive assets (CSI = 16.2), livelihood diversification (CSI = 14.5), and temporary migration (CSI = 12.3). The higher CSI scores in affected areas indicate more severe coping responses. Reduction in meal frequency and consumption of less preferred foods are consumption based coping strategies that directly indicate food insecurity.

These strategies were more prevalent in affected areas, reflecting the greater food scarcity experienced by these households. Selling of productive assets is an asset-based coping strategy that can have long term negative consequences. When households sell livestock, farm tools, or land, they reduce their future productive capacity, making it harder to recover from shocks. Livelihood diversification was adopted by many affected households as a proactive strategy to reduce vulnerability. Farmers engaged in nonfarm activities such as trading, artisanal work, and casual labour to supplement declining farm income. Temporary migration was adopted by some households, particularly in Niger State, where banditry was more intense. Family members, especially younger males, migrated to urban areas in search of employment, while the remaining household members continued farming on a reduced scale. The adoption of child labour and begging, although less frequent, indicates extreme coping responses that reflect severe deprivation. These strategies were more prevalent in affected areas, highlighting the depth of vulnerability.

Livelihood Status of Rural Farm Households

Table 4 presents the livelihood status of rural farm households based on the **Simpson Livelihood Index (SLI)**. The index ranges from **0.00 to 1.00**, with values of **0.00–0.33 classified as low livelihood status, 0.34–0.66 as moderate, and 0.67–1.00 as high livelihood status**. The classification provides a basis for comparing the livelihood conditions of households in banditry-affected and non-affected communities.

Table 4: Livelihood Status of Rural Farm Households

Livelihood Status	Livelihood Index Range	Niger Affected (%)	Niger Not Affected (%)	Plateau Affected (%)	Plateau Not Affected (%)	Pooled Affected (%)	Pooled Not Affected (%)
High	0.67–1.00	12.9	36.6	18.1	40.4	15.5	38.5
Moderate	0.34–0.66	21.8	32.7	23.7	28.8	22.7	30.7
Low	0.00–0.33	65.3	30.7	58.2	30.8	62.4	31.7
Total	—	100.0	100.0	100.0	100.0	100.0	100.0

Source: Field Survey, 2025

The pooled Simpson Livelihood Index revealed that 62.4% of affected households had low livelihood status, compared to 31.7% of non-affected households. Only 15.5% of affected households had high livelihood status, compared to 38.5% of non-affected households. In Niger State, 65.3% of affected households had low livelihood status, compared to 30.7% of non-affected households. In Plateau State, 58.2% of affected households had low livelihood status, compared to 30.8% of non-affected households. The higher proportion of households with low livelihood status in Niger State reflects the more intense banditry activities in that region.

Livelihood Asset Dimensions

Table 5 presents the distribution of livelihood assets across the four major dimensions **human, social, physical, and financial capital** among banditry affected and non-affected rural farm households in Niger and Plateau States.

Table 5 presents the distribution of livelihood assets across the four dimensions.

Asset Dimension	Niger Affected	Niger Not Affected	Plateau Affected	Plateau Not Affected	Pooled Affected	Pooled Not Affected
Human Capital	0.42	0.58	0.45	0.56	0.44	0.57
Social Capital	0.38	0.52	0.41	0.50	0.39	0.51
Physical Capital	0.31	0.48	0.35	0.47	0.33	0.48
Financial Capital	0.28	0.45	0.32	0.44	0.30	0.45
Overall Livelihood Index	0.35	0.51	0.38	0.49	0.36	0.50

Source: Field Survey, 2025

Financial capital was the most severely affected asset dimension, with a mean score of 0.30 for affected households compared to 0.45 for non-affected households. This reflects the loss of income, savings, and credit access resulting from banditry. Physical capital also showed substantial deficits in affected areas (0.33) compared to non-affected areas (0.48). This includes loss of farm equipment, livestock, and infrastructure due to bandit attacks. Social capital was moderately affected (0.39 in affected areas vs. 0.51 in non-affected areas). While social networks provide important support during crises, banditry can disrupt community cohesion and limit the effectiveness of social safety nets. Human capital was the least affected dimension (0.44 in affected areas vs. 0.57 in non-affected areas). However, the education and health of household members can still be compromised by insecurity and displacement.

Discussion

The socio-economic characteristics provide important context for interpreting the livelihood and coping outcomes. Although affected and non-affected households were broadly similar in age, marital status, education and farming experience, notable differences existed in productive and institutional resources. Affected households had smaller mean farm sizes (1.25 ha) than non-affected households (2.25 ha), while access to agricultural credit was substantially lower (7.8% versus 28.2%) and extension contact was markedly lower (14.9% versus 51.2%). These constraints may reduce households' capacity to sustain agricultural production, invest in livelihood diversification and recover from insecurity related shocks, as access to productive resources and institutional services is important for strengthening rural livelihood resilience (Zakari *et al.*, 2025; Etim *et al.*, 2023). The relatively high cooperative

membership in both affected (69.6%) and non-affected (66.5%) households nevertheless represents an important social-capital resource that can facilitate access to credit, inputs, information and collective support under conditions of vulnerability (Abdullahi *et al.*, 2020).

The predominance of **reduction in meal frequency and consumption of less-preferred foods** as coping strategies is consistent with Mohammed *et al.* (2021), who found that farmers commonly adopt consumption-based responses to food shortages. In the present study, the reliance on these strategies is particularly concerning given the weaker economic position of affected households, including their smaller farm sizes and limited access to credit and extension services. Such constraints may reduce household food availability and increase dependence on short-term consumption adjustments, with potential nutritional consequences for vulnerable household members.

The use of **selling productive assets** further demonstrates the economic pressure experienced by affected households and is consistent with Onwuzuruigbo (2020), who reported asset disposal as a common response among conflict-affected households. In this study, the smaller farm sizes and substantially lower access to agricultural credit among affected households suggest limited capacity to replace depleted assets through productive investment. Although asset sales may provide immediate consumption support, continued reliance on this strategy can erode the productive asset base and undermine long-term livelihood sustainability.

The high proportion of affected households classified as having **low livelihood status (62.4%)**, compared with 31.7% among non-affected households, supports Olanrewaju *et al.* (2022), who found that insecurity weakens rural livelihood systems through declining productivity, reduced income and asset depletion. The observed differences in farm size, credit access and extension contact reinforce this relationship, as households with restricted access to productive resources are less able to maintain agricultural enterprises or diversify their livelihoods.

The relatively severe constraint on **financial capital** is consistent with Etim *et al.* (2023), who emphasised the importance of financial resources in strengthening households' adaptive capacity. The very low proportion of affected households accessing credit (7.8%) and their considerably lower mean credit amount compared with non-affected households indicate restricted financial capacity for purchasing inputs, replacing lost assets and investing in recovery. This financial constraint may also limit the development of alternative livelihood activities that could reduce dependence on vulnerable agricultural production.

The observed deterioration in **physical capital** agrees with Gadzama *et al.* (2018), who reported that insecurity can result in the destruction and loss of productive assets and infrastructure. Losses involving

livestock, farm equipment and other productive resources can directly reduce production capacity. The smaller average farm size among affected households further suggests that insecurity may restrict access to productive physical resources and agricultural land.

The comparatively **moderate impact on social capital** is consistent with Abdullahi *et al.* (2022), who found that cooperative participation can improve farmers' access to institutional support and strengthen resilience under conditions of insecurity. The relatively high cooperative membership recorded in both groups provides an important avenue for collective access to credit, inputs, extension and markets. Nevertheless, persistent banditry may weaken wider community networks through displacement, restricted mobility and disruption of social interactions, thereby reducing the effectiveness of informal safety nets.

Finally, the relatively lower impact on **human capital** suggests greater persistence of education, skills and household labour capacity despite insecurity. However, the benefits of these assets may be constrained where households face displacement, reduced income and limited access to agricultural and institutional services. Overall, the findings indicate that banditry affects livelihoods through an interconnected combination of **restricted productive resources, weak financial access, reduced institutional support, asset depletion and reliance on short-term coping strategies**, thereby increasing the vulnerability of rural farm households.

Conclusion

The study examined the coping strategies adopted by rural farm households in response to banditry and assessed their livelihood status in North Central Nigeria. The findings reveal that affected households adopt a range of coping strategies, with reduction in meal frequency and consumption of less preferred foods being the most common. Livelihood status is significantly lower in affected areas, with 62.4% of households having low livelihood status compared to 31.7% in non-affected areas. Financial and physical capitals were the most severely affected asset dimensions.

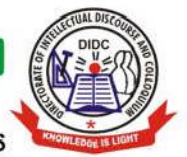
Recommendations

Establishments of a farmer centred early warning and telephone alert system: Security agencies, local governments and community institutions should establish functional communication networks linking farmers with designated security and community focal persons. When credible information on suspected movements of armed groups is received and verified, farmers should be promptly alerted through telephone calls, SMS and other accessible communication channels, enabling them to suspend movement to vulnerable farms and relocate temporarily to safer areas where necessary. Farmers should also be provided with reliable channels for reporting suspicious movements to security authorities. This

approach would strengthen preventive security, reduce farmers' exposure to attacks and protect agricultural assets without placing responsibility for security operations on farming communities.

References

- Abdullahi, N., Yusuf, M. A., Yahuza, Y., & Mohammed, M. U. (2022). Coping strategies of rural households to drought in the Sudano-Sahelian zone of Northwestern Nigeria. *GeoJournal*, 87(6), 5213-5227.
- Adewumi, I. I. (2024). Effects of flood on households' food security among the peasant farmers in North-Central Nigeria. *TIJER International Research Journal*, 11(11), 722-780.
- Ahmed, G., Pawa, D., Zakari, M. (2020) Profitability Analysis of Fish Farming in Niger State, Nigeria. *International Journal of Food Science and Agriculture*, 4(3), 293-300. DOI: 10.26855/ijfsa.2020.09.009
- Attah, A. N. (2021). Initial assessment of the impact of COVID-19 on sustainable forest management African States. United Nations Forum on Forests Secretariat.
- Etim, F., Ukpere, W., & Adekanmbi, F. (2023). *A deconstruction of frustration-aggression-theory of political violence: Nigeria*. *Annals of Spiru Haret University*, 23(2), 117-139.
- Gadzama, I. U., Saddiq, N. M., Oduche, T. C., & Dariya, C. J. (2018). Appraisal of rural banditry in Kamuku forest in Birnin Gwari Local Government of Kaduna State. *Nigerian Journal of Rural Sociology*, 18(1), 42-49.
- Gulbi, A. S., Ahmad, U., Karofi, U. A., Rambo, R. A., & Sani, A. U. (2024). Banditry and pragmatic solutions to its menace in North western Nigeria. *Tasambo Journal of Language, Literature, and Culture*, 3(2), 1-10.
- Mohammed, U., Umar, I. S., Olaleye, R. S., Pelemo, J. J., Ahmad, B. S., & Mohammed, U. (2021). Effects of banditry on income and livelihoods of yam marketers in Shiroro Local Government Area of Niger State, Nigeria. *Journal of Agriculture and Food Sciences*, 19(1), 163-178.
- National Bureau of Statistics, (2022). Demographic Statistical Bulletin 2022, Executive summary.
- Onoja, A., Odumu, A. S., & Moses-Ojo, O. A. (2024). Food Security Challenges: An Impediment To Achieving Sustainable Development Goals (SDGs 2) in Nigeria. *Gusau Journal of Sociology*, 4(2), 205-215
- Olanrewaju, B., Ajibade, A., & Jimoh, M. (2022). Insecurity and declining food productivity in North-Central Nigeria. *African Development Review*, 34(3), 442-456.
- Olorunsanya, E. O., Auna, Y. M., Olorunsanya, A. O., Kolawole, A., & Lawal, A. F. (2019). Food security status of rice marketers' households in Niger state, Nigeria: a gender-based analysis.



Invited paper presented at the 6th African Conference of Agricultural Economists, September 23-26, 2019, Abuja, Nigeria

Onwuzuruigbo, I. (2020). Enclaves of banditry: Ungoverned forest spaces and cattle rustling in Northern Nigeria. *African Studies Review*, 64, 168-191.

Yaqoob, A. M. (2023). *Rural Livelihoods and Food Insecurity among Farming Households in Southwestern Nigeria* (Doctoral dissertation)

Zakari, M., Rahab, B., James, G., Saleh, D. B., & Aliyu, G. (2025). Impact of Insecurity on Agripreneurship Development in Niger State, Nigeria. *Federal University Gusau Faculty of Education Journal*, 2(2), 104-112.