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ASSESSING THE EFFECT OF BANDITRY ON AGRICULTURAL PRODUCTIVITY AND FOOD SECURITY IN KADUNA, KATSINA AND ZAMFARA STATE NIGERIA

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Abstract

Banditry is one of the most pressing security issues studied in this paper in relation to its effects on the agricultural productivity and food security in Kaduna, Katsina, and Zamfara states, Northern Nigeria. Using PLS-SEM a cross-sectional survey of 438 respondents, the study aims at investigating how the incidence, dispersion and impact of banditry attacks on agricultural productivity and food supply. Research evidence indicates that the levels of attack by bandits have the greatest adverse effects on agricultural returns compared to spread of such activities. The findings indicate that almost 59% of outcomes concerning performances in agricultural can be accounted by banditry-related factors pointing to the need for intervention. The results emphasize the need for increasing the security measures, shared approaches and agricultural assistance to minimize the negative impact on food security. The paper suggests that well-coordinated efforts from grassroots up to the application of technology will be critical to enhance capacity to reduce vulnerability in the agricultural sector in conflict regions.

Keywords: *Banditry, Agricultural Productivity, Food Security, Conflict Impact, Rural Security, Sustainable Development.*

1. Introduction

Farming is important for the growth of the economy as more than 70% of the population in Nigerian northern states depends on agriculture as their source of income (National Bureau of Statistics, 2023). Out of these regions: Kaduna, Katsina and Zamfara states are famous for Agriculture and they contribute immensely to the food basket of the nation. But of recent, these states have experienced a high incursion of banditry with devastating effect on agricultural business. Increase in insecurity has not only affected farming operations, but also posed a very big threat to food security, which again has led to increased poverty and hunger. According to the National Bureau of Statistics, information on the agricultural sector shows that it is the largest contributor of the GDP in Nigeria accounting for about 24%. Yet, because of rising levels of violence, some farmers cannot safely get to their farms to

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harvest crops, grains, and seeds, or transport food to markets, consequently depressing Figures of production and aggravating high food prices, besides interrupting food supply chains (FAO, 2023; WFP, 2023).

According to current data, bandits have forced more than 200,000 people to flee their farms in Zamfara state alone. The same problems can be observed in the Kaduna and Katsina states where more than half of the cultivated area remains idle owing to the constant threats of attacks. They disclosed that based on the FAO report, food production in these states has been reduced by twenty nine (29) per cent since 2021, thereby worsening food insecurity and the cost of living. The WFP approximated that around 4.4 million residents in the northern area are now considered food insecure, mainly due to the declines in agricultural production (WFP, 2023; Vanguard, 2023).

As a result, different interest groups, the Nigerian government, as well as international organizations, have put measures in place to fight the insecurity. Measures like "Operation Puff Adder" have been taken against banditry while donor funding targets food production, and supporting farmers who fled their homes (Daily Trust, 2024). Nonetheless, insecurity persists as a major issue, the Federal Ministry of Agriculture disclosed that investment in agriculture has been cut down by as much as 40% in the listed states due to threats from bandits. This constant insecurity not only affects local farming production, but it also scares off external investors from investing in sustainable farming initiatives (IJMIR, 2024).

Since these challenges are still evident and unrelenting, a call for innovative and better approaches that will help to rebuild agriculture and create food security in Kaduna, Katsina, and Zamfara. This paper seeks to evaluate how banditry affects agriculture in these areas through the analysis of the rate, distribution and intensity of the raids. Therefore, the knowledge of these dynamics forms the basis for the study to offer policy advice on how best to strengthen food security as well as encourage responsible use of resources in farming. It is believed that the results will assist in policy formulation for the improvement of the lives of millions of people with a source of income from agriculture in Northern Nigeria.

2. Literature review

This section covers conceptual review related to the study variables, theoretical review that help in understanding the relationship between the variables of the study and the empirical review that explore the previous studies relevant to the study.

i. Conceptual review

a. Agricultural productivity

Agricultural productivity is defined as the ratio between agricultural outputs (crops and livestock products) and the agricultural inputs used to produce them (land, labour, capital). More widely, it is a key driver of food security, rural livelihoods and economic development — especially in poor countries. The increasing demand for food due to population growth, urbanization and changing dietary preferences (FAO, 2023) underscores the importance of improving agricultural productivity. Productivity growth is central, supported by technological advancement, sustainable agriculture practice and optimal use of resources. For example, the newer sustainable climate-smart agricultural practices — precision farming and better seed varieties –have already demonstrated great promise for increasing yield and resilience to climate change (World Bank 2023; IFPRI 2023).

Yet, productivity gains are often stifled by factors such as poor infrastructure, a lack of modern technology and security issues in parts of sub-Saharan Africa. Tackling these concerns is important to ensuring food security and sustainable agricultural development in the context of SDGs.

b. Food security

People have access to enough food if they will find sufficient and regular food due to any economic or political issues (FAO, 2023).Food security is a complex concept with components of availability, accessibility, utilization and stability which leads that everybody has not just enough food but safe and healthy enough as per dietary (FAO, 2018). Food production is increasingly facing pressures due to global proliferation, urbanization, and changing consumption behaviours which are making food security a major challenge globally but particularly in developing nations.

The World Food Programme (WFP) states that more than 345 million individuals around the world are currently facing crisis levels of food insecurity, caused by violence and internal strife, climate change and economic shocks and when one combines all of these factors along recent global health challenges, continues to aggrivate the instability of existing food systems and all its branches, including nutrition, health among others (World Bank, 2023). For this reason, addressing hunger necessitates intervention strategies aimed at improving agricultural practices and infrastructures, Collaborative measures aimed at minimizing post-harvest losses, enhancing adaptive capacity towards climate change, in addition to improving social support systems for the at-risk populations are also needed.

c. Banditry

Banditry involves criminal behavior such as attacking and robbing people or places organized in gangs/classes of armed robbers in most cases. This behavior is prevalent in the countryside or semi-urban regions. Banditry in Nigeria has posed serious threats to security, especially in the Northern parts of the country where groups of armed bandits raid and attack the local communities, farmers, and even travelers. These groups have unfortunately taken to kidnapping for ransom, robbery, and acts of violence thus states which drastically affect economic and social frameworks. The increase in cases of banditry due to poor leadership and governance, insecurity, and poor economy, has remained a major setback to productivity and food security because farmers cannot compel their farms for fear of being attacked (Olojo, 2021). Banditry activities also insecurity phenomenon that has displaced thousands of people in Nigeria, thus adding to the country's unsustainable food production systems (Adebayo, 2022). These criminal acts have not only enforced economic insecurity but are also the major causes of socio-political insecurity and the retardation of national development endeavors (Oluwaseun, 2023).

d. Frequency of the Banditry Incidents

Kidnapping operations have become increasingly common in Kaduna, Katsina and Zamfara states in the last few years, affecting the lives of many people and agricultural output, as well. The banditry activities in these states have become more rampant over the years in that they have continued to attack villages, forced thousands of residents to flee their homes, and affected essential services particularly farming. In Zamfara only, the bandits have

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displaced more than 10,000 persons thereby causing a drastic decline to farming (Daily Trust, 2024). In a report by the National Bureau of Statistics, over 50 percent of farmland in these regions has been out of use because of insecurity; frequent attacks on farmers and their families during the planting and harvesting periods have also led to poor yields Many farmers have abandoned farming due to the insecurity, and according to many farmers, over 50 percent of the farmland in the affected Northern regions is no longer under cultivation because of insecurity (Vanguard, 2023).

As a result, the Nigerian government has launched several actions to increase security on the territory and deal with the violence, including the "Operation Puff Adder," while those efforts remain rather fruitless. However, these have not been deliberated as the attack rates are still on the rise with the bandits patronizing the rural areas with ease. These attacks are still unfolding, which underpins the chronic insecurity threatening not just the production of agricultural commodities, but also food security in the area (Daily Trust, 2024; IJMIR, 2024).

The continued existence of these challenges shows that efforts in attempting to bring back peace for the revival of the agricultural sector and food security still require much enhancement.

e. Geographical spread of the Banditry

The threat of banditry in Kaduna, Katsina and Zamfara states is seemingly high and localized across all regions but unique in degrees of impact. In Kaduna state, banditry has remained mainly a rural problem in the Birnin Gwari and Chikun local governments in which farmers are frequently attacked, and their farms are abandoned (Nigerian Tribune, 2023). Currently, the act of banditry is done across the state especially the northern and the eastern parts, insecurity has forced even the shifts of thousands of residents and the near unsustainable production in local agriculture (Vanguard, 2023). A report revealed that Zamfara is still the hotbed of the act with the northern and the central part most hit. The problem in Zamfara is made worse by these states' position, which borders Niger Republic, affording bandits with cross-country mobility (Guardian, 2024). Intermittent attacks and warfare in these areas have forced farmers to flee their homes and plants during planting and harvesting seasons exposing those already in poor health to the risk of further malnutrition.

The occurrences of Armed Banditry across these areas are not just random activity but a continuous phenomenon that threaten large forests in the Northern Nigeria states, with the consequence on production of food crops, food security and the livelihood of the people (BBC, 2024). This geographical expansion of banditry remains a strong indicator that different military and government interferences have not solved the problem in relation to establishment of security and food stability in the region.

f. Severity of the banditry attacks

Banditry attacks have been constantly and and severely ramping up in Kaduna, Katsina, and Zamfara states, and the violence threatens the stability of social and economic lives of these regions. In Kaduna, the attacks have turned more daring, and not only targeting farmers, but also students, traders and local leaders, for instance 121 students were abducted in 2021 (BBC, 2023). Katsina has also received the same ill-fate as such, the bandits stormed villages, kidnapped residents, stolen their cattle, thereby causing fear in the state. These homers have gotten most organized where the bandits demand ransoms for the kidnapped victims and inflict a serious setback to agriculture as posted by Vanguard, 2023 when the farming community of Kurfi was attacked.

Zamfara however has been on the receiving end with rampaging gunmen embarking on large scale attacks that displaced huge numbers of people and destructed social facilities like schools and health facilities. The violence here is augmented by the increased incursion of armed criminal groups who occupy large chunks of territory; security forces remain in the process of reclaiming them (The Guardian, 2024). This has made the situation worse by causing a persistent deterioration of agricultural yields and made many people leave their farms resulting to a disturbing rise to food crises in the region. The continuation and escalation of these attacks further masks the need to come up with efficient and quick way of ensuring that peace is brought back to the region in a bid to enhance food security.

ii. Theoretical review

The Human Security Theory in this study benefits from the theoretical framework proffered by the United Nations Development Programme (UNDP) since 1994. This theory which states that individuals should be protected from the very serious risks to their survival, livelihood or person is very apt where conflict hampers normal economic activities like farming. The first of those assumptions is that threats to human security – whether violence, food, or economic insecurity – are mutually connected and multifaceted, thus insisting on comprehensive solutions (Gomez & Gasper, 2021).

In the case of northern Nigeria, the theory emphasises how the banditry activity frequency's incidence, spatial coverage, and enactment severity all actively erode human security through farmer displacement, farmland access limitation, and consequent reductions in food production yields. This in turn has led to poor food production and disrupts food supply chain hence increasing hunger levels a factor aggravated by the COVID-19 pandemic (FAO, 2023). Thus, applying the Human Security Theory will allow identifying the circle between insecurity factors and the shrinking of agricultural activity. Not only does the continued security threat from banditry limit farmers' access to their land but it also reduces investment in agriculture with negative lasting effects for food security and economic growth in the affected states (Adebayo et al., 2023; Aliyu & Sulaiman, 2023). Hence, this theoretical background enables the evaluation of the levels of insecurity in all of them and its effects on agriculture and food security and people's security enables an understanding of the stated problem's multifaceted nature and to look for the interrelated interventions that take into consideration security and economic perspectives.

iii. Empirical review

There is plenty of literature that portrays how banditry has a negative effect on food production especially in Northern Nigeria among states such as Kaduna, Katsina and Zamfara. According to Abubakar et al., (2022), the cases of banditry in Zamfara have increasing incidents that forced farmers off their farms and consequently reduced crop production. Yusuf and Umar (2023) made an observation on the effects of constant attacks especially during the/stylesApril and struck hacking seasons in Kaduna and Katsina which pointed that food production has been reduced by more than 40% and this has influences food availability and market price. According to the World Food Programme (WFP, 2023), banditry remains a key factor affecting food insecurity in these

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states based on disruptions in the affected population's agricultural productivity, thereby already affecting over 4.4 million people that are already food insecure.

The NBS in its recent report affirmed that more than fifty percent of arable land in these states have been inexplicably abandoned due to banditry, with estimated ₦2.5 billion Agric-revenue loss in 2022 (Okeke, 2023). Onuoha and Eze (2022) explained that in addition to Zamfara, banditry has spread to other states, and the resultant insecurity has all the more made it virtually impossible for farming to go on in the rural areas. This spread leaves remote areas with very high risks due to low security developments (Olayemi et al., 2023).

The nature of the banditry attacks was reviewed by Ahmed and Suleiman (2023) with what has resulted to heightened violence leading to the loss of human capital in the agricultural sector as farmers either run away from their homesteads or are unable to dare venture into their farms. By the information of FAO (2023), this has led to a decrease of 30 percent in food production compared with 2021. However, as noted by Musa et al. (2022) within government-led operations such as "Operation Puff Adder," efforts have been almost inadequate because of poor synergies and resource employment, thus enabling banditry.

According to the survey conducted by Adeyemi and James (2023), Nigerians are discouraged from investing in agriculture due to bandit attacks leading to a decline of agricultural investment by 40%, the Federal Ministry of Agriculture (2023) established that international organizations are reluctant to fund project due to risks. According to Olaniyan (2022), shifted farming has resulted in poverty as many families engage in all sorts of seek for other means of livelihood by moving to urban centres. According to the International Crisis Group (2024), projected future interventions remain modest, and that the yield of agriculture in these states may reduce to further 20% in the subsequent five years, thus aggravating the situation connected with food insecurity (Adebayo et al., 2023).

Similarly, Osei and Bello (2023) identified differences between strategies in Kaduna, Katsina, and Zamfara with other successful interventions in other conflict affected areas and stated that more innovative intervention approach are required. Although these studies are useful for gaining such insights, no studies have empirically examined, for the states defined above, how the incidence rate, scope, and the extent of banditry influences agricultural output and food security measures such as yields and food prices. Further, little basic primary research currently exists on effectiveness of current interventions, and therefore undeniably, urgent requirements for location-specific interventions because of the specific issues that farmers face in those locations. This paper seeks to address these discrepancies by providing an extensive examination of the interconnectivity between banditry and agriculture and policy suggestions.

3. Methodology

Based on the research questions, this study employs a quantitative research approach to assess the impacts of banditry, based on its incidence, distribution, and intensity, on the yield and food security of the selected agricultural commodities in Kaduna, Katsina, and Zamfara States in Nigeria. To achieve this, the study focuses on a population that is involved in agricultural activities as proportionally estimated by the National Bureau of Statistic, (2020) 12,745,797, with engagement rates of 42.4%, 95%, 80% in Kaduna, Katsina and Zamfara respectively. Dillman (2007)'s formula was used to calculate the initial sample size to be 384 participants, which was supplemented by a 40% non-response factor to afford a total of 538 participants. To achieve an increased level of generalization, a stratified random sampling technique was used in this study since the states had different agricultural characteristics. Survey data included structured questionnaires that elicited information on the dimensions of banditry and agricultural consequences while the data analysis in capturing the interrelationship of the complex variables was by Partial Least Squares Structural Equation Modeling (PLS-SEM). Cronbach's alpha and Composite Reliability were used to test the reliability of the factors while boot strap procedure was used to test the significance of the path coefficients to give the robustness of the findings and policy prescription.

4. Results

The study used Partial Least Squares Path Modeling (PLS-SEM) to make the analysis on the relationships between banditry and Agricultural productivity and food security. The analysis method most suitable for the investigation of the interdependence of banditry attacks and agricultural productivity/Food Security is PLS-SEM due to additional strengths of the method in dealing with complex models and non-normal data both of which are applicable to the present study (Cain et al., 2017; Hair et al., 2017; Knief & Forstmeier, 2021). The analysis utilized a sample size of 538 with 438 valid responses, examining latent variables: Frequency, Type, Location, and Intensity: four major variables, namely Agricultural Productivity/Food Security, to give the decision-makers good quantitative evidence and enhance their understanding of the situation.

i. Measurement Model Assessment

Table PLS-SEM evaluates the measurement model in two stages: Reliability of measures and validity of constructs: iterative process of evaluating the reliability of the measures, and testing the validity of the constructs is an essential activity, and it follows a stringent approach essential for making valid conclusions (Hair et al., 2021; Sarstedt et al., 2021). The following are the assessment of constructs' consistency, reliability and validity:

Table 1 *Mesureament Model*

Constructs	Indicators	Outer Loadings	Cronbach's alpha	Composite reliability (rho_a)	Average variance extracted (AVE)
Agricultural Productivity/Food Security	AP1	0.796	0.767	0.777	0.589
	AP2	0.782			
	AP3	0.687			

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	AP5	0.798			
Frequency of Banditry Incidents	FBA2	0.715	0.703	0.791	0.579
	FBA4	0.850			
	FBA5	0.708			
Geographical Spread of Banditry	GSB1	0.847	0.788	0.768	0.557
	GSB2	0.717			
	GSB4	0.663			
Severity of Banditry Attacks	SBA1	0.848	0.782	0.783	0.696
	SBA3	0.814			
	SBA4	0.841			

Table 1 shows the measurement model: constructs and indicators, outer loadings, reliability and validity measures. The findings proved reasonable levels of convergent and discriminant validity. In particular, the second index, Agricultural Productivity/Food Security has relatively high internal consistency and convergent validity, with all average extracted values greater than 0.5 and lesser than 0.9, Thus, The AVE is 0.589, ρ_a = 0.777, α = 0.767 AP1 = 0.796, AP2 = 0.782, AP3 = 0. The reliability estimates are acceptable for both constructs: Frequency of Banditry Incidents (α = 0.703, ρ_a = 0.791, AVE = 0.579) and Geographical Spread of Banditry (α = 0.788, ρ_a = 0.768, AVE = 0.557). For Severity of Banditry Attacks (α = 0.782, ρ_a = 0.783, AVE = 0.696), reliability and validity tests are high while outer loadings values which are SBA1 (0.848), SBA3 (0.814), and SBA4 (0.841) are highly significant. Collectively, these results imply that the measurement model is an accurate reflection of the hypothetical constructs and hence provides the foundation for the study of the structural model.

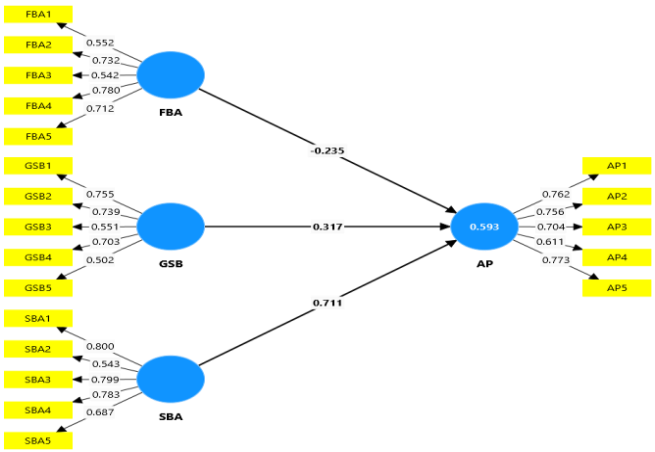

Fig. 1 Initial Measurement Model

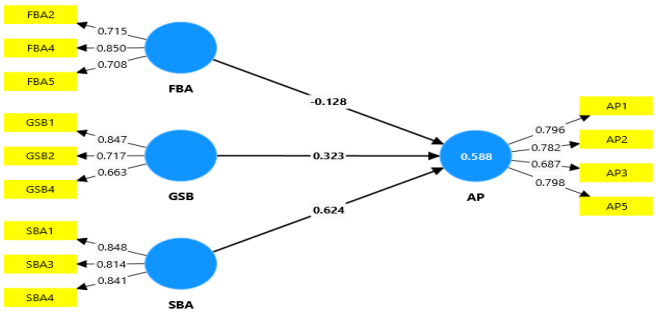

Fig. 2 Revised Measurement Model

Table 2:

Heterotrait-monotrait ratio (HTMT)

	AP	FBA	GSB	SBA
Agricultural Productivity/Food Security				
Frequency of Banditry Incidents	0.710			
Geographical Spread of Banditry	0.750	0.729		
Severity of Banditry Attacks	0.702	0.707	0.798	

Table 2 shows acceptable discriminant validity of the constructs by using Heterotrait Monotrait Ratio (HTMT) analysis. The recommender-HTMT values are less than 0.85, so all the HTMT values represent distinct constructs as suggested by Henseler et al. (2015). Agricultural Productivity/Food Security (AP) has acceptable discriminant validity with the Frequency of Banditry Incidents (FBA) (0.710); Geographical Spread of Banditry (GSB) (0.750); and Severity of Banditry Attacks (SBA) (0.702). In Table 4, all the discriminant validity between the scales are adequate, FBA and GSB (0.729), FBA and SBA (0.707), and GSB and SBA (0.798). These results provide evidence that the characteristics of each construct identify specific aspects of the research framework;

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the measurement model; the subsequent reliability of the structural model analysis and interpretation of relationships between the constructs.

ii. Structural Model

The method used to estimate the outer- and inner- model R^2 and Q^2 values in this study was the Partial Least Squares (PLS) algorithm After obtaining the model, the bootstrapping resampling approach was used to determine the significance of the path coefficients as well as the size of the effect (f^2) for practical significance. Using PLS, the analysis allowed to estimate the model complexity, which Hair et al., (2021) mentioned; moreover, bootstrapping facilitated the construction of accurate confidence intervals that do not necessitate strict data distribution conditions according to Sarstedt et al., (2021). In addition, Q^2 values assessed the relevance of the model for prediction extending the evaluation measures of R^2, establishing a strict evaluation of the research framework.

iii. Hypotheses Testing

The study therefore used bootstrapping analysis to assess the significance of the path coefficients between the exogenous and endogenous constructs while giving accurate confidence intervals free from unreasonable assumption of the distribution of the data (Sarstedt et al., 2021). This made it possible to establish the nature of linkage as well as the direction of the linkage between construct, so as to assess the theorized paths.

Table 3:

Path coefficients

	Original sample (O)	Sample mean (M)	Standard deviation	T statistics	P values
Frequency of Banditry Attacks -> Agricultural Productivity/Food Security	-0.129	-0.126	0.066	1.961	0.050
Geographical Spread of Banditry -> Agricultural Productivity/Food Security	0.322	0.323	0.065	4.936	0.000
Severity of Banditry Attacks -> Agricultural Productivity/Food Security	0.626	0.625	0.042	14.898	0.000

Table 3 also indicates path coefficients arising from the PLS analysis showing a few and important direction between banditry related constructs and Agricultural Productivity/Food Security. However, Severity of Banditry Attacks closely follows Poverty Level as the most significant negatives predictor of the second dependent variable, Agricultural Productivity/Food Security $\beta = 0.626$, $p < 0.001$. Similarly, Geographical Spread of Banditry also postive correlation to Agricultural Productivity/ Food Security r ($\beta = 0.322$, $p < 0.001$) which indicate that increased spread of banditry impacts on food production. On the other hand, and perhaps, more disturbing is the weak negative correlation where lower Frequency of Banditry Attacks results in relatively better Agricultural Productivity/Food Security; ($\beta = -0.129$, $p = 0.050$). These results suggest banditry as a disruptive force on agricultural production, especially if expressed acutely and pervasively.

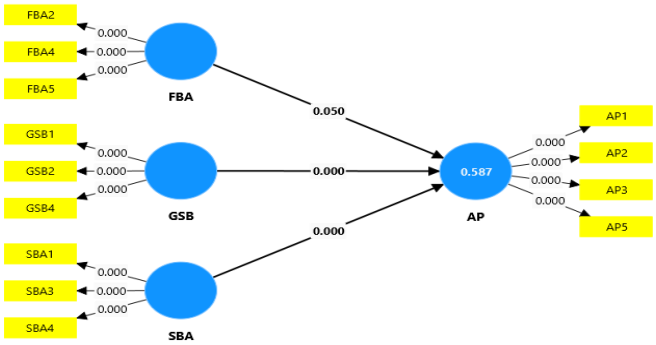

Fig. 2 Structural Model

iv. Coefficient of Determination (R^2), Effect Size (F^2) and Predictive Relevance (Q^2)

The study evaluated model performance using three key metrics: Therefore, the current study adopted three primary indices including: R^2 (Coefficient of Determination) which estimated the extent to which the proposed predictors accounted for the variance; F^2 (Effect Size) that evaluated the real-world significance of the construct relations; and Q^2 (Predictive Relevance) which provided assessment on the criterion validity or the model's capability to predict new data.

Table 4

R-Square, Adjusted R-Square, F-Square and Q-Square

	R-square	R-square adjusted	F-square	Q - Square
Agricultural Productivity	0.588	0.585	-	0.838
Frequency of Banditry Attacks -> Agricultural Productivity/Food	-	-	0.012 (Small effect)	-

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Security			
Geographical Spread of Banditry -> Agricultural Productivity/Food Security	-	-	0.109 (Medium effect)
Severity of Banditry Attacks -> Agricultural Productivity/Food Security	-	-	0.364 (Large effect)

Table 4 lists the model fit and effect size of the research model. Closer observation of the results shows that the R-square (0.588) and adjusted R-square (0.585) all point to the fact that variance in Agricultural Productivity is explained by the predetermined predictors to be 59%. The F-square values reveal the effect sizes of each predictor: The impact of Frequency of Banditry Attacks on Agricultural Productivity/Food Security as a dependent variable is small (Coefficient = 0.012), the impact of Geographical Spread of Banditry is moderately significant (Coefficient = 0.109), and Severity of Banditry Attacks is highly significant (Coefficient = 0.364). The Q-square value of the model was 0.838, which proves the model has high predictive relevance. In sum, thus, the studies' findings indicate that the level at which it occurs determines Severity of Banditry Attacks as the most important predictor since the results showed that Geographical Spread of Banditry has more influence than Frequency of Banditry Attacks. The assumed explanatory and predictive validity is confirmed by a moderate to strong explanatory and predictive value.

5. Discussion of findings

The fact that on one hand policies to promote ''food production for food security'' has been the center of policy intervention eligible this study important for policymakers, agricultural stakeholders, and security agencies. Due to the great correspondence between Severity of Banditry Attacks and Agricultural Productivity/Food Security, there is a heightened urgency for improved security measures that will safeguard farmers and A Member States against serious attacks. Appropriate counter measures to banditry will go a long way in eradicating the disastrous effect on agricultural productivity hence food security and economic stability. In addition, measures towards control of geographical spread of banditry can also increase production preparedness of agricultural produce.

Consequently, the present study's findings underscore the need to increase the yield in agricultural production and food security in conflicted areas. The governments and the international organizations should incorporate support for farmers, development of agriculture structures and channels that enhance sustainability of agriculture systems. It is in this context that security agencies together with agriculture representatives, and local people would be useful to map out the risks, ultimately reducing the frequency and severity of banditry attacks.

The study also in turn presents implications for availing future research. Knowledge of the root causes of banditry, and how their actions affect productivity in the country's agricultural sectors based on socio-economic factors can help. There is also a potential to evaluate in longitudinal research programmes designed to mitigate the effects of banditry on agriculture. Studies on, for example, the use of Information Communication Technologies based early warning system or formation of security frameworks by the agriculturalists may be useful in improving the existence of the aforementioned structures. The end goal of all this is to see and work towards sustainable development and peace in the so called operated regions by understanding the complexity of the link between banditry, agricultural yields, and food security basins.

6. Conclusion

This research shows that banditry has negative effects on agricultural yield and food security in Nigeria whereby the intensity and extension of these attacks are highly negative. It is established that severe attacks significantly cut the agricultural productivity and, in turn, compromise food security and economic performance. Using PLS-SEM, the study finds out that about 59% of the variability in agricultural productivity can be accounted for by factors involving banditry; This is why it is important to address this problem. Altogether, a call for a revamp of security structures and policy-sensitive strategies to address the impact of banditry as a factor that retards agriculture and underpins economic transformation in troubled zones.

7. Recommendations

These literatures imply that policymakers must work to improve physical security in rural areas through focus on deploying more resources to protect the farming communities. Moreover, interventions for mitigation of attacks from bandits and for limitation of the influence of the offenders require cooperation of the government and agricultural actors, as well as the local population. Further, there is an ability to stabilize food security through investments in appropriate agricultural structures and farmers subsidies. Moreover, the introduction of proactive technology measures-early warning mechanisms, plays a role in preventing the acts and ensuring the security of agricultural production. Solving these closures altogether can improve Nigeria's agriculture kingdom and make food security and economic advancement more sustainable.

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