Effect of conflict incidences on vulnerability to food insecurity in Oyo State, Nigeria

[1]Ayantoye, K., [2]Oyelade, J. O., and [2]Amao, J. O.
[1] Department of Agricultural Economics, Kwara State University, Malete.
[2]Department of Agricultural Economics, Ladoke Akintola University of Technology, Ogbomoso.
Correspondences details: oyeladejoluwaseun@gmail.com

Abstract: Despite several concerted efforts made at eradicating hunger by the world leaders, it still persists. The dynamism of food insecurity remains a major drawback at capturing the hungered by the various interventions. Hence, the world still experiences acute food insecurity, mostly prevalent in Sub-Sahara Africa and the Asian. Fluctuation in weather elements and conflicts are two major factors where hunger is prevalent. This calls for policies that will address the dynamism, fluctuations in weather as well as conflict incidences. These are feasible when *ex ante* studies are done. There is perceived insufficient data for making of such policies in the study area. Hence, this study analysed the effect of conflict incidence on vulnerability to food insecurity in Oyo State, Nigeria. The population of the study were registered farmers with the Oyo Agricultural Development Programme. The data was collected during two visits (April through early June and September through December of the year 2019) using a multistage random sampling procedure. The data were analysed using three staged feasible generalized least square regressions (at 5% probability) following the Value at Risk (VaR) approach. The result indicated that the majority of the farmers (63.37%) were of their active age having mean age of 49 years and majorly smallholders with a mean farm size of 3.75 hectares. Dynamism in food insecurity status was established 53.48% and 13.55% of the households moved in and out of food insecurity respectively (an indication of dynamism) while about 68.50% of households were not vulnerable to food insecurity, 31.50% of them were vulnerable to food insecurity. In the same vein, 59.71% of the households experienced conflict while about 40.29 % of the households do not. In the study area, 66.84% of the households that did not experience conflict were not vulnerable while 33.16% were vulnerable to food insecurity. Also, 55.81% of the households that experienced conflict were vulnerable to food insecurity. Lastly, a unit increase in conflict incidence have the probability of increasing vulnerability to food insecurity by about 19.4%. In conclusion, dynamism in food insecurity was established while a positive significant relationship exists between conflict incidence and vulnerability to food insecurity. This therefore calls for *ex ante* analysis to enhance efficiency of interventions aimed at eradicating hunger in the study area. Measures aimed at eradicating conflict incidence and compensation of affected farmers should also be put in place to stem vulnerability to food insecurity in the study area.
Keywords: Food insecurity, vulnerability, dynamism, and conflict.

INTRODUCTION

By the year 2050, it is estimated that the world's population would have at least doubled, and the purchasing power of the populace increased. The implication of this will be an increase in the demand for food that is currently insufficient (United Nations, 2009). According to Jensen (2002) food is not only a global fuel for powering humans, but also a basic requirement for maintaining political stability in the economy and for ensuring a peaceful coexistence amongst the populace. Thus, it creates a needful environment that enables governments achieve their developmental objectives. This is because, a hungry man is often referred to as an angry man who may at the slightest provocation, take to violence or somewhat illegal or unwholesome activities Jensen (2002). Cantor *et al.,* (1985) also established a strong link between lack of food, unemployment, and crime rate.

Going by the report of the Food and Agricultural Organisation in the last quarter of 2017 where 51 nations were surveyed, almost 125 million people were faced with what the organization described as acute food insecurity. This represents an increase of 11 million people from the same quarter of the previous year (FAO, 2017). From the same report, there was an 11% increase in the occurrence of food insecurity at various levels especially in Northern Nigeria (FAO, 2017). This figure is expected to either remain relatively constant or soar higher given the prevailing conflict and harsh weather conditions in this region except some emergency measures are taken to ameliorate the situation.

At present, about one billion people of the world's population still suffer from chronic hunger out of which about (25%) are from Sub-Sahara Africa due to factors ranging from, unavailability, inability to afford food because of the prevailing weather, conflicts, extreme poverty, spirally increasing prices of foods, food materials to bad government policies, (FAO/World Food Program, 2018).

Evidence of conflicts in Nigeria

The era of conflict in the Nigerian setting started with the merger of the Northern and Southern Nigeria in 1914 by the British empire, to discourage the would-be ethnic conflicts borne out of inter-regional migration. The new influx to these parts were encouraged to stay in a separate colony called Sabon-Gari and Sango in the Northern and Southern parts respectively (Ray, 2012). This however solved or stemmed the expected conflicts howbeit temporarily as the separation enhanced competition for resources among these settlements. Thus, the

stage was set for what will later translate into unending conflict in the country (Osaghae *et al.,* 2005).

Following the independence of the country in the year 1960, conflicts ensued between these ethnic groups in no distance time, leading to the overthrowing of the nation's first democratic government in not more than six years, it started, this was followed closely by the Biafran war in year 1967. Since then, inter and sometimes intra-ethnic (for example Ife versus Modakeke conflict of mid 90's in Southwest Nigeria and between Tiv and Jukun in the middle belt) conflicts of one kind had been the order of the day (Bah *et al.,* 2003). The prolonged conflict ravaging the Northern part has been the Boko Haram insurgence, while the middle belt is being bedevilled by the farmers and Fulani herders' crises and, indeed, some scattered incidences of the conflict across the federation. (Osaghae *et al.,* 2005).

The background to most of these conflicts has been the struggle to control economic resources, notably land and water (Fabusoro *et al.,* 2014). Territorial establishment over these resources makes land and water-related conflicts difficult to control relative to other forms of conflicts (Olabode, and Ajibade, 2010). Blench (2003) established that, pastoralists-farmer conflicts got escalated in recent times due to genetics improvement culminating in increasing herd size that necessitates more grazing land requirement, exploding population that drives demand for food items thereby necessitating the need for cultivation of more lands.

The inception of Fadama farming along the prized resource for Cattles, water, further escalates the problem (Blench, 2010). This could be partly responsible to why the conflict is more concentrated in the middle belt region where the landscape has a big river (river Benue) supplying water for crop growth and cattle consumption. For instance, Benue state accounted for 58.4% of violent deaths stemming from land issue in the country between June 2006 and May of 2014 (Bah *et al.,* 2003). Furthermore, Bah *et al.,* (2001) identified rapid desertification in the Northern part (the primary homes of these nomads) and harsh weather condition as a result of weather change as contributing factors to the migration of these pastoralists southward.

Figure 1.2 shows the number of violent deaths between June 2006 to May 2014 because of land conflicts between communities at the state levels. Plateau State tops the chart with more than 550 deaths, followed by Benue State with close to 450 deaths. The Plateau conflict was due to land tussle between Islamic group and communities while Benue State was due to conflicts between farmers and pastoralists. The conflicts of south-south states were due to communities against the oil companies.
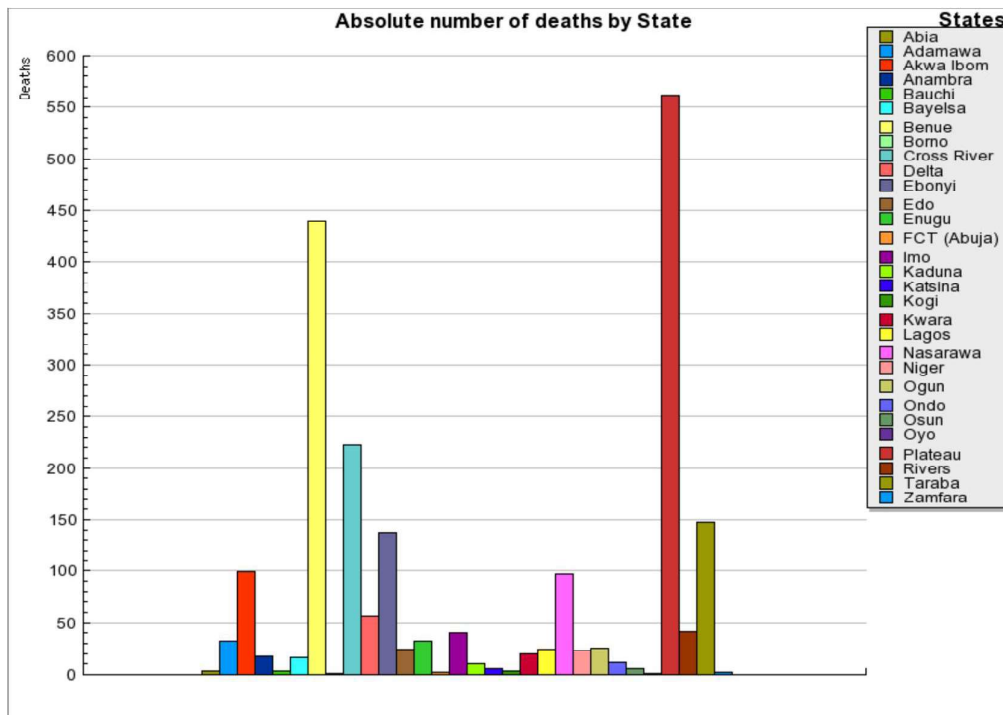
Number of deaths from Violent Conflicts in Nigeria (Stone, 2014)

Finally, in the work of Olomojobi (2017) where he examined the newspaper coverage of the farmer-herders conflicts in Nigeria from the month of January 2015 to August 2016, the incidence is a

nationwide phenomenon with diverse degrees of frequency, the North Central (24.2 %) having the highest frequency of reportage by the three newspapers analysed by the author, followed by the South West (16.9%), and closely by South East (15.5%), while the South- South recorded 6.1%. This is in spite of the oil exploration in the region polluting its waters and which makes it land area unfit for arable crop growth, the most sought-after resources by herders, North West and East were least with the same frequencies (3.5%). This could be due to inaccessibility of the regions because of another form of intense conflict between the Nigerian army and the Boko haram insurgent. About 30.0% of the incidences do not have their locations reported, while numerous unreported or undocumented cases were also suspected by the authors.

The Concept of conflict

There had been many concentrations on civil and inter-state wars in the more recent years. Conflicts are really of different forms, notable are political forms, this although this is only common just before and after major electioneering, rioting by perceived aggrieved groups in the society (except that this could distort food distribution channels, it is mostly an urban- related problem), organized crimes form, and communal conflict form. The later having an extension to farmers and herders or Pastoralists and is majorly caused by struggle to control agricultural productive resources, notably, land and water (World Bank, 2011).

Although the conflict has multidimensional causes, acute food insecurity is usually a general motivating factor for participating in conflicts. The other popular cause is the desire to get revenge for perceived wrongs (Stewart, 2010 and Centre for Systemic Peace, 2012). The relationship between conflict and food security is usually nuanced in that food insecurity enhances the occurrence of and participation in conflict (usually communal) while, dampening This is because in curbing insurgencies and civil conflicts, restriction of access to food by the opposition is often employed (Downes, 2007).

A notable and prevalent instance of this is the Boko Haram insurgence that has been ravaging the North Eastern parts of Nigeria for almost a decade now. Conflict remains one of the major drivers of food insecurity today (World Food Program, 2018). Conflict (civil) is perhaps an exclusive occurrence in developing nations and is common only amongst the food insecure. (Collier *et al.,* 2003) established a strong linkage between chronic food insecurity, conflict, and poverty.

Food insecurity was discovered at individual and community levels to enhance participation in conflict. Based on the premise that, fighters are usually recruited by warring rebels through incentives (usually food and shelters),

appeal and coercion (Arjona and Kalyvas 2012). In the case of armed conflict, in which farmers' herders' conflicts are an example, revenge and grievances are often not sufficient reasons for participation. Needed resources (both materials and partisan humans) need to be mobilized, the cost of the arms and ammunitions often suggests that the participants are food secure or at best, have sponsors who either coerced or incites them (Tilly 1978, Collier and Hoeffler, 2004).

In communal conflicts however, weather change causes crop failures while farming land invasion by herders to eat up remnant of the failed crops cause grievances on the part of the farmers. However, a generally declining income because of this menace makes willing donors of money and materials for use for armed conflicts become more difficult to come by for farmers and thus could also motivate resistance to coercion. (Roble, 2011). The pressing need for food security rather than political fulfilment that could precipitate conflict becomes the preoccupation of the individuals (Maslow 1984, Salehyan and Hendrix, 2012).

From the preceding discussion, high food prices often result from violence or conflicts and thus make the availability, accessibility, and affordability of food very difficult for the populace, resulting in food insecurity. Lack of enabling environment for farming operations in the case of communal and farmers-herders conflicts makes proper attention to farms almost impossible, consequently reducing yields and increasing mortality in livestock farming, the gross aftermath of which is the erosion of farmers' income and food insecurity (United Nations 1993). Scanlan and Jenkins, 2001) established an increase in government spending in peace keeping at the expense of investments in infrastructural development and economic growth that will drive food security and prosperity for the populace.

Conflict as a shock on rural households causes death, the effect of which is more devastating if the death is of the economically productive household members (like household head or male adults) because this tends to reduce the household's income, enhances the spread of diseases due to restricted access to health personnel and facilities as a result of reduced or low household income, displacing households as evident in increasing number of Internally Displaced Persons (IDPs) camps and the population of people therein, and discouraging investment in agriculture because the primary motive would be survival rather than investment, all of which negatively affects food security (Collier, 2003).

Pathways to weather-induced conflict

Figure 2 shows a complex relationship between weather change, food insecurity and conflicts. An adverse change in weather increases the rate of natural disasters like flooding, drought,

desertification, and increasing scarcity of productive resources (land, water, and sunlight). These result in loss of means of sustainability (loss of source of livelihood, be it cropping or livestock production) thus, causing food insecurity. To correct this anomaly, migration must be the ultimate coping strategy when other strategies have failed. Migration to greener pasture characterized by resource availability, (like fresh water for livestock and arable land for crops and pastures). The new entrants to this new colony cause population pressure on these resources, and there will be stiff opposition to these intruders, resulting in economic instability and an incentive to organise and participate in all conflicts.
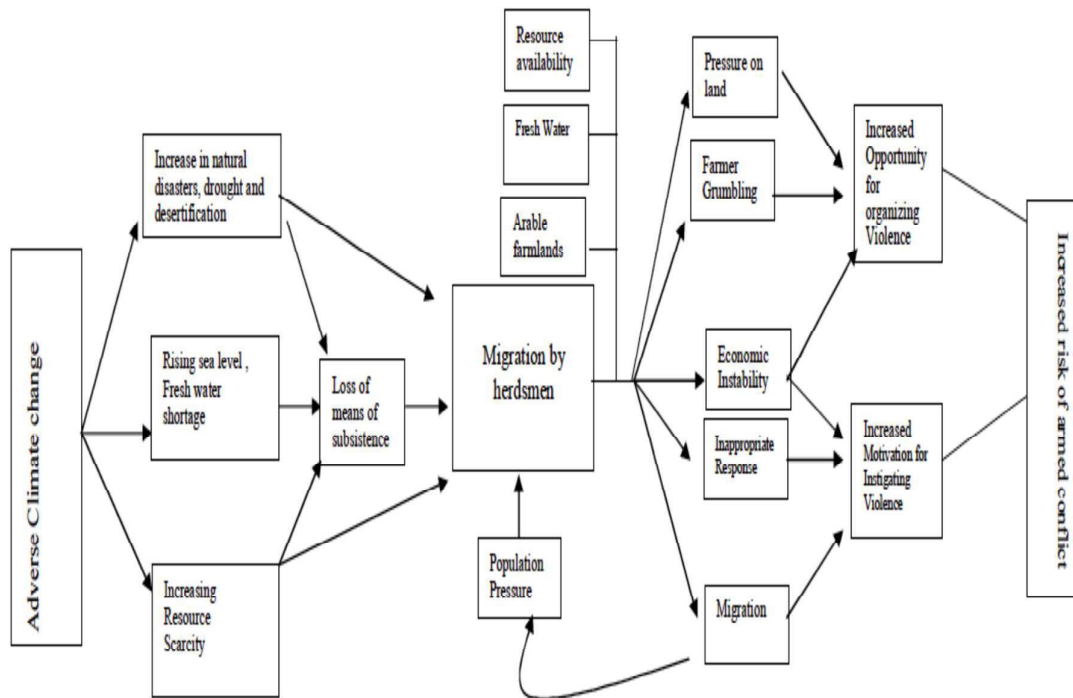

Figure 2: Pathways to weather-induced conflict (Adopted from Odoh, 2012)

Objectives of the study

1. Analysis of socio-economic characteristics of the respondents.
2. Estimation of vulnerability to food insecurity of the respondents.
3. Determination of effect of conflict incidence on vulnerability to food insecurity.

METHODOLOGY
Study area

The study area is Oyo State, Nigeria. The state was created in 1976. It currently has 33 Local Government Areas. The state shares boundaries with Kwara, Osun, and Ogun States to the North, East, and South respectively and with the Republic of Benin to the West.

The State covers 28,454 square kilometres and is ranked 14th (relative to size) in the country. It is located on latitude 8.1196^0N, 3.4196^0E, having an equatorial weather condition, with distinct dry and wet seasons and relatively high humidity. Being in a temperate region, it has a daily temperature range of 25-35 ^{0}C which is almost the year-round. These conditions favour the cultivation of various arable crops such as Yam, Cassava, Maize, Cocoa, and Cashew. Oyo State is culturally the home of the Yorubas, though almost all people of other languages in Nigeria live, work, or trade there. (Ndianefor, 2016).

Data Source, Population, Sampling Technique and Sample Size

Primary data were used, collected during two visits to the respondents using a structured questionnaire. The first visit was done during the planting season; April to early June, and the second, during the harvesting season July to December, year 2019. The population is comprised of all the registered farming households with Oyo State Agricultural Development Program (OYSADEP). (415,030 households). A multi-staged sampling procedure was used. The first stage was a purposive selection of two agricultural zones (Saki and Ogbomoso zones) out of the 5 in the State, followed by purposive selection of 8 Local Government Areas

LGAs from the two zones (3 from Saki and 2 from Ogbomoso zone) based on some desirable characteristics such as being agrarian area. This was followed by random selection of the farming households.

The selected zones were Saki zone with 119,313 households and Ogbomoso zone having a population of 90,413 households, this makes a total of 209,728 households. Population size of 290 was determined using the table of sample size determination. Over the two visits, a total of 17 household's data were incomplete, this could be due to relocation of the households that might have been occasioned by conflict or a search for a greener pasture elsewhere. In this regard, 273 households were used as the sample proportionately spread across the zones and LGAs randomly as thus: Oriire (66), Surulere (49), Atisbo (38), Saki West (31), Iwajowa (29), Kajola (22), Ogo-Oluwa (21), and Saki East (17).

The profiling of the socio-economic characteristics was achieved using descriptive statistics as frequency count, mean and percentages. In estimating vulnerability to food insecurity, two staged feasible generalized least square regression following Value-at-Risk VaR approach was used as used by (Oyelade *et al*, 2022, Sileshi *et al*., 2019, Sisay *et al*., 2016, Capaldo *et al*., 2010, Scaramozzino 2006) using the model:

$$\tilde{V}_{ht} = \Pr(\ln C_h < Z/ X_h = \phi \frac{\ln Z - X_h\beta}{\sqrt{X_h\theta}}$$

where $\ln c_h$ is defined as $X_h\beta + \epsilon$ and $\tilde{V}_{ht}$ is the probability of vulnerability, C_h, per capita consumption of the households, Z, ideal consumption, X_h, household characteristics, β, vector of parameters to be estimated, and ϵ_h is the error term that captures idiosyncratic shocks.

The effect of conflict on vulnerability to food insecurity was estimated using three staged feasible generalized least square regression because it is suspected that there could be a problem of endogeneity, thereby leading to a correlation between an endogenous variable and the error term. Two endogeneity tests (residual and Hausman) were conducted to confirm endogeneity. This necessitated using three staged least square regressions, though ordinary least square may be consistent, it will not be efficient in this case.

VaR in the context of food security can be construed relative to the critical threshold level of the nutrition outcome consistent with a minute (given) probability of such an outcome falling below this level at a particular time. However, sensitivity analyses must have been done prior to choosing the confidence interval level for the classification because a higher confidence interval could be associated with increased food security or reduced food insecurity. Therefore, this approach can greatly help in suggesting custom-built approaches of specific households, reducing such a household's vulnerability to food insecurity (Chaudhuri, 2000), and (Scaramozzino, 2006).

The explanatory variables of the household's heads used were; X_1 = Gender (1 for Male and 0 for female) X_2 = Age (years), X_3 Household size, (absolute number), = X_4 = Primary occupation, X_5 = Level of education measured by years of schooling, X_6 = Farmland Ownership, X_7 = Farm size, X_8 = Farming Experience, X_9 = Membership of political or cooperative society (1 if Yes and 0 if No), X_{10} = Access to Weather information, X_{11} = Livelihood Diversification, X_{12} = Time spent to get water, Dependency ratio (number of household member below age 18 years and above 70 years), Expenditure of household on food items in Naira, Access to remittance (1 if Yes and 0 if No), Access to external credit (1 if Yes and 0 if Not), Time spent in fetching water, X_{13}= Time spent to Access Healthcare, X_{14}= Indebtedness, X_{15}= Farming income, X_{16} = Dependency Ratio, X_{17} = Conflict Incidence (1 if an household experienced either farmer-herders conflict (farm, water source or community invasion by herders), land leaser-leasee conflict, or communal land conflict at least once in the last 2 months, 0 if otherwise)

RESULT AND DISCUSSION
Socio-economic Characteristics of the Respondents

Table 1 presents the socio-economic characteristics of the respondents. Saki and Ogbomoso zones have a proportionate distribution of 50.18 and 49.82 percent, respectively. Across Oyo state, the minimum age recorded was 29 years, while the maximum was 78 years, and the mean age was 49 years. It shows that the respondents are young adults with vigour demanded by agricultural operations. This result was like the findings of Oluwasusi and Tijani (2013).

From the table, the mean farm size of the respondents was 3.75 hectares, which implies that the respondents are predominantly small-scale farmers. A similar finding was made by (Amao and Ayantoye, 2017), where an average farm size was 3.5 hectares. Also, the average household size obtained was 5 individuals, while the maximum and minimum sizes were 13 and 2 individuals, respectively. The reason for a relatively lower mean size could be rural-urban migration waves, increased use of chemicals that reduce human labour demand, and aggressive birth control campaigns.

Finally, 163 households, representing 59.71% of the households surveyed, did not experience any of the earlier identified forms of conflict, while 110 households, representing 40.29% did experience one form of conflict or the other.

Table 1: Socioeconomic characteristics of the respondents

Variables	Frequency	Percentage	Mean	Min.	Max.
Agricultural zone					
Saki	137	50.18			
Ogbomoso	136	49.82			
Age (years)			48.97	29	78
<=30	5	1.83			
31-40	65	23.81			
41-50	103	37.73			
51-60	52	19.05			
61-70	34	12.45			
Above 70	14	5.13			
Farm size (hectares)			3.75	0.5	30
Not more than 5	225	82.42			
6-10	43	15.75			
Above 10	5	1.83			
Household size			5	2	13
Not more than 5	95	34.80			
6-8	152	55.68			
Above 8	26	9.52			
Conflict incidence					
Experienced conflict	110	40.29			
No conflict experienced	163	59.71			
Vulnerability statuses					
Vulnerable	86	31.50			
Non-vulnerable	187	68.50			
Total	**273**	**100.0**			

Vulnerability to food insecurity

Table 2 presents the household's food vulnerability status in the study area. While 31.50% of households were vulnerable, 68.50% were not susceptible to food insecurity. This is not in tandem with Mesfin's (2015) findings, where 52% and 48% of households were vulnerable and non-vulnerable to food insecurity, respectively in his study. Inferentially, not minding the current food security status, given a minimal disturbance of the prevailing socio-economic characteristics and conflict incidence, 31.50% of households have a higher chance of becoming food insecure.

The table as well gave the statuses of food insecurity across the planting and harvesting seasons, these statuses were found to be non-static but dynamic. A similar finding was reported by Christina, Miller, Swanson, and Strawderman (2005). Across the seasons, 17.95% of the households maintained the status of being food insecure (the vulnerable in the coming season), while 15.02% of the households as well-maintained food secure status. However, in the report of Amao and Ayantoye (2015), higher percentage of surveyed households (86.8%) remained food insecure across harvesting and planting seasons. Contrarily, 53.48% households changed status from being food insecure to being food secure across the planting and harvesting seasons while 13.55% of the households' changed status from being food secure to being food insecure (the vulnerable) in the study area. The latter is like the findings of Amao and Ayantoye (2015) where 13.1% of the households moved from being food secure to becoming food insecure.

Table 2. Vulnerability to food insecurity

Food security status	Vulnerability Status		
	Vulnerable (%)	Non-vulnerable (%)	Total
Food insecure ($P_x H_x$)	49 (56.98)	0 (0.0)	49 (17.95)
Food Secure P_x, H_x	0 (0.00)	41(21.93)	41 (15.02)
Food Insec. P_x, Food Sec H_x	0 (0.00)	146 (78.08)	146 (53.48)
Food Sec P_x, Food Insec H_x	37 (43.02)	0 (0.00)	37 (13.55)
Total (%)	86 (31.50)	187 (68.50)	273 (100)

Source: Field Survey 2019. P_x and H_x represent planting and harvesting seasons respectively.

Distribution of vulnerability status based on conflict incidence

Relative to conflict incidence, table 3 presents the results of the distribution of the respondents. Households that experienced one form of conflict or the other have vulnerability percentage of 55.81 of the vulnerable households. However, 44.19% (households of those that do not experience conflict) were vulnerable. This implies that,

exposure or experience of any form of conflict increases vulnerability to food insecurity.

The table also shows that, 66.84 percent of the households that do not experience any form of conflict were not vulnerable while only 33.16 percent of the households that experienced conflicts were non vulnerable. Again, this index shows that, non-exposure to conflict increases non vulnerability percentage among the respondents in the study area. This is in consonance with the findings of Mesfin (2015).

Table 3: Distribution of vulnerability status based on conflict incidence

Variables			Vulnerability Status
Conflict Incidence	Vulnerable (%)	Non-vulnerable (%)	Total (%)
Experienced Conflict	48 (55.81)	62 (33.16)	110 (40.29)
No Conflict Experienced	38 (44.19)	125 (66.84)	163 (59.71)
Total (%)	**86 (31.50)**	**187 (68.50)**	**273 (100)**

Source: Field Survey 2019

Estimation of Vulnerability to Food Insecurity

Table 4 presents the result of estimation of vulnerability to food insecurity status of the respondents. The FGLS result as presented showed some variables as age, household size, primary occupation, conflict incidence (all positives), years spent in schooling, ownership of farmland, weather information access, and livelihood diversification (all negatives), are significant to vulnerability to food insecurity status in Oyo State.

Given the result, as the age of the household head increases by a year, the probability of vulnerability increases by 2.9%. This is in agreement with the report of Sisay *et al*., (2016). In the same vein, increase in household size by one individual will increase food vulnerability by 8.5%, Capaldo *et al*., (2010) reported a similar result, probably because, increase in household membership creates more burdens on the limited economic resources of the households. Also, as the household's head primary occupation tends towards civil service, there is probability of vulnerability to food insecurity to increase by 4.0 percent, somewhat negating apriori expectation that Civil servants with secure and stable source of income should be relatively food secure, this could be due to erratic payment of the civil servant's salary at the time.

As the year spent in school increases by a year, probability of vulnerability to food insecurity decreases by 29.9 percent. High educational attainment is expected to enhance modern technology adoption that will drive agricultural productivity and reduce vulnerability to food insecurity, according to Sisay *et al*., (2016). Furthermore, an increase in farmland ownership by one hectare stands the chance of reducing vulnerability to food insecurity by 41.6 percent, a possible explanation being that farmland remains a major factor of production in agriculture that, if owned, positioned the households at a vantage position to be food secure, Mesfin, (2014) and Ojoko (2017).

A unit increase in weather information access has probability of reducing vulnerability to food insecurity by 30 percent, probably because access to requisite and location/crop specific weather information could assist the households with better decision making for optimum productivity Ogundari (2017). Increase in livelihood diversification of the households by a unit could reduce food vulnerability to insecurity by 37.7 percent probably because, the more the sources of income the more likely the households will have means of providing for their food needs hence reduction in vulnerability, also, the more the livelihood sources, the likely their low correlation and then the lesser their riskiness, hence the lesser the chance of being vulnerable to food insecurity (Mesfin, 2014).

Finally, a unit increase in conflict incidence can increase vulnerability to food insecurity by 16.9 percent. This agrees with the findings of Sisay *et al*., (2016). This could be because, conflict incidence has been shown to negatively affect food production, accessibility and distribution, three of the four core indices of food insecurity (the last which is probably unaffected being food utilisation). Communal land conflict, for instance, reduces farmers' access to farming resources such as land and water, and herders' farm invasion leading to the destruction of farms and loss or reduction of harvest from the farm, Human Rights Watch. (2013). Agricultural farm input merchants and produce buyers or middlemen in a bid to avoid casualty do avoid conflict or conflict-prone areas, thus affecting the normal input-output channel; this has a negative effect on the agrarian economy, increasing the chance of vulnerability to food insecurity (Hoddinott, 2004)

Table 4. Estimation of Vulnerability to Food Insecurity

Variables	OLS Regression			FGLS Regression		
	Coefficient	Std. Error	t	Coefficient	Std. Error	t
Sex	-0.0195554	0.0746051	-0.26	0.1195776	0.1171433	1.02
Age	0.0044475	0.0033837	1.31.	0.0288885	0.0053824	5.37***
Household Size	0.0775619	0.0159504	4.86***	0.284767	0.0249808	11.40***
Pry Occupation.	0.0541485	0.0258982	2.09**	0.1749754	0.0394694	4.43***
Year spent in School	-0.0061797	0.0061144	1.01	-0.0299459	0.0094976	-3.15***
Land Ownership	-0.1092052	0.0646574	-1.69*	-0.4158631	0.0974893	-4.27***
Farm Size	0.0122928	0.0093978	1.31	0.017638	0.0140619	1.25
Farming Experience	-0.0014	0.0033663	-0.42	-0.0077064	0.0052609	-1.46
Political participation	-0.014917	0.0546788	-0.27	-0.0513928	0.0840175	-0.61
Access to weather info	-0.0777718	0.0574329	-1.35	-0.2797171	0.0881701	-3.17***
Livelihood Diversification	-0.1076363	0.0300849	-3.58***	-0.3764947	0.0511909	-7.35***
Time to get Water	-0.0012816	0.0027126	-0.47	-0.0038878	0.0041962	-0.93
Tim to get healthcare	0.0002649	0.001021	0.26	-0.0002013	0.0016496	-0.12
Debt Status	-0.0360627	0.0346582	-1.04	0.0214578	0.0943708	0.23
Farming Income	-6.86e-09	1.90e-07	-0.04	4.44e-07	2.92e-07	1.52
Dependency ratio	0.0237407	0.1415243	0.17	0.198094	0.2173094	0.91
Conflict incidence	0389654	0.0563317	0.69	0.1692495	0.0874005	1.94***
Constant	0.1181766	0.2251312	0.52	-2.162502	0.3546052	-6.10***

R^2 = 30.4 69.8
Observation = 273
Source: Field survey 2019
***significant at 1 percent, ** significant at 5 percent and significant at *10 percent

CONCLUSION AND RECOMMENDATIONS

The study examined the effect of conflict incidence on vulnerability to food insecurity in Oyo State. It concluded that conflict incidence has a significant positive relationship with vulnerability to food insecurity in Oyo State. Thus, adequate measures should be taken to address all forms of agricultural-related conflicts, such as farmers-herders and communal and land lease disputes in Oyo State. A mechanism should be put in place to compensate the affected farmers and reduce their vulnerability to food insecurity. Identified areas of further studies include investigating the determinants of vulnerability to conflict in Oyo State. The effect or impact of each form of the identified conflicts could be investigated in isolation.

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