

SOCIOECONOMIC CHALLENGES AFFECTING FOOD SECURITY AMONG RURAL FARMERS IN DELTA STATE, NIGERIA

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ABSTRACT

The study looked at the socioeconomic challenges affecting food security among rural farmers in Delta State. Multistage sampling procedure was used to select two hundred and seventy-one (271) rural farmers. Structured interview schedule was used for data collection. Data were gathered on socioeconomic characteristics, types of conflicts, the problem of corruption on food security, and the extent of food security among farmers in the study area. The data were analysed using frequency counts, mean, percentages and PPMC. The result revealed that, conflict between farmers and herdsmen ($\bar{x} = 3.69$) in the selected communities is very high. While corruption in government subsidies and aid programmes ($\bar{x} = 4.10$) ranked highest corruption impeding the achievement of a food secured community, and the extent of food security among the farmers revealed that majority ($\bar{x} = 1.92$) don't have enough money sometimes to get healthy food. The result also revealed a significant negative relationship between conflict and food security ($r(260) = -0.498$, $p < 0.05$). It was concluded that conflict and corruption contribute significantly to food insecurity. The study recommended that drastic reduction of conflict by government/community leaders in the selected communities will help improve farmer's livelihood and food security.

Keywords: Food security, conflict, corruption, rural farmers

INTRODUCTION

According to the Food and Agriculture Organisation (FAO), International Hunger, International Fund for Agricultural Development (IFAD), United Nations Children's Fund (UNICEF), World Food Programme (WFP), and World Health Organisation (WHO), 2018, one in nine people worldwide suffer from hunger. The number of food-insecure Nigerians increased significantly, from 66.2 million in Q1 2023 to 100 million in Q1 2024 (WFP, 2024), with 18.6 million facing acute hunger and 43.7 million Nigerians showing crisis-level or above crisis-level hunger coping strategies as of March 2024.

Nigeria is a country that pride-prides herself as the giant of Africa with a growing population of over 218,541,212 million with, a gross domestic product (GDP) of size (Constant 2015 US\$ 472.62 billion), a GDP per capita (Constant 2015 US\$ 2162.6), and inflation rate 23.4% (World Bank, 2023). Yet, given these statistics by the World Bank, previous studies such as (Beyene, 2023), (Theodore *et al.*, 2023), and Iwu (2020) agree that Nigeria still suffers from food insecurity.

Food security in Nigeria is suffering as a result of the substantial economic effects of conflict (Rockmore, 2015). Agricultural output is hampered by conflict, including many programs and support systems in place for the sector's expansion (Adelaja *et al.*, 2019).

Conflicts around the world have been a main cause of a rise in global hunger in recent years, increasing food insecurity and limiting the livelihood options of rural populations (Da Silva & Fan, 2017). Despite the government effort to increase agricultural productivity and food production in Delta state, Nigeria, serious crises of conflicts have worsened the already existing

challenges to production, such as conflict between farmers and herdsmen, communal conflict, political conflict, among many others as resulted to destruction of livestock, farmland and poor livelihood among rural farmers. Conflict can destroy agricultural production as well as increase unemployment, leading to food insecurity (George *et al.* 2019). Da Silva and Fan (2017) also explained that many conflicts are fought in rural areas, they target productive agricultural assets such as infrastructure, land, and livestock, and the economic impacts often hit agricultural sectors disproportionately hard.

Furthermore, corruption has also exacerbate food insecurity in a number of ways, which include decreasing the ability of small farmers to produce food or by forcing households to spend money on bribes that would otherwise go toward purchasing food. It is also anticipated that corruption would make the present food crisis worse. If corruption diverts public funds to private pockets, this leaves smaller budgets to fund social protection programmes that put food on tables and delivers worse services (Ben-Davies *et al.* 2014; Schmeer *et al.* 2015; Mutisya *et al.* 2016). Corruption can also be a driver of internal conflict, which in turn undermines a country's food security (Anser *et al.* 2021). Various corruption risks might arise at various stages along the food value chain. Land and water, two of the most vital resources for producing food, present many corruptions threats such as theft, land grabbing, and extortion. Government subsidies and aid programmes also have important corruption risks that can prevent them from reaching those in need.

Food insecurity has been fundamentally tied to a society's level of peacefulness and is a known driver of conflict. An adequate food supply is thus

widely acknowledged as a vital building block for stability. At the same time, this phenomenon is also observable in reverse; the presence of armed conflict has been shown to promote food insecurity through processes such as resource-rich areas being targeted by rebel groups; deterioration of land; redirection of resources; competition between groups, leading to food access challenges; disruptions to supply chains; recruitment of civilians to rebel groups; and disruptions to industry and economies (Mary *et al.*, 2020; Eklund *et al.*, 2017). According to Anser *et al.*, (2021), in the West African sub-region, weak governance regarding food security enhancement mechanisms could decrease food security by 20 per cent.

Many research has been done on food security and other related studies but this research was conducted on socio-economic problems affecting food security among rural farmers in the study area. However, this study will be focusing on conflict and corruption as socioeconomic challenges affecting food security among rural farmers.

The general objective of this study was to examine the socio-economic challenges affecting food security among rural farmers in Delta state.

The specific objectives of the research were to;

- i. determine the socio-economic characteristics of the rural farmers;
- ii. examine the types of conflict among rural farmers;
- iii. assess the problem of corruption on food security among rural farmers; and
- iv. assess the extent of food security among farmers in the study area.

The research hypotheses tested:

H₀₁: There is no significant relationship between conflict and food security among farmers in the rural communities of Delta State.

H₀₂: There is no significant relationship between corruption and food security among farmers in the rural communities of Delta State.

METHODOLOGY

The study was conducted in Delta state. The state is known for economic activities in the Fish value chain, it is also known for production of yams, cassava, oil palm products and maize. It is a major exporter of petroleum, rubber, timber, palm oil and palm kernels. It has 17,698km² land area and a population of 4,112,445 (2006 Pop. Census).

The Population of the study covers all the registered rural farmers in Delta State which are estimated to be 545,987; according to Delta State Agricultural and Rural Development Authority (DARDA).

The sample size for the study was determined using Raosoft (R) software. The sample size was based on a margin error of 5% with 90% level of

confidence, based on the foregoing computation; the sample size of 271 was used in the study.

Furthermore, in order to draw the sample from the population, multi-stage sampling technique was used for this study. First stage involved the purposive selection of two Local Government Areas in each of the three (3) senatorial zones. They are Ethiope east and Uvwie LGAs (Delta Central), Ndokwa east and Aniocha North L.G.As (Delta North) and Isoko North and Isoko south (Delta South), making it a total of Six Local Government Areas for the study. For this research, this selection was premised on the result of recognizance survey and briefing from Agricultural Development Authority (DARDA) which revealed their comparative advantage in agricultural production and the consequences of conflict and food insecurity they experience during and after farming. Secondly, in each of the Local Government Area, random selection of two (2) communities per local government was selected making it 12 communities for the study.

Primary data was obtained by structured interview schedule based on the research objectives. Descriptive statistics involved the use of frequency, percentage, and mean score while the hypothesis was tested using Pearson Product Moment Correlation (PPMC).

The types of conflict among farmers were measured by a 4 points Likert-type scale of very High, High, Moderate and Very Low with weighted mean of 2.5 was considered as the cutoff point, which implied that any variable that is greater or equal the threshold (2.5) was considered to be very high in the community, while the variable that is less than the threshold (2.5) was considered very low. The responses were weighted on the level of occurrences (from very high to very low).

The extent of household food security among farmers was measured on a five-point scale of strongly agree, agree, undecided, disagree, strongly disagree. Fourteen negative questions were asked. They are based on farmers' anxiety over food, fluctuations in the quantity of food for adults and children, and anxiety over consequences of reductions in food intake for adults and children according to FANTA's Household Food Insecurity Access Scale (HFIAS) of the United States Agency for International Development (USDA) (2012).

Problem of Corruption among farmers was deduced from 5 points scale of strongly agree, agree, undecided, disagree, and strongly disagree, with a cutoff point of weighted mean of 3.0, which implied that any variable that is greater or equal the threshold (3.0) was considered to be a major problem of corruption in achieving food security among rural farmers in Delta State, while the variable that is less than the threshold (3.0) was considered not a problem. The responses were weighted on the level

of agreement of respondents to the question ranging from strongly agree to strongly disagree

RESULTS AND DISCUSSION

Socioeconomic characteristics

Table 1 shows that majority (56.5%) of the respondents were female; this indicates that there are more female farmers in agriculture than male in Delta state. This finding was consistent with Okonya (2014), which reported that, women in sub-Saharan Africa produce 70–75% of the agricultural food in rural regions.

The age distribution of the respondents revealed that, those aged 60 to 69 years had the highest percentage with 30.8, this indicated that respondents aged 60-69 participated more in farming activities in the study area, which is not appropriate because having more older farmers will reduce productivity and can increase food insecurity. This result is consistent with Ugwoke *et al.* (2005)'s findings, which indicated that since farmers' production is thought to decline with age, this is not a useful index to boost productivity.

The widows(er) participated more in the survey at 65.00%, this may be because of death or migration of spouse to the urban area which have brought about low labour. On the other hand, this may also increase food insecurity in the selected area. This is

in consonance with the findings of Muller (2005); one of the impacts of epidemic at household level experienced is labour shortages and has an impact on people's labour at several levels like supply, productivity and opportunities.

The findings also showed that, those with no formal education were 41.9%, This indicate the level of illiteracy among rural farmers are higher as majority of the farmers can neither read nor write which can instigate food insecurity in terms of adoption of improved technology and proper handling of agricultural produce. This is consistent with Olayide *et al.* (2003), who suggested that one of the main causes of older farmers' poor adoption rates of technology is their low educational attainment.

The income frequency was also reported, higher proportion (33.5%) of the rural farmers earned between #31,000 - #40,000 per month. The outcome demonstrates that, in comparison to the usual poverty limit of one dollar per day, farmers' annual income is typically low. However, the data also demonstrate that inadequate capital and a lack of essential infrastructure have a negative impact on local farmers' incomes. The result conforms to the works of (Ibekwe *et al.*, 2010) who also found a positive correlation between infrastructure and farmers income.

Table 1: Socio-economic characteristics of the Respondents

Variables	Percentage	
Gender	Male	43.9
	Female	56.2
Age	20-29 years	2.7
	30-39 years	12.7
	40-49 years	13.1
	50-59 year	17.3
	60-69 years	30.8
	> 69 years	23.5
Marital Status	Single	6.5
	Married	23.1
	Divorced	5.4
Educational Qualification	Widow(er)	65.0
	Non-formal	41.9
	Primary school	30.0
	Secondary school	19.2
Years of farming experience	Tertiary	8.9
	< 10 years	6.9
	11-20 years	37.7
	21-30 years	45.4
	> 30 years	10.0
Income/month	<#10,000	7.3
	#11,000 - #20,000	13.5
	#21,000 - #30,000	21.2
	#31,000 - #40,000	33.5
	>#41,000	24.6

Source: Fieldwork, 2023

Types of conflict among rural farmers

The results in Table 2 reveals that the highest mean score (\bar{x}) of 3.69 indicated that conflict between farmers and herdsmen in the selected communities is very high, conflict over indebtedness of farmland (\bar{x} =3.59), communal conflict (\bar{x} =3.27), conflict arising over ownership of farmland (\bar{x} =3.27), political conflict (\bar{x} =3.22), conflict arising from spouse (\bar{x} =3.02), conflict among farmers (\bar{x} =2.62), and family conflict (\bar{x} =2.62). The grand mean score of 3.02 indicated that the respondents

agreed to a very large extent that conflict have a significant effect on farming activities and it's one of the major challenges of food security. Hence, conflict in the selected communities has resulted to loss of agricultural produce, life, properties, reduce farmer's income and pose more treat to food security. This is consistent with (George *et al.*, 2019) who stated that, conflict can destroy agricultural production as well as increase unemployment, leading to food insecurity.

Table 2: Types of conflict among rural farmers

Types of conflict	(\bar{x})
Conflict between farmers and herdsmen	3.69
Communal conflict	3.27
Family conflict	2.62
Conflict among farmers	2.62
Political conflict	3.22
Religious Conflict	1.87
Conflict arising from spouse	3.02
Conflict over indebtedness of farmland	3.59
Conflict arising over ownership of farmland	3.27

Source: Fieldwork, 2023

Problem of corruption on food security

The highest (\bar{x} =4.10) indicates that corruption in government subsidies and aid programmes has an effect on food security, embezzlement of funds allocated to farmers (\bar{x} =3.89), Theft of agricultural produce (\bar{x} =3.84), Bribery before getting irrigation technology (\bar{x} =3.82), bribery before acquiring the allocated incentive by the government (\bar{x} =3.75), bribery before getting land title and usage (\bar{x} =3.68), not given incentive to the targeted group (farmers) during empowerment programme (\bar{x} =3.66), undergoing any form of bribery to participate in empowerment programme (\bar{x} =3.65). The overall mean score of (\bar{x} =3.76) denotes the degree of agreement among rural farmers regarding the issue of corruption. They all agreed that corruption is one of the main factors affecting food security, and that the costs associated with securing other services (such as paying bribes for technologies, fertilisers,

and participation in empowerment programs) put less money in the pockets of low-income families, which in turn reduces their ability to buy food. This is consistent with (Tacconi & Williams, 2020), who claimed that because they have less authority and are more likely to be required to pay bribes, impoverished farmers are more impacted by corruption.

More so, corruption deprive them of standard education, good standard of living and also divert public funds allocated for farmers to private pockets (embezzlement) this is as a result of weak governance and also have a serious effect on food security. This is in accordance with the findings of (Anser *et al.* 2021), which suggested that inadequate governance over methods for enhancing food security could reduce food security in the West African sub region.

Table 3: Respondents' responses on the problem of corruption among rural farmers

The problem of corruption among rural farmers	Mean (\bar{x})
Corruption in government subsidies and aid programmes	4.10
Undergoing any form of bribery to participate in empowerment programme	3.65
Not given incentive to the targeted group (farmers) during empowerment programme	3.66
Bribery before acquiring the allocated incentive by the government	3.75
Sub-standard technology giving by government	3.57
Embezzlement of funds allocated to farmers	3.89
Theft of agricultural produce	3.84
Land grabbing by individual, companies and government	3.68
Bribery before getting land title and usage	3.68
Bribery before getting irrigation technology	3.82

Source: Fieldwork, 2023

Extent of food security

Table 4 shows the participants' responses on food security among rural farmers. The mean score of ($\bar{x}=1.92$) indicated that rural farmers don't have enough money sometimes to get healthy food, the mean score of ($\bar{x}=1.89$) indicated that farmers are not able to eat healthy and nutritious food, the mean score of 1.87 indicated that rural farmers Run out of food sometimes, thus, indicating that majority of the respondent are not food secure because a food secure

person must have the four key point of food security which are, accessibility, affordability, stability and availability. This is in tandem with World Food Summit in 1996, who described Food security as, "a situation in which all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious foods that meet their dietary needs and food preferences for a healthy life.

Table 4: Respondents' responses on food security among rural farmers

Food insecurity situations	Mean
Worried about not eating to satisfaction	1.81
Not able to eat healthy and nutritious food	1.89
Run out of food sometimes	1.87
Spend a day Sometimes without eating	1.80
Don't have enough money sometimes to get healthy food	1.92
In some cases, you don't eat balance diet	1.59
Sometimes you reduce the portion of your meal because you don't have enough money to get more	1.72
Eating less than three times daily because you don't have enough money	1.80
Sometimes, you don't have access to healthy and nutritious food	1.83

Source: *Fieldwork, 2023*

Hypotheses of the study

Table 5 shows the Pearson Product Moment Correlation coefficient on the relationship between conflict and food security. It revealed that there is a significant negative relationship between conflict and food security such that an increase in conflict leads to a decrease in food security, $r(260) = -.498$, $p < 0.05$. Therefore, hypothesis that there is no significant relationship between conflict and food security was not supported.

This finding is supported by empirical work both within and outside Nigeria, in the study

conducted by Ujunwa *et al.*, (2019) on armed conflict and food security in Africa, it was found that food security is largely affected by conflict that is happening in specific parts of West Africa which is in line with the result of this study. The result brings to the fore, the urgent need to reevaluate the conflicts across various regions (mostly in rural areas) in Nigeria. The result is also consistent with the study carried out by Sandra (2023), who found a close association between conflict and food security further supporting the results of the current study.

Table 5: Pearson Product Moment Correlation on the relationship between conflict and food security

Variables	N	M	SD	Df	R	r2	P
Conflict	260	3.02	.90	258	-.498	.25	.001
Food Security	260	1.80	.44				

Table 6: Pearson product moment correlation coefficient on the relationship between corruption and food security

The result revealed that there is a significant negative relationship between corruption and food security such that an increase in corruption leads to a decrease in food security, $r(260) = -0.438$, $p < 0.05$. Therefore, the hypothesis which states that there is no significant relationship between corruption and food security was not supported.

This implies that, as corruption increases in rural areas and the country at large, food security is likely to decrease. For example, the work of (Helal *et al.*, 2016) on the relationship between corruption and food security at a global scale indicated that

amongst diverse population demographics, the absence of corruption has a positive impact on food security while the increasing presence of corruption, reduces the level of food security. This is possible largely because corruption affects the livelihood and well-being of the people especially those living below the middle-class line. This notion was also supported by a recent study by (Olabiyi, 2022) that examined the effect of bureaucratic corruption on household food insecurity and found that corruption within public institutions and the country at large affects household food insecurity. Hence, further buttressing the point that corruption is contributing significantly to the levels of food security.

Table 6: Pearson Product Moment Correlation on the relationship between corruption and food security

Variables	N	M	SD	Df	R	r ²	P
Corruption	260	3.76	.41	258	-.438	.19	.001
Food Security	260	1.80	.90				

CONCLUSIONS AND RECOMMENDATION

Some Socio-economic challenges affecting food security among rural farmers were brought to the fore in the study. Conflict and corruption also contribute significantly to food insecurity. The study recommended that drastic reduction of conflict by government/community leaders in the selected communities will help improve farmer's livelihood and food security. Additionally, the government should formulate policy that will guide the distribution of incentive/palliative among rural farmers during empowerment programmes.

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