Journal of Agriculture & Forestry Research
Volume no.2, Issue no. 5, Year 2023
www.sarpo.net

Research Article

Open access

Intensity of Livelihood Diversification on Food Security among Small-Scale Arable Farming Households in Benue State, Nigeria

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ARTICLE INFORMATION

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Keywords:

Intensity
Livelihood
Diversification
Food
Security
Arable
Small-scale

Received: 30.10.2023
Received in revised form: 11.11.2023
Accepted: 15.11.2023

ABSTRACT

The study analyzed the intensity of livelihood diversification and food security among arable crop small-scale farming households in Benue State, Nigeria. The study adopted a survey research design that made use of primary data. The data collected were analyzed using frequency, percentages, means, and food security index. The results on socio-economic characteristics showed that most arable farmers are in their productive age (40 years), about 61.7% of males are majorly involved in farming and 89.4% are married. Arable farmers in the area spent at least 10 years in school had a household size of at least 7 members, and an average farm size of 5.55 hectares with an average annual income of N 461, 785.53. The result of livelihood strategies engaged in and income realized showed that most (23.3 %) of respondents were more diversified in cultivation of cassava with average income earned of N 82,688.89, 22.2 % diversified into yam cultivation with average income earned of N166,257.14, 18.3% diversified into rice cultivation and earned N139,757.58, 8.3 % into soybeans with average income earned of N129,130.; 6.7 % into guinea corn and earned N143,750.00, 6.1 % into maize and earned N 89,444.44, 5.0 % into cowpea (beans) and earned N101,428.57, 3.9 % into groundnuts and earned N 67,533.33, 1.1 % into sesame (beniseed) and earned N 107,500.00, and 0.6% into bambaranut and earned N 70,000.00. The results of Simpson index showed the mean diversification index of 0.7059 which falls between the index of 0.61 and 0.90 indicating that, small scale farming households are highly diversified in various diversification activities. The results on the constraints to diversifying livelihoods of respondents in the study area showed that inadequate access to credit (99.4 %), insufficient market price of commodity (80.0 %), and unstable electricity (78.3 %) were the most constraints. The study concludes that livelihood diversification strategies are healthy for income realization during off-season when farmers who depend on rain are no more in the cropping season. Agricultural policies should be targeted towards livelihood diversification strategies that ensure the food security status of small-scale farmers.

1. INTRODUCTION

In Nigeria, agriculture is the source of food for the populace as well as raw materials for the agro-industries and contributes about 33 % to the Gross Domestic Product of the nation (Bureau of African Affairs, 2010). The sector employs about one-third of the total labor force and provides a livelihood for the bulk of the rural populace (Federal Ministry of Agriculture and Rural Development, FMARD, 2006). Nigeria is an agrarian society with about 70 % of its population (approximately 140 million) small-scale farmers majorly participating in agricultural production to provide food for the teeming population and raw materials for industrial production (NBS, 2020).

The Nigerian agricultural landscape is basically dominated by small-scale farmers who form about 90 % of the farming population most of which are arable crop farmers. In most developing countries, the importance of non-agricultural activities is increasing and it is estimated to account for 30-50 % of rural incomes (Omofonwan, 2018). Several international organizations like the Oversea Development Institute (ODI), Department for Foreign and International Organizational Development (DFID), and many others promote and argue that livelihood diversification acts as a safety net for poor rural households.

Development economics literature has identified two main factors that drive diversification among arable crop farming households in developing countries like Nigeria. These factors are broadly classified into pull factors and push factors. Farm households can be pulled into the off-farm sector so as to earn high returns to labour or capita and the less risky nature of investment in the off-farm (Kilic *et al*. 2019). The push factors that may drive off-farm income diversification include; the need to increase family income when farm income alone cannot provide sufficient livelihood, the desire to manage agricultural production and markets risks in the face of a mission insurance market, the need to earn income to finance farm investment in the absence of a functioning credit market (Babatunde and Quim, 2013).

Many studies (Yared, 2012; Degefa, 2015) have shown the need and importance of diversification for households survival and secured livelihood. A household, which depends on few livelihood strategies, is very vulnerable. Diversification means there could be other sources of livelihood for the household to fall back on. Rural people in Africa and Nigeria, in particular, have diversified their economic activities to encompass a range of productive areas that include farm and non-farm income-generating activities (Idowu, 2014).

The main driving forces of diversification are: to increase income when the resources needed for the main activities are too limited to provide a sufficient means of livelihood (Nghiem, 2010), to reduce income risks in the face of the mission insurance market (Dilruba and Roy, 2012), to exploit strategic complementarities and positive interactions between different activities and to earn cash income and finance investment in the face of credit failures (Nghiem, 2010).

The problem of food security in Nigeria has not been adequately and critically analyzed despite various approaches to addressing the challenges. The government has introduced several projects and programmes including livelihood activities to improve agriculture status of small-scale farmers and boost food production in the country. However, the empirical records of many of these programmes and projects are not impressive enough to bring about the expected transformation of the small-scale farming households (Ihimodu, 2014). Today, the problem continues to exist at an increasing pace as more than 900 million people around the world are still food insecure (FAO, 2010). According to Adebiyi (2012), Nigeria remains a net importing nation, spending about N1.3 billion on importing basic food items annually. The food security

problem in Nigeria is pathetic as more than 70 percent of the populace live in households too poor to have regular access to the food that they need for healthy and productive living with an increasing high level of poverty (Babatunde et al. 2017).

There exist studies on diversification strategies and food security in Nigeria. Baharu (2016) studies the effect of livelihood diversification on household income; Abu and Soom (2016) focused on factors affecting food security in rural and urban farming households in Benue State; Ahungwa (2013) studied economic analysis of household food insecurity and coping strategies in Osun state, Nigeria. However, there are perhaps no known studies on livelihood diversification and food security among small-scale arable farming households in Benue State, Nigeria. Motivated by the above gaps, empirical evidence that will be generated by this study will help to fill the knowledge gap in the literature. Using Benue State, Nigeria as a typical ecological region, this study will focus on the analysis of livelihood diversification and food security among small-scale arable farming households in Benue State, Nigeria.

2.0 METHODOLOGY

2.1 Study Area

The study was conducted in Benue State, Nigeria. The State capital is Makurdi. Benue State lies within the lower river Benue trough in the middle belt region of Nigeria. Its geographic coordinates are longitude 7° 47' and 10° 0' East. Latitude 6° 25' and 8° 8' North; and shares boundaries with five other states namely: Nasarawa State to the north, Taraba State to the east, Cross-River State to the south, Enugu State to the south-west and Kogi State to the west. The state also shares a common boundary with the Nord-Ouest Province, claimed by both Ambazonia and the Republic of Cameroon on the south-east. Benue occupies a landmass of 34,059 square kilometers. Benué State consists of twenty-three (23) Local Government Areas.

The state is populated by several ethnic groups such as; Tiv, Idoma, Igede, Etulo, Abakpa, Juku, Hausa, Igbo, Akweya and Nyifon. Most of the people are farmers while the inhabitants of the river areas engage in fishing as their primary or important secondary occupation. The people of the state are famous for their cheerful and hospitable disposition as well as rich cultural heritage. The State is a major producer of food and cash crops like yam, cassava, rice, groundnuts and maize. Others include sweet potatoes, millet, sorghum, sesame and a wide range of others like soyabeans, sugarcane, oil palm, mango, citrus and banana. Irrigation farming along the bank of Rivers Benue and Katsina-Ala is a common feature.

2.2 Sample and Sampling Techniques

The population of this study consisted of arable crop small scale farmers in Benue State. Multi-stage random sampling technique was used to select respondents for the study. In the first stage random sampling technique was used whereby, one (1) Local Government was randomly selected from each of the three (3) agricultural zones in Benue State (Zone, A, B, and C) which include Vandeikya, Tarka and Otukpo Local Government Area respectively. A total of 90,071 small scale arable crop farmers were involved in production of arable crops in the selected Local Governments according to BNARDA, (2020). In the second stage a proportionate sampling technique was used whereby, a total of 180 respondents was selected using a proportionate distribution of 0.2%. The distribution of sample in the three (3) selected Local Government is presented in Table 1.

2.3 Methods of Data Collection and Analytic Technique

Primary data was used for this study. The data was collected through direct personal interview with structured questionnaire. Trained enumerators who understand and speak the native languages perfectly were employed in the collection of primary data, while the illiterate households were asked questions in the questionnaire and answers filled by the enumerators.

Data for the study was analysed using descriptive statistics such as frequency, percentages, mean and standard deviation and

inferential statistics such as food security index (FSI).

Table 1: Sample Size Selection Plan

Agricultural Zones	LGAs selected	No. of arable farmers in the LGAs	Sample size (0.2%)
A	VANDEIKYA	29,877	60
B	TARKA	30,518	61
C	OTUKPO	29,676	59
TOTAL		**90,071**	**180**

2.4 Model Specification

2.4.1 Food Security Index (FSI)

Food Security Index was used to ascertain the food security status of respondents in the study. Food security index is given as below

$$fi = \frac{per\ capita\ food\ expenditure\ for\ the\ Ith\ household}{\frac{2}{3} mean\ per\ capita\ food\ expenditure\ of\ all\ households}$$

Where:

$fi = Food\ Security\ Index$

$fi = 1$ (indicate food security)

$fi \geq 1$ *it implies that the Ith household is food secured*

$fi < 1$ *it implies the Ith household is food insecured*

3.0 RESULTS AND DISCUSSION

3.1 Socioeconomic Characteristics of Respondents

The socioeconomic variables of the respondents examined include: age, sex, marital status, years spent in school, household size, farm size, farming experience, extension contact and annual income.

Age (years)

The result in Table 2 showed that most (57.2%) of the respondents were between the age bracket of 21-40 years, 33.3 % were between 41-60 years, 6.7 % were more than 60 years and 2.8 % were less than 20 years of age. The mean age of respondents was 39.73 years. This implies that most members of small-scale arable farming households are economically active and energetic to engage in agricultural production which is an important factor that positively influence their involvement into varied diversification activities. This is in line with the findings of Tashikalma *et al*. (2015) and Afodu *et al*. (2020) that small scale farmers in Benue State, Nigeria are still in their youthful age of 31 to 40 years. The findings was also agreed by Bayero *et al.* (2019) who pointed out that most small scale farmers in Nigeria are between 30 to 40 years of age.

Sex

Table 2 also shows the distribution of respondents according to sex which indicates that majority (61.7 %) were males while 38.3 % were females. This implies that most of the small scale arable farmers in the study area are males. This is in line with the findings of Kuwornu *et al*. (2013) who reported that most farmers in Benue State, Nigeria are males. Also coincide with the findings of Gani *et al*. (2019) and Okpokiri *et al*. (2017) who reported that a larger population of arable crop farmers in Benue State, Nigeria were males.

Marital status

The findings on marital status revealed that, a larger proportion (89.4 %) of respondents were married while just 10.6 % of the respondents were single. This shows that a larger proportion of the small scale arable crop farming households in the study area were married. The implication is that most farmers who are married tend to try other sources of income and thus diversify into other option so as to obtain income to provide household needs. This is in agreement with the findings of Matthew-Njoku and Nwaogwugwu (2014) who found out that most farmers were married. Also Mohammed and Fentahun (2020) and Babatunde and Quim (2009) agreed that most arable crop farmers were married.

Years Spent in school

The analysis in Table 2 on the years spent in school by respondents revealed that most (57.2%) respondents spent between 7 and 12 years in school,

24.7 % spent between 1and 6years in school, 17.4 % spent more than 13years in school and 1.7 % spent less than 1year in school. The average years spent in school was 10.35years. This implies that, the respondents were literate and attained at least secondary education. This is in line with the findings of Gani *et al*. (2019) who posited that farmers in Nigeria were literate. Also in agreement with the findings of Haddabi *et al*. (2019) that farmers attained at least secondary level of education.

Household Size

The result on household size of respondents showed that most, (55.0 %) of respondents have a household size of between 5and 10 members, 28.3 % have less than 5 members, 11.1 % have between 11and15members and 5.6 % have more than 16 members in their households. The mean household size of respondents was 8 members. This implies that, the respondents have a large household size to support family labour and thus engage in diversification. This finding disagrees with Amurtiya et al. (2016) who reported that the average household size of farmers was between 10and 15 persons. Also not in line with Sowamin (2018) who was of the view that the average household size of arable farmers was between 5 and 6persons per household. But in line with the findings of Audu (2017) who reported that cassava farmers in Benue State, Nigeria have a household size of between 5 and 10 persons.

Farm Size

The findings in Table 2 on farm size showed that most (55.6 %) own more than 3.01hectares of farm size, 22.8 % own between 1.01and 2.00 hectares, 12.2 % own between 2.01 and 3.00 hectares of farm size and 9.4 % own less than 1.0 hectares of farm size. The respondents own a mean farm size of 5.55 hectares for the production of arable crops. This implies that respondents were medium-scale farmers who cultivate small portions of land which are often fragmented. Cumulatively, they have a reasonable farm size which will encourage their income earning and be involved in diversification since they will use the fragmented lands to grow different crops. This disagrees with the findings of Sowami (2018) who reported that farming households in Ogun state hold between 2-3hectares of farm size. Also disagrees with Haddabi *et al*. (2019) who reported an average of 2.95 hectares of farm size for rural farming households in Adamawa State, Nigeria.

Farming Experience

Analysis on farming experience showed that a larger proportion (60.1 %) of respondents have less than 10years of farming experience, 25.0 % have between 11 and 20 years of farming experience, 8.9 % have between 21 and 30 years and 5.0 % have more than 30 years farming experience. The mean farming experience of respondent was 13.16 years. This implies that, respondents in the study area are experienced farmers since they have spent many years in farming. This is in contrast with Abiodun *et al*. (2019) who reported that arable crop farmers have more than 10 years farming experience. Also in contrast with the view of Sowami (2018) that, farmers had between 10-20 years farming experience in cassava farming.

Extension Contact

The result in Table 2 showed that majority (92.8 %) of respondents made less than 3 times contact with extension agents and 7.2 % made more than 4 times contact with extension agents. The average extension contact of farmers was 1.09 times. This implies that, farmers do not often meet with extension agents. This may also be because of their diverse involvement with their farm enterprises since they will not be eager to wait and meet with extension agents. This is in line with the findings of Etuk *et al*. (2018) who reported less than one-time meetings with extension agents. Also agrees with Umeh *et al.* (2013) who reported a mean contact of 2 times with extension agents.

Annual Income

The results of annual income as presented in Table 2 showed that 49.4% of respondents earned between ₦100,001.00 and ₦300,000.00 annually, 37.8% earned less than ₦100,000.00 annually, 8.3% earned ₦300,001 and ₦500,000 annually and 4.4% earned ₦500,001 annually. The average annual income of respondents was ₦461,785.53 annually. This implies that respondents are low income earning farmers who are classified as operating under small scale since they make less than N 500,000.00 annually from their farming. This is line with Amurtiya *et al*. (2016) who reported that small scale farmers earn less than ₦500,000.00 per annum. Also in line with Sowami (2018) who reported that cassava farmers earn less than ₦500,000.00 annually as income from farming.

Table 2: Socioeconomic Characteristics of Respondents n = 180

Socioeconomic Variables	Frequency (F)	Percentage (%)	Mean ($\bar{x}$)
Age (years)			
<20	5	2.8	39.73
21-40	103	57.2	
41-60	60	33.3	
>60	12	6.7	
Sex			
Female	69	38.3	
Male	111	61.7	
Marital Status			
Single	19	10.6	
Married	161	89.4	
Years Spent in School (years)			
<1	3	1.7	10.35
1-6	44	24.7	
7-12	102	57.2	
>13	31	17.4	
Household size (persons)			
<5	51	28.3	8.0
5-10	99	55.0	
11-15	20	11.1	
>16	10	5.6	
Farm Size (hectares)			
<1.0	17	9.4	5.55
1.01-2.00	41	22.8	
2.01-3.00	22	12.2	
>3.01	100	55.6	
Farming Experience (years)			
<10	110	60.1	13.16
11-20	45	25.0	
21-30	16	8.9	
>30	9	5.0	
Extension Contact (times)			
<3	167	92.8	1.09
>4	13	7.2	
Annual Income (naira)			
<N100,000	68	37.8	461,785.53
N100,001 – N300,000	89	49.4	
N300,001 – N500,000	15	8.3	
>N500,001	8	4.4	

Source: Field Survey, 2021

3.2 The Livelihood Strategies Engaged in and Income Realized from them

The result on livelihood strategies engaged in and income realized from them as presented in Table 3 showed that majority (23.3 %) of respondents were more diversified in cultivation of cassava with average income earned to be N82,688.89, 22.2 % cultivated yam with average income of N166,257.14, 18.3 % cultivated rice and earned income of N139,757.58, 8.3 % cultivated soybeans with average income earned of N129,130.; 6.7% cultivated guinea corn and earned income of N143,750.00, 6.1 % cultivated maize and earned N89,444.44, 5.0 %

cultivated cowpea (beans) and earned N101,428.57, 3.9 % cultivated groundnuts and earned N67,533.33, 1.1 % cultivated sesame (beniseed) and earned N107,500.00, and 0.6% cultivated bambaranut and earned N70,000.00. This implies that most of the respondents were involved in diversification by participating in more than one farm activity thereby cultivating several crops. This is in line with Yusuf (2013) who reported that most farming households diversify their farming into cultivating other crops other than one type of crop.

Table 3: Livelihood strategies engaged in and income realized from them

Livelihood Diversification Strategies	Frequency (F)	Percentage (%)	Average Income (₦)	Standard Deviation
Beans	9	5.0	101,428.57	75537.755
Rice	33	18.3	139,757.58	90,421.247
Cassava	42	23.3	82,688.89	69,297.062
Potatoes	8	4.4	23,500.00	23,334.524
Guinea corn	12	6.7	143,750.00	142,722.258
Maize	11	6.1	89,444.44	38,907.297
Soybeans	15	8.3	129,130.43	90,574.080
Groundnuts	7	3.9	67,533.33	34,983.397
Yam	40	22.2	166,257.14	173,600.343
Beniseed (Sesame)	2	1.1	107,500.00	102,530.483
Bambaranut	1	0.6	70,000.00	0.000000
Mean			**101,908.22**	

Source: Field Survey, 2021

3.3 Food Security Status of Farming Households

Table 5 presents the result on food security status of farming households. A mean per capita annual food expenditure of N 97,494.44 was used to classify the households either as food secure or food insecure. The result showed that, majority (60.0 %) of respondents were found to be food secure while 40.0 % were found to be food insecure. This implies that most households were food secure, but also attaining food security is still a challenge in the study area since households (40%) experience chronic food insecurity problems annually. The result disagrees with the findings of Biam and Tavershima (2020) who found that 43.1% of the households were food secure, and 56.9 % were food insecure in their study on the food security status of rural farming households in Benue State, Nigeria.

3.4 Constraints to diversifying livelihoods

Multiple responses were used to determine the constraints toward farmer's diversification into other enterprises. It was found that; inadequate access to credit, unstable market price of commodity, unstable electricity, poor access to market, inadequate infrastructure, appreciation of tax rate, inadequate skill labour supply and high cost of rent for business premises all stand as bottle necks for farmers achieving diversification.

Inadequate access to credit

The result shows that inadequate access to credit (99.4 %) was the most identified constraints hindering farmers from diversifying to other enterprises. Most farmers are willing to get engaged into other enterprises so as not to be entangles to only one enterprise but they are handicap due to inadequate and unavailability of credit support from government and other financial institutions. This implies that, farmers who are poor and are not supported with credit facilities will tend to stick to cultivation of a particular cash crop. This is in line with the findings of Saha and Bahal (2014) and Degefa (2015) who found that farmers inability to obtain credit facilities restrict their potentials to harness opportunities from other crop enterprises.

Table 4: Food security status of farming households

Food Security Status	Proportion of households	Percentage (%)
Food insecure	72	40.0
Food secure	108	60.0
Total	180	100.0

Source: Field Survey, 2021

Unstable market price for commodities

The result shows that about 80.0% of respondents were of the view that instability of market price for commodities is one of the problems hindering farmers from achieving diversification. Unstable market prices makes farmers lose tract of appreciable prices of commodities. This discourages farmers from diversifying since they thought, they might lose their initial capital if invested into some crop enterprises. This is supported by Ellis and Freeman (2017) who found that, continuous reduction in prices of commodities discourage farmers intentions of investing in such enterprises. Also Dereje (2016) reported that price instability of agricultural products especially when prices are on the decrease prevents farmers from cultivating crops whose prices are low but tend to cultivate crops whose prices tend to increase.

Unstable electricity

The result also reveals that 78.3 % of respondents identified unstable electricity as another constraint towards attaining diversification. Most of the farmers who indulge in the processing of products to add value so as to receive appreciable prices are hindered due to incessant electricity power supply. Electricity power supply lowers the processing cost and when unstable, it makes farmers who carryout processing activities spend more money in processing agro-products. According to Omonfonwam (2018) unstable electricity prevents most farmers from diversifying to crops which needs value addition for appreciable prices. The findings are also supported by Martins and Lorenzen (2016) who pointed out that poor electricity supply prevents most farmers willing to invest in other crop enterprises from doing so considering the hike in prices of alternative sources of power.

Poor access to market

About 60.8% of respondents indicated that poor access to market also is a constraints hindering farmers from achieving livelihood diversification strategies. Some market structures prevents most farmers entry and this makes it difficult for most farmers who do not want to only stop at cultivation but also to explore the market opportunities not to participate in some livelihood diversification strategies. This is in accordance with the findings of Onunka and Olumba (2017) who pointed out that, most farmers refuse entry into other crop enterprise since they cannot participate in market activities which are most a times profitable than just cultivation of the crop.

Inadequate infrastructure

About 40.0% of respondents gave their responses amounting to acceptance that inadequate infrastructure is also a constraint towards farmers getting involved in other livelihood diversification strategies. This problem of infrastructure prevented farmers from enjoying economies of scale which could be provided by infrastructure facilities such as electricity, water supply, processing plants, warehousing, etc. This makes many farmers not explore other areas of investments and thus restricts their diversification abilities. This is in line with the findings of Sowami (2018) who suggested that a lack of infrastructure prevents farmers from being involved in the processing and packaging of products. Also in tandem with the findings of Tshikalma *et al*. (2015) who opined that poor infrastructures activities prevents farmers from indulging into other production activities which are profitable.

Appreciation in tax rate

The study found that, about 24.4% of respondents agreed to appreciation of tax as a constraints towards livelihood diversification by farmers. This is so because, rural farmers are mostly involve in the production of crops and where there is high tax charges, the farmers tend to avoid this and thus preventing them from getting involved into other livelihood strategies. For instance, if there are high taxes for transporting agro produce, farmer will tend

to sell their produce at the farm gate to avoid further expenses on transportation since they are poor farmers. These findings coincide with that of Ihimodu (2014) who found that high market taxes prevent farmers from diversifying into marketing of products in the agricultural markets. Haddabi *et al*. (2019) also contributed that, most farmers do not get involved in the processing of agricultural produce due to the high cost of processing.

Inadequate skilled labour supply

The results revealed that, about 22.8 % of respondents were of the view that inadequate skilled labour supply prevents them from diversifying into strategies. Most farmers are unskilled and thus only produce their products and get them sold at the farm gate. They are not learned and thus lack marketing skills, communication skills, processing skills and much more. This by implication makes these farmers to become limited in selling their produce only at the farm gate. This is in tandem with the findings of Kuwornu et al. (2013) who found out those farmers who are unskilled findings if difficult to diversify into other areas of crop enterprises since they lack knowledge of some crop enterprises. Similarly, Kyeremeh (2014) reported that most unskilled farmers tend not to adopt innovations and thus finds it challenging to indulge in other livelihood activities with ease.

High cost of rent for business premises

The result also shows that 5.0% of respondents agreed on high cost of rent for business premises as other constraints preventing most farmers from getting involved into livelihood diversification strategies. This shows that, the cost of rent for warehouses, storage rooms, shops is high and most farmers could hardly afford to pay. By implication, the cost of rent prevents farmers from diversifying into some livelihood diversification strategies. This is in line with the findings of Kassie (2016) who found that farmers who wish to diversify their productions process into marketing and distribution become handicap due to high cost of rent for land. These findings also coincide with that of Kyeremeh (2014) who reported that high cost of rent for assembling produce in the urban areas prevents most farmers from diversifying into transportation and marketing of agricultural produces which limits them to sale their produce at farm gate.

Table 5: Multiple Responses on the Constraints to diversifying livelihoods

Constraints	Frequency (F)	Percentage (%)	Rank
Inadequate access to credit	179	99.4	1
Poor access to market	109	60.8	4
Inadequate skilled labour supply	41	22.8	7
High cost of business premises	9	5.0	8
Unstable market price of commodity	144	80.0	2
Appreciation in tax rate	44	24.4	6
Inadequate infrastructure	72	40.0	5
Unstable electricity	141	78.3	3

*Multiple responses

Source: Field Survey, 2021

4. CONCLUSION AND RECOMMENDATIONS

The study concludes that a larger proportion of arable crop farmers are involved in livelihood diversification activities for improve income generations so as to take care of their households needs. This suggests that, there is need for arable crop farmers to get involved more into livelihood diversification activities so as to provide food for the household, increase their income earnings and in turn boost agricultural and nonagricultural activities for a developed economy. Based on the findings of this study, it is therefore recommended that:

i. Government should provide access to credit facilities so as to encourage farmer's easy swing into

livelihood diversification activities with benefits from economy of scale.

ii. Government should formulate policies and provide infrastructure facilities to help farmers improve their income

iii. Agricultural policies should be targeted towards livelihood diversification strategies that ensure food security status of small scale farmers.

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