EFFECTS OF NOMADISTS AND CROP FARMERS CONFLICTS ON FOOD SECURITY IN OHAJI-EGBEMA AREA OF IMO STATE, NIGERIA.

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ABSTRACT
study specifically looked at the Effects of Nomadists and Crop Farmers Conflicts on Food Security in Ohaji-Egbema area of Imo State, Nigeria. Data for the study were collected using structured and validated questionnaire which was administered to 120 crop farmers while 108 were found valid and used for the study. The data were analyzed using frequency distribution table, percentage, mean, mean score and standard deviation. The hypothesized relationship was established using multiple regression model. The study showed that destruction of Crops by pastoralists ($\bar{X}$3.81), blockage of Water source ($\bar{X}$=3.05), Indiscriminate defecation by cattle on the road ($\bar{X}$=3.24), Disregard for traditional authority (X=2.92), Sexual harassment ($\bar{X}$=3.42), theft/stealing of cattle ($\bar{X}$=3.14), overgrazing of farmland ($\bar{X}$=3.43), were major causes of the conflict. The hypothesis was rejected with respect to the significant variables and accepted with respect to non-significant variables. Based on the findings of the study, it was concluded that majority of the causes of the conflict are as a result of the activities of the herdsmen than that of the crop farmer.
Keywords: Conflict, Nomadic Pastoralists, Crop Farmers, Food Security

INTRODUCTION

In the past decades and even centuries, the Fulani herdsmen livelihood strategies had resulted in conflicts with their host crop farmers over many identified and unidentified reasons. The relationship between the nomadic pastoralists and their host communities of recent has been none other than that of conflicts and open hostilities. Recently in Nigeria, these conflicts have escalated in intensity and in effect have deteriorated to nefarious (ethnoreligious) conflicts as it may seem. In recent times, the issue of violent clashes and instability between farmers and nomadic herdsmen across the regions in Nigeria has become a major focus to the Nigerian Government, International and National or indigenous development organizations (Imo, 2017). Some communities in Ohaji/Egbema, Owerri West Local Council area of the state have at different times been attacked by cattle herders. News has it that rape, destruction of farmlands, cash crops and brutalization of farmers by the herdsmen had been the order of the day (Nkwopara, 2013). The major factors influencing these conflicts between the nomadic pastoralists and crop farmers in Ohaji/Egbema Local Government Area of lmo State remain unidentified and yet to be discovered, thus creating a gap in knowledge which this study seeks to bridge, by providing answers to the following research questions:

1. What are the socioeconomic characteristics of the crop farmers in Ohaji/Egbema LGA?
2. What ate the causes/factors influencing nomadic pastoralists and crop farmers' conflicts in the study area?

OBJECTIVES

The specific objectives of the study include to;

- describe the socioeconomic characteristics of crop farmers in the study area.
- identify the causes of farmer/pastoralist conflict in the study area

METHODOLOGY

LOCATION OF THE STUDY

The study was carried out at Ohaji/Egbema which lies in the south western part of Imo state and shares common boundaries with owerri in the east, Oguta in the north and Ogba/Egbema/Ndomi in Rivers state in the south west. It covers an area of approximately 958.010 sq/km, and has an estimated population of 800,904 (NPC, 2006).OhajiEgbema local government area comprises of three (3) districts namely: Ohaji East, Egbema North, and Ohaji West. There are 12 council wards. The local government has sixteen (16) autonomous communities namely: Egbema, Umuagwo, Oloshi, Umunwaku, Obile, Obitti, Mgbirichi/Abakuru, Opuoma, Assa, Awarra, Ikwerede, Umuokanne, Obiakpu, Ohuba, Obosima, andMmahu. In Umuagwo community, there are 8 villages which include: Umuelu-Umuagwo, Umukene-Umuagwo, Umuezewere-Umuagwo, Okohia-Umuagwo, Etuohia-Umuagwo, Umuogbani-Umuagwo, Umuduko-Umuagwo and Umuogbuanua-Umuagwo.

Population and Sample Size

All the crop farmers in Ohaji/Egbema Local Government Area constitute the population of this study. A sample size of one hundred and twenty (120) crop farmers were drawn and used for the study.

Sampling Techniques

Multistage sampling technique was used in collecting sample for the study. The first stage involves the purposive selection of three communities namely: Nkaraha, Umuapu, andMgbirichi since they were directly involved with crop farmer and pastoralists conflict, Secondly, four villages were randomly selected from each of the three communities to give a total of twelve villages used for the study. The third stage involved the random selection of1n (10) crop farmers from each of the twelve villages, stratified

into 50 male and 70 female crop farmers to ensure that both sexes are represented, to give a sample size of one hundred and twenty (120) crop farmers. The sampling frame is the list of villages, communities and crop farmers as supplied by the community development officer and staff of ADP in the Local Government Area.

Data Analyses

Frequency distribution table, percentage and means were used to analyze objective I, which described the socioeconomic characteristics of crop farmers in the study area.

For objective 2, which sought to identify the causes of fanner/pastoralist conflict in the study area, mean score, frequency distribution table, percentage and standard deviation were used in the analysis. The variables were measured on a four point Likert-type scale of Strongly agree (SA) = 4, Agree (A) = 3, Disagree (0) =2, and Strongly disagree (SA)=1 The values were added and divided by 4 to get a mean value of2.5 (see formula below).

The weighed mean is represented by the following

$$X = \frac{\sum X}{n}$$

Where X= mean

x= nominal value assigned to each scaling statement.

n= number of values

A limit of 0.5 was chosen, i.e. mean value (2.5) ±0.5, to yield 3.0 and 2.0 respectively.

Decision rule: ≥3.0= strongly agree

Between 3.0 and 2.0= agree

≤2.0= disagree/strongly disagree

Hypothesized Relationship

There are no significant relationships between crop farmers' socioeconomic characteristics and their perceived causes of conflict with nomadic pastoralists. This was established using the Ordinary Least Square (OLS) multiple regression model which produced the t-value.

The model is specified as follows:

$Yi = f(X_1\ X_2\ X_3\ X_4\ X_5,\ X_6\ X_7\ X_8,\ X_9\ X_{10}\ e)$

Where

Y = dependent variable (respondents sum of rating of perceived causes of conflicts)

X_1 = sex (dummy male = 1, female= 2)

X_2 = age (≤19=1, 20-29=2, 30-39=3, 40-49=4, 50-59=5, ≥60=6)

X_3 = marital status (single=1, married=2, widow= 3, widower=4, separated=5, divorced=6) X4 = level of education (no formal education=l, primary school not completed=2, primary school completed=3, secondary school not completed=4, secondary school completed=5, tertiary education=6)

X_5 = household size (0-5=1,6-10=2, 11-15=3, ≥16=4)

X6 = membership ofsocial organization (dummy yes=1, no = 2)

X_7= farming experience (0-5=1,6-10=2, 11=15=3.16-20=4, ≥21=5)

X_8 = access to agricultural credit (dummy yes=1, no = 2)

X_9 = monthly income (1-20,000=1, 21,000-40,000=2, 41,000-60,000=3, 61,000-80,000=4, 81,000-100,000=5,≥101,000=6)

X_{10}= extension visit (very frequent=1, frequent=2, sparingly-3, none=4)

X_{11} =farm size (0-5plots=1, 6-10plots=2. 11-15pJots=3, ≥16plots=4)

e= stochastic error term

RESULTS AND DISCUSSION

1.1 Socioeconomic Characteristics of the Respondents

1.1.1 Sex

Table 4.1 shows the distribution of the respondents based on sex. The table reveals that 39.8 percent of the respondents were males while 60.2 percent are females. Thus, the sample is dominated by female crop farmers. This agrees with the result of many researchers that mote of agricultural workforce in rural areas consist of women. This also implies that women being a weaker sex, are more likely to be vulnerable to farmer/pastoralist conflict, therefore sexual harassment of women and girls could be a major part and cause of the conflict since women appear to be more on the farm, and literature reviewed shows that 95% of the herdsmen are males. According to Ibrahim et al., (2015), women and children are most affected by the farmer/pastoralist conflicts.

Table 1.1 Distribution of Respondents According to Sex

Age	Frequency	Percentage
Male	43	39.8
Female	65	60.2
Total	108	100

Source: Field survey data, 2018

1.1.2 Age

Presented in table 4.2 above is the distribution of the respondents according to age. From the table, 7.4% of the respondents were within the age range of 10-19, 11.8% were within 20-29 years of age, 23.1% were within 30-39 years, 38.9% were within 40-49years, 15.8% were within 50-59 years, while 3.7% fell within 60-69 years, with a mean age of 40 years, which shows that the fanners are relatively young. The relative young age of the farmers could predispose them to reprisal of the attack from the herdsmen. Literature reviewed also showed that most of the herdsmen are within the age bracket of 12-18 years and are always in possession of dangerous

weapons such as guns, spears, and arrows which they use to defend both themselves and their herd. This makes them very violent, aggressive and prone to conflicts.

Table 1.2 Distribution of Respondents According to Age

Age	Frequency	Percentage
10-19	8	7.4
20-29	12	11.1
30-39	25	23:1
40-49	42	38.9
50-59	17	15.8
60-69	4	3.7
Total	108	100

Mean age: 40 years
Source: Field survey data, 2018

1.1.3 Marital Status

Table 4.3 shows the distribution of the respondents according to marital status. From the table, 17.6% of the respondents were single, majority (70.4%) were married, 8.3% were widowed, 2.8% were divorced while Jess than 1 % were separated. This implies that marital status is an important factor to be considered in any conflict mitigation strategy, or any program of change; to be introduced to the study area since family decision will be required in any activity to be embarked upon. From literature reviewed, majority of the herdsmen are not married. This further predisposes them to conflict and violence.

Table 1.3 Distribution of respondents According to Marital-status

Marital status	Frequency	Percentage
Single	19	17.6
Married	76	70.4
Widow/widower	9	8.3
Separated	1	0.9
Divorced	3	2.8
Total	108	100

Source: Field survey data, 2018

1.1.4 Educational Attainment

Table 4.4 shows the distribution of the respondents according to educational attainment. From the table, 15.74% of the fanners do not have any formal education at all, 11.11% did not complete primary school, 25% completed primary school, 12.96% of the farmers did not complete secondary school, another 12.96 completed secondary school, while 22.23% of the farmers attained tertiary education. The distribution seems to be somewhat spread out, but this also suggests that most of the fanners can at least read and write, and should also be aware of the conflict management strategies to employ in times of need. They should also be able to interpret and respond to new information/innovation. Education also enables rural households to take up opportunities to diversify their income. From literature reviewed, most of the herdsmen have no western education, apart from Islamic education, thus they are likely to be taken in as far as conflict is concerned.

Table 1.4 Distribution of Respondents According to Educational Attainment

Educational attainment	Frequency	Percentage
No formal education	17	15.74
Primary school not completed	12	11.11
Primary school completed	27	25
Secondary school not completed	14	12.96
secondary school completed	14	12.96
Tertiary education	24	22.23
Total	108	100

Source: Field survey data, 201 8

4.1.5 Household Size

Table 4.5 highlights the distribution of the respondents according to farm size. It shows that 27.78% of the farmers had household size of 1-5, while 53.70% had household size of 6-110, 13.89% had household size of 11-15, while less than 4.63%

had household size of 16 and above, with a mean household size of 8. The implication is that the relatively large family sizes may mean more people to feed and cater for; and also more hands on the farm. Also; each household member is a potential source of information. It also implies higher population and greater pressure on the available resources, thus worsening the effects of the farmer/pastoralist conflicts on food security.

Table 1.5Distribution of Respondents According to Household Size

Household size	Frequency	Percentage
1-5	30	27.78
6-10	58	53.70
11-15	15	13.89
≥16	5	4.63
Total	108	100

Mean household size:8
Source: Field survey data, 2018

1.1.6 Membership of Social Organizations

Presented in 'fable 4.6 above is the distribution of the respondents according to membership of social organizations. The table shows that 88.9% of the farmers belonged to at least one social organization, while 11.1 % do not belong to any social organization. This implies that individual and communal problems, (such as the farmer/pastoralist conflict and food security issues) can be jointly solved with the aid of the social organizations, through self-help projects and other strategies.

Table 1.6 Distribution of Farmers According to Membership of Social Organizations

Membership	Frequency	Percentage
Yes	96	88.9
No	12	11.1
Total	108	100

Source: Field survey data, 2018

1.1.7 Monthly Income

The table shows the distribution of the respondents by monthly income. From the table, 18.52% had monthly income of 0-20,000, 45.37% had monthly income of 21000-40000, 14.81% had monthly income of 41000-60000, 7.41% had monthly income of 61,000-80,000, 5.56% had monthly income of 81-100,000, while 8.33% had monthly income of ≥101,000, with a mean monthly income of N42,722. The findings show that the farmers are not poor since they live above the poverty threshold of $1per day. It should be noted however, that apart from agriculture, some of the farmers have other occupations such as - public service, trading and commerce, artisanship etc. which provides them with additional source of income. According to the National Bureau of Statistics (NBS) 2014, about 60% of agricultural households in rural areas have a non-farm enterprise. This additional income could help cushion the effects of farmer/pastoralist conflicts.

Table 1.7 Distribution of Respondents According to Monthly Income

Monthly income (N)	Frequency	Percentage
0-20,000	20	18.52
21,000-40,000	49	45:37
41,000-60,000	16	14.81
61,000-80,000	8	7.41
81000-100,000	6	5.56
≥101,000	9	8.33
Total	108	100

Mean monthly income: 42,722
Source: Field survey data, 2018

1.1.8 Access to Credit

Table 4. shows the distribution of the respondents by access to credit. From the table, majority (75%) of the farmers have access to credit, while 21% do not have access to credit. Agricultural credit is an essential input for increased farm productivity. Farmers easy and timely access to credit enables them to expand and diversify their farming activities. Since most of the farmers have access to credit, it is possible that they would be able to respond positively to conflict management.

Table 1.8 Distribution of Respondents According to Access to Credit

Access to credit	Frequency	Percentage
Yes	81	75
No	27	25
Total	108	100

Source: Field survey data, 2018

1.1.9 Sources of Credit

Table 4.8 shows the distribution of the respondents by sources of credit. From the table, 15.74% of farmers that answered in the affirmative obtained their credit from commercial banks, while 29.63% obtained theirs from agricultural Banks, 12.96% obtained from rural microfinance banks, while 24.07% obtained from cooperative societies. Other sources of credit identified were friends, neighbors, relatives, age grade, and church organizations and other social organizations. This suggests that local sources are more efficient in giving farmers credit than the more modem ones such as the commercial banks, as most of these sources may require little or no collateral.

Table 1.9 Distribution of Respondents According to Their Sources of Credit

Source of credit	Frequency	Percentage
Commercial bank	17	15.74
Agricultural bank	32	29.63
Rural microfinance bank	14	12.96
Cooperative society	26	24.07

Source: Field survey data, 2018

1.1.10 Farming Experience

Table 4.10 highlights the distribution of the respondents according to number of years in fanning. It shows that 13.89% have 1-5 years' experience in farming, 18.52% have 6-10 years, 25.93% have 11-15 years' experience, 32.41% have 16-20 years' experience, while 9.25% have 21-30 years' experience in farming, with a mean of 13 years. more years of experience. Experience is a valuable asset. Relatively long years of experience of the crop farmers could enable them relate encounters they had, causes, effects and resolution.

Table 1.10 Distribution of Respondents According to Their Farming Experience

Number of years	Frequency	Percentage
1-5	15	13.89
6-10	20	18.52
11-15	28	25.93
16-20	35	32:41
21 and above	10	9.25
Total	108	100

Mean number of years: 13 years
Source: Field survey data. 2018

1.1.11. Farm Size

Presented in table 4.11 above is the distribution of respondents by farm size. The table shows that 36.11% of the farmers had a farm size of 1-5 plots, 44.44% had a farm size of 6-10plots, .15.74% had a farm size of 11-15 plots, while 3.71% had a farm size of ≥16 plots, with a; mean farm size of 7.4 plots (0.5 ha), This shows that majority of the farmers have small farm holdings, which is a major characteristic of traditional agriculture dominant in rural areas, This agrees with FAO (2015) which states that about two-thirds of the developing world's rural people live in small farm households, working on land plots smaller than 2 hectares. This could also be a reflection of the fragmentation of land due to population pressure. The problems of farmers get exacerbated by infringement of herdsmen thus worsening the food security situation.

Table 1.11 Distribution of Farmers According to Farm Size

Farm size (plots)	Frequency	Percentage
1-5	39	36.11
6-10	48	44.44
11-15	17	15.74
≥16 plots	4	3.71
Total	108	100

Mean farm size: 7.4 plots (0.5 ha)
Source: Field survey data, 2018

1.1.12 Extension Contact

Table 4.12 shows the distribution of the respondents by extension contact. From the table, over 25.93% and 46.30% of the farmers were visited by extension agents very frequently, and frequently respectively. 9.25% were visited sparingly, while 18.52% have never been visited by an extension agent. The findings thus indicate the frequency of extension visit in some areas. Frequency however, may not necessarily portray effectiveness of extension services in the area. This is in line with the findings of Adesiji et al, (2012), which states that, although 90% of the farmers had frequent contact with extension agents; less than half (about 49.2%) acknowledged extension services to be effective. This could also worsen food security issues in the country.

Table 1.12 Distribution Respondents According to Extension Contact

Extension visit	Frequency	Percentage
Very frequent	28	25.93
Frequent	50	46.30
Sparingly	10	9.25
Never	20	18.52
Total	108	100

Source: field survey data, 2018

1.2 Causes/Factors Influencing Farmer/Pastoralist Conflicts

Table 4.13 shows the distribution of the respondents by the perceived causes of the farmer/pastoralist conflicts. From the table, Destruction of Crops by pastoralists ($\bar{X}$=3.81), Blockage of Water source ($\bar{X}$=3.05), Indiscriminate Defecation by cattle on the road ($\bar{X}$=3.24), Disregard for traditional authority ($\bar{X}$=2.92), Sexual harassment ($\bar{X}$=3.42), Theft/stealing of cattle ($\bar{X}$=3.14), overgrazing of farmland ($\bar{X}$=3.43), etc. were all perceived causes [of the conflict between fanners and Fulani herdsmen. This is consistent with the findings of Alhassan (2013) which states that destruction of crops by cattle, increasing rate of cattle theft. Inadequacy of grazing resources and antagonistic perceptions and beliefs among farmers and herdsmen are major causes of the conflict. It is also in line with the findings of (Okoli et al., 2014; Odoh and Chigozie, 2012; Abbass, 2012) which relate the causes of conflict to the global climate change and the contending desertification and aridity that has reduced arable and grazing lands, forcing pastoralist to move southwards in search of pasture for their livestock. Since theft/stealing of cattle is also a major cause of the conflict, this implies therefore that not only the herdsmen are at fault. This is in consonance with the findings of John (2014),1 which show the existence of one-sided reporting by the media, research articles and interested parties; majority of those reports tend to highlight and report cases in which the pastoralist faulted farmers and tend to ignore the other side of the stories or even their losses. It then means that the government, both Federal, State, and Local have major roles to play in controlling this conflict.

Table 1.13 Distribution of Respondents According to The Perceived Causes/Factors Influencing Farmer/Pastoralist Conflicts

Causes	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean Score	SD	Remark
	F	%	F	%	F	%	F	%			
Destruction of crops by pastoralist	91	84.26	14	12.96	2	1.85	1	0.93	3.81	0.50	SA
Blockage of water source	55	50.93	20	18.52	16	18.41	17	15.74	3.05	1.13	SA
Indiscriminate defecation by cattle on the road	50	46.30	39	36.11	14	12.96	5	4.63	3.24	0.85	SA
Disregard for traditional authority	31	28.70	44	40.74	26	24.07	7	6.48	2.92	0.88	A
Sexual harassment	67	62.04	28	25.93	4	3.71	9	8.33	3.42	0.90	SA
Theft/stealing of cattle	49	45.37	34	31.48	16	14.81	9	8.33	3.14	0.96	SA
Overgrazing of farmland	73	67.59	26	24.07	9	8.33	0	0.00	3.43	1.12	SA
Claiming ownership of land	39	36.11	46	45.59	15	13.89	8	7.40	3.07	0.89	SA
Destruction of soil structure and texture	52	48.15	48	44.44	5	4.63	3	2.78	3.38	0.70	SA
Indiscriminate bush burning	55	50.93	28	25.93	17	15.74	8	7.40	3.20	0.95	SA
Negligence by law enforcement agencies	61	56.48	32	29.62	11	10.19	4	3.70	3.39	0.81	SA
Climatic condition	44	40.74	26	24.07	22	20.37	16	14.81	2.91	1.09	A
Blockage of cattle routes	56	51.85	17	15.74	20	18.52	15	13.89	3.06	1.12	SA
Inadequate grazing reserves	29	26.85	55	50.93	11	10.19	13	12.04	2.93	0.91	A
Disobedience of tenancy rules	35	32.41	39	36.11	13	12.04	21	19.44	2.81	1.09	A
Destruction of ponds and fishery resources	52	48.15	31	28.70	18	16.67	7	6.48	3.19	0.93	SA
Stealing of farm produce by nomads	44	40.74	41	37.96	16	14.81	7	6.48	3.13	0.89	SA
Impunity in using land resources	60	50.55	30	27.78	14	12.96	4	3.70	3.35	0.84	SA
Loss of traditional relationship	42	38.89	35	32.41	20	18.52	11	10.16	3.00	0.99	SA
Ethno religious relationship	52	48.15	45	41.67	6	5.56	5	4.63	3.33	0.78	SA
Improper management of cattle by nomads	57	52.78	31	28.70	19	17.89	1	0.93	3.33	0.79	SA
Regarding land as common property	39	36.11	53	49.07	12	11.11	4	3.70	3.18	0.77	SA

SA = Strongly Agree, A = Agree
Source: Field survey data, 2018

1.3 Hypothesized Relationship

There are no significant relationships between crop farmers' socioeconomic characteristics and their perceived causes of conflict.

To determine the relationship between the socioeconomic characteristics of the crop farmers and perceived causes of farmer/pastoralist conflicts, four functional forms of multiple regression were fitted and presented on table 4.21. The double-log function forms the lead equation since it had the highest number of significant variables of 7, highest coefficient of multiple regression of 0.7243 and the highest F-value of 22.9276. The coefficient of multiple regression of multiple regression of 0.7243 implies that 72.43% of the variations in the causes of farmer/pastoralist conflict were accounted for by factors investigated in the study, while the remaining 27.57% were accounted for by factors not investigated in the study, this represented the error term e. The coefficient of sex (X_1) is -0.0854, with a

T-ratio of -3.9721 which is significant at 1 %. The coefficient of age (X_2) is 0.0921, with a T-ratio of 1.1301 which is not significant even at 5%. The coefficient of marital status (X_3) is -0.0542, with a T-ratio of -1.1459 which is not significant even at 5%. The coefficient of education (X_4) is -0.0921, with a T-ratio of -4.4927 which is significant at 1%. The coefficient of household size (X_5) is 0.0719, with a T-ratio of 3.4903 which is at 1 %. The coefficient of membership of social organization (X_6) is 0.0529 with a T-ratio of 4.9906 which is significant at 1 %. The coefficient of experience (X_7) 0.0813 with a T-ratio of -1.1715 which is not significant even at 5%. The coefficient of access to credit (X_8) is -0.0744 with a T-ratio of 1.2257 which is not significant even at 5%. The coefficient of monthly income (X_9) is -0.0914 with a T-ratio of -2.9675 which is significant at 1%, The coefficient of extension contact (X_{10}) is 0.0839 with a T-ratio of -3.9206 which is significant at 1%. The coefficient of farm size (X_{11}) is 0.0883 with a T-ratio of2.9731 which is significant at 1%.

The variables that are significant even at 5% show that they are very important variables influencing the farmer/pastoralists conflicts in the study area. They include sex (X_1), education (X_4), household size (X_5), membership of social organization (X_6), monthly income (X_8), extension contact (X_{10}), and farm size (X_{11})

Sex (X_1), education (X_4), monthly income (X_9), and extension contact (X_{10}) were significant but negative. This implies that increase in these variables will lead to a decrease in the factors influencing fanner/pastoralist conflicts and vice versa.

Household size (X_5), membership of social organization (X_6) and farm size (X_{11}) were significant but positive. This implies that an increase or decrease in these variables will lead to subsequent increase or decrease in the variables causing farmer/pastoralist conflicts.

Age (X2), marital status (X3), experience (X7) and access to credit (X_8) are not significant. This shows that they are not important factors influencing the farmer/pastoralist conflicts 4t the study area.

Based on the foregoing, hypothesis one is therefore rejected with respect to the significant variables and accepted with respect to non-significant variables.

Table 1.14 Ordinary Least Square (OLS) Multiple Regression Model Test of Significant Relationships Between Crop Fanners' Socioeconomic Characteristics and The Perceived Causes/Factors Influencing Farmer/Pastoralist Conflicts in The Study Area.

Explanatory variables	Linear function	Semi-log function	Double-log function	Exponential function	Decision
Constant	203.4429	171.0885	163.4694	154.0647	
X_1(Sex)	-16.4093	-5.2294	-0.0854	-0.0073	Reject
	(-4.1901)	(-5.0095)	(-3.9721**	(-1.1967)	
X_2(Age)	15.3391	4.3904	0.0921	0.059	Accept
	(2.9997)	(4.2979)	(1.1301)	(4.5385)	
X_3(Marital status)	-13.3117	2.5604	-0.0542	-0.0083	Accept
	(-1.1057)	(-1.0608)	(-1.1459)	(-3.4583)	
X_4(Education)	-15.0821	-3.9114	-0.0921	-0.0085	Reject
	(-1.0641)	(-1.1605)	(-4.4927)**	(-1.1486)	
X_5(Household size)	14.3391	3.4604	0.0719	0.0089	Reject
	(1.0943)	(1.1349)	(3.4903)**	(1.2027)	
X_6(Membership of social organizations)	12.4607	1.3708	0.0529	0.0074	Reject
	(1.0989)	(1.221)	(4.9906)**	(1.1746)	
X_7(Experience)	-10.3309	-2.5509	-0.0813	-0.0093	Accept
	(1.10989)	(1.0569)	(-1.1715)	(-1.1481)	
X_8(Access to credit)	13.9207	3.0925	-0.0744	0.0066	Accept
	(1.0969)	(1.0626)	(1.2257)	(1.2453)	
X_9(Monthly income)	-10.4467	-1.4726	-0.0914	-0.0083	Reject
	(-3.3648)	(-1.2224)	(-2.9675)**	(-3.9206)	
X_{10}(Extension contact)	-18.5021	-8.4033	-0.08339	-0.0091	Reject
	(-1.0885)	(-1.0463)	(-3.9206)**	(-1.0706)	
X_{11}(Farm size)	10.2509	3.4692	0.0883	0.0075	Reject
	(3.2199)	(3.4537)	(2.9731)**	(2.8846)	

Source: Field survey data, 2018

CONCLUSION AND RECOMMENDATION

The causes offarmer/pastoralist conflict as agreed by the crop farmers included Destruction of crops by pastoralists, Blockage of Water source, Indiscriminate Defecation by cattle on the road, Disregard for traditional authority, Sexual harassment of women, Theft/stealing of cattle, overgrazing of farmland, among others.

Based on the findings of the study, it is therefore concluded/discovered

- that both the fanners and the herdsmen are co-instigators of the conflict, but however majority of the causes of the conflict are as a result of the activities of the herdsmen than that of the crop farmers.
- (both from literature reviewed) that climatic condition is the major factor responsible for nomadism.
- that majority of the causes of farmer/pastoralist conflicts were land related
- that most of the fanners have little or no formal education. It was also discovered from literature reviewed that the herdsmen on their own part have no formal education, and the highest education they have is the Quranic education.

Recommendation

- It was discovered both from literature reviewed that climatic condition is the major factor responsible for nomadism. Global climate change and contending desertification has reduced arable and grazing lands, forcing pastoralists to move down south in search of pasture for their livestock. This situation could be remedied by developing better and efficient climate smart livestock management practices, especially in arid and semiarid regions, which will replace the need to wander about in search of greener pastures for their animals. In other words, sedentariness instead of nomadism should be encouraged. Besides, nomadism is an ancient method of livestock production and can be seen as a 'reflection of underdevelopment.
- It was discovered that majority of the causes of farmer/pastoralist conflicts were land related. It is therefore recommended that the land use decree of 1978 should be reviewed to address issues of land use and ownership for easy understanding and implementation byboth the farmers and herdsmen.
- It was discovered that most of the farmers do not have any education on conflict and conflict management strategies; and that most nomadic pastoralists have only Islamic education. Therefore. Extension agents in pastoralist communities should take seriously, the education of pastoralists, as well as fanners, in the areas of cooperative organization and management, as well as animal and crop production in a reduced conflict environment.

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