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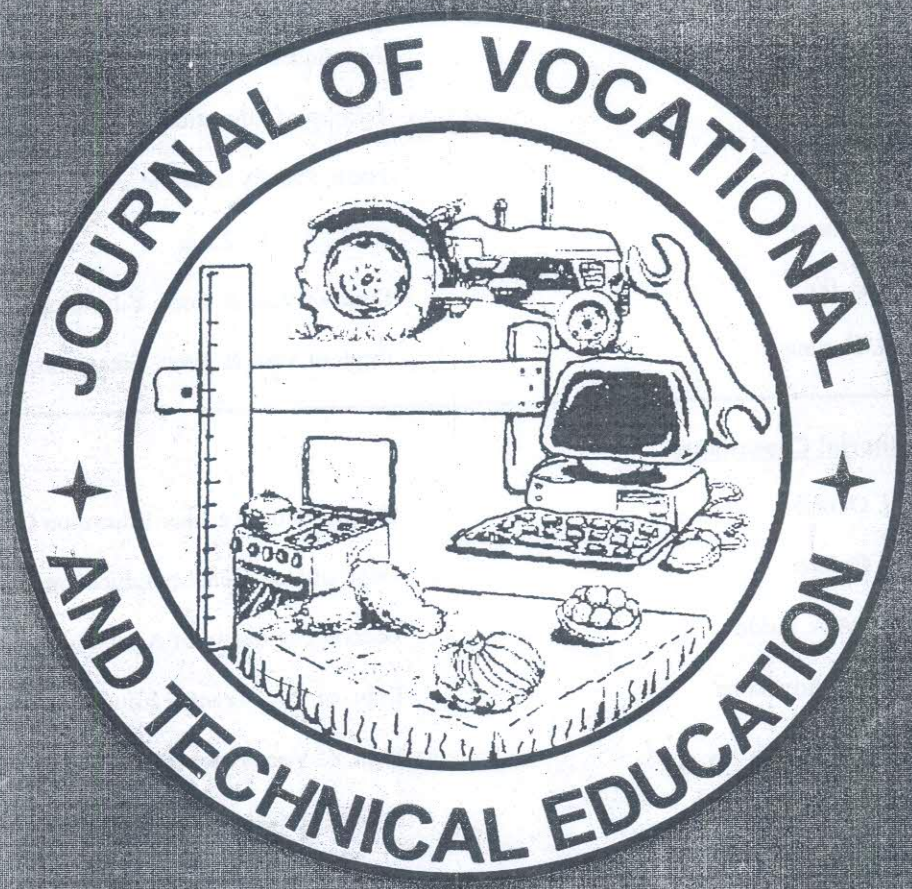

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Diversification of Rural Non-Farm activities among Farming Households in Ankpa Local Government Area of Kogi State, Nigeria

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Abstract

The need for the diversification of non-farm activities among farming household to gain more liquidity to alleviate rural poverty is essential for the sustainability of household income in rural areas. Some other reasons for diversification include increasing per capita income, improved standard of living, and investment in personal development or education of household members, reduction of risk and creation of employment opportunities. This study was therefore designed to; identify the types of non-farm diversification activities, determine the reasons for non-farm diversification, identify the determinants and constraints of non-farm diversification in Ankpa, Kogi state, Nigeria. Survey method was employed as the methodology where data was collected from 100 randomly sampled farming households. Analysis was done using regression model OLS. The variables in the regression model explained up to 80% variation in the number of non-farm activities. The study found that the determinants of non-farm diversification are access to credit, level of household income, total household farm size and household dependency ratio. The constraints to non-farm diversification include high financial risks, high competition and lack of skills and knowledge. The study recommends that policies and programmes made to raise the income of the rural households should focus on increasing households' access to credit and capacity building.

Keywords: Diversification, Rural Non-farm, Farm household, Ankpa

INTRODUCTION

Economies in transition are gradually shifting towards a market economy, and this shift has been driven in part by land reforms that distribute land from large corporations or cooperatives to individual farmers. Yet, many of these farmers do not produce farms goods that make it to the market, and hence cannot enjoy the benefits of the market economy, Kan et al (2006). A number of studies have shown that rural households in sub-Saharan Africa derive their incomes from a variety of sources with non-agricultural activities accounting for a substantial share of total income like commercial trading, clerical work, teaching, security and construction. Despite the importance of non-agricultural activities for rural farm households, we still know little about the impact of such activities on the distribution of income and, on poverty. Hence, there is the need for the diversification of rural nonfarm activities in rural household to enable them gain more liquidity that would empower them and alleviates their standard of living, Lay et al (2007).

Diversification is this context simple means a change from real farming activities. There are several reasons like poverty, low income earning and seasonal farm engagements and the lack of job security that have been advanced for income diversification among households who were traditionally exclusively engaged in farming activities.

OBJECTIVES OF THE STUDY:

The main objective of the study is to understudy the diversification of rural non-farm activities among farming households. Other specific-objectives include;

0. To identify the types of non-farm diversification activities among rural farmers.
0. Determine the reasons for non-farm diversification.
0. To determine the determinant and constraints to non-farm diversification

LITERATURE REVIEWED

TYPES OF NON-FARM DIVERSIFICATION

Broadly, one may classify diversification strategies as survival-led or opportunity led. It has been observed that poor rural households with low asset endowments embrace multiple livelihoods, in particular engagement in non-agricultural activities, to ensure survival. These households are forced to diversify mainly because they lack sufficient agricultural assets to sustain subsistence (Reardon and Taylor 1996; Haggblade et al. 2005). Returns to these activities may well be below those in agriculture. At the same time, richer rural households with higher asset endowments will choose to diversify their livelihoods to maximize returns to their assets. Such activities will have at least the same returns as agricultural activities and exhibit entry barriers that the poor are not able to overcome.

The existence of these two types of non-agricultural activities implies a relationship between the share of income derived from non-agricultural activities and household wealth as well as household income.

I) **Survival-led engagement in non-agricultural activities:** Survival-led engagement in non-agricultural activities should be inequality-decreasing through increasing the incomes of the poorer parts of the population and hence reduce poverty. Opportunity-led diversification, however, should increase inequality and have a minor effect on poverty, as it may be confined to non-poor households. Some authors have pointed to this ambiguity (e.g. Ferreira and Lanjouw 2001; Haggblade et al. 2005), but only few, e.g. Elbers and Lanjouw (2001) for rural Ecuador, explicitly address the relationship between different diversification strategies, on the one hand, and poverty and distributional outcomes, on the other.

Many households in rural areas of Sub Saharan Africa including Nigeria obtain a significant share of their income and devote a large part of their assets to nonfarm activities, Mahoney (2006). Households mix farm and nonfarm activities in their livelihood strategies because for the poorest households, access to land is limited and for the majority, a diversified livelihood strategy is the most secure means for dealing with the many risks they face. Agriculture growth, with its strong upstream and downstream linkages, provides many income opportunities for households that rely upon nonfarm sources of income. Other measures can assist households in gaining higher returns from nonfarm activities; skill development is perhaps the most critical; access to finance to start a business and a regulatory environment that facilitates starting up business and doing business are also important.

ii) **Opportunity led non-agricultural activities:** The opportunity led non-farm or agriculture activities is such that impact indirectly the rural non-farm income of the rural dwellers. Rural non-farm income (RNFI) includes earned and unearned income received by rural people from the urban economy (via temporary migration, remittances, welfare, pensions, interest) and the rural non-farm economy (RNFE, which includes activities based in rural towns).

Non-Farm Activities

When thinking about sectoral definitions of 'non-farm' it makes sense to follow national accounting classifications. Thus, all secondary (including manufacturing, processing, construction) and tertiary (including transport, trade, finance, rent, services) sectors are non-farm, as are some primary sub-sectors, such as mining. Crop and animal husbandry are 'farm' activities (including silviculture, horticulture, aquaculture, apiculture and sericulture, and wage labour in any of these) while forestry, fisheries or hunting and gathering on common-property resources are sometimes called 'off-farm'. While agriculture is still the main activity of the rural poor, non-farm activities such as agro-processing and input supply activities become increasingly important, Bryceson, (2000).

However, for the majority of rural workers the rural non-farm sector provides only a low-level livelihood and a safety-net, and only some relatively privileged households with sufficient resources can engage in rural non-farm activities with high returns. For many developing countries, the agricultural sector is still the main employer, especially for women, and particularly in sub-Saharan Africa and South Asia. Worldwide, 75 per cent of the poor work in rural areas, and in spite of high rates of rural-urban migration in many countries, it is estimated that over 60 per cent will continue to do so in the coming decades, Ellis (1999). Low income rural groups are wage-earners, mostly casual and seasonal workers, small-holders engaging in

subsistence or traditional cash crop cultivation, raising small livestock, undertaking a range of off-farm activities with low return, and often combining two or more of these activities.

In Nigeria, the increasing level of income inequality has also been a concern to policy makers for a long time. For instance, Canagarajah et al. (1997), reported increasing level of income inequality between 1980s and 1990s as shown by an increase in the Gini-coefficient from 38.1% in 1985 to 44.9% in 1992. Similarly, Aigbokhan (1999), found that income inequality worsened after the Structural Adjustment Programme (SAP) of 1986. World Bank (2003), found that in 1997, the Gini index of income inequality was 0.506. Using the 2004 National Living Standard Survey (NLSS) data, Oyekale et al. (2006), found that the overall Gini index for Nigeria was 0.580. In sectoral sense, the study found income inequality to be higher in rural areas (Gini – 0.5808) as compared to urban areas (Gini – 0.5278), and that employment income increases income inequality while agricultural income decreases it. On the contrary, however, Awoyemi and Adeoti (2004), found that agricultural income is inequality increasing while wage and self-employed income are inequality decreasing. Most recent studies agree that cash and in-kind rural nonfarm income-RNFI is a substantial contribution to total household income. The contribution from the RNFE alone is 40–45% in sub-Saharan Africa, Latin America and SE Asia, and 30–40% in S Asia. Including urban income, total RNFI contributions may be closer to 70% in some cases. In most areas these shares have been rising as smallholder farming is threatened by weakening international terms of trade and, more debatably, corporatization throughout-contracting.

REASON FOR THE DIVERSIFICATION OF RURAL NON-FARM ACTIVITIES

Many would agree that the rural nonfarm economy RNFE is not mainly agriculture-led, a result of rising farm productivity and demand. But the non-farm sector plays a critical role, by providing cheap and effective goods and services, and adding value to farm commodities. Production linkages – both forward (processing, trade, storage) and backward (inputs, tools) – and consumption linkages (household goods and services, restaurants, retail, entertainment, transport) are key. Such linkages are especially strong where regional income growth is distributed evenly, strengthening the case for supporting small-scale farming. According to FAO report (1998), rural services and bulky or perishable goods often have the highest growth potential because they are less tradable, so are protected from urban competition. They are also the most likely to survive as improved infrastructure and rural purchasing power increase competition from urban goods. Some rural non-farm sectors act as growth engines in their own right by supplying urban, rather than rural, demand. They complement rather than compete with urban enterprise and thrive on increased urban connectivity.

They include: tourism, extractive industries, those enterprises based on traditional skills, cheap rural labour or any form of activity that requires temporal or spatial proximity to rural materials. However, such activities are still disadvantaged by poor economies of agglomeration, proximity and scale found in urban areas. The following targeted interventions can help:

- Market-linkage and development programmes that help rural enterprises trade with larger urban and industrial enterprises through out-sourcing and sub-contracting;
- Producer groups or trade associations which are able to develop economies of scale in procurement, marketing and lobbying; manage cross-industry quality standards; and support the provision of focused financial, technical, business and training services;
- Enterprise zones providing infrastructure, services and tax incentives, which harness the spatial and sectoral synergies of clustered development.

Supporting local economic development across sectors, attempts to identify a RNFE 'sector' should not encourage planners to focus on non-farm-led (as opposed to farm-led) growth strategies, or vice-versa. It may be more important to address cross-sectoral constraints to local economic development: infrastructure (roads, electricity, telecom), human capital (skills, literacy, health), supportive regulatory and taxation policies and activation of key markets (financial, information, input and output). Often rural towns or 'growth points' providing a nexus for information, markets and

services – are key entry points for such rural enterprise development strategies.

On the positive side, non-farm activities may:

- Tighten labour markets that the poor depend on, checking any downward trend in rural wages;
- Help manage risk, both ex-ante (by providing opportunities to spread risks), and ex-post (by providing coping strategies);
- Complement other activities – providing employment in the agricultural off-season, making fuller use of agricultural assets (capital, contacts, markets, etc.) or providing part-time, home based work which fits with women's other domestic work;
- Add value to farm activities (processing, trade, storage, etc.) and provide opportunities to learn new skills make new contacts or gain entry to new markets. Micro, small and medium-sized enterprises – much of the 'informal' economy – provide most employment in developing countries. Small and microenterprises create livelihood opportunities and can yield very high returns to investment. Start (2001).

CONSTRAINTS OF NON-FARM DIVERSIFICATION

1. **Labour:** Productivity can be low, however, and many start-up enterprises fail quickly. Medium-sized units provide the best medium-term potential for growth and employment creation, though labour and environmental standards can be poor. Large-scale investment may be necessary, but the local economy may benefit little unless there is strong local sourcing and profit-sharing from taxation. What is the prospect for rural non-farm livelihoods? In the long term, rural locations may offer some economic advantages over congested urban sites, while small-scale units may provide flexibility firms need in fluid, competitive global markets. However, attracting pro-poor, linkage rich investment into rural areas requires a policy that favours, and subsidises, participatory, decentralised development and marginal regions. Such a policy does not come cheap. In the short term, governments must accept that chronic rural underemployment breeds multi-spatial livelihood strategies, and that the cycle of migration and remittances should be supported rather than hindered.
2. **RISK:** Non-agricultural diversification constitutes an important means to deal with risk, smooth income and consumption in rural areas. This is not surprising since agricultural livelihoods are often subject to great uncertainty. In such an environment, diversification aims at lower covariate risk between different household activities to smooth consumption (Bryceson 1999; Dercon 1998, 2002; Francis and Hoddinott 1993). For our discussion, it is useful to distinguish between ex-ante risk management and ex-post risk coping strategies. Engagement in high-return non-agricultural activities represents an ex-ante risk management strategy, as it is unlikely that entry barriers can be easily overcome after a negative shock.
3. **Initial Low Return:** Low return non-agricultural diversification will figure prominently as an ex-post coping strategy, i.e. households will relocate labour towards these activities after they have been hit by a negative agricultural shock, typically a weather shock. Yet, in particular poorer household may also be willing to accept lower returns than in agriculture ex-ante in exchange for lower covariate risk. While rural household risk can be reduced by venturing into non-agricultural activities, risk

considerations may also play a role when deciding between different types of non-agricultural activities. If high-return activities are more risky than low-return activities, households able to overcome possible entry barriers may engage in both types of non-agricultural activities according to their risk preferences.

The empirical literature on the rural non-agricultural economy has emphasised the drivers of participation in these activities at the individual, household, and community level. Some of the empirical contributions have distinguished between low- and high-return activities in doing so. Studies in sub-Saharan Africa, Asia, and Latin America have confirmed that the level of formal education is positively correlated with participation in non-agricultural activities, in general, and high-return activities, in particular (Ferreira and Lanjouw 2001; Lanjouw 2001). Land and other productive assets have also been demonstrated to be important determinants of different types of diversification strategies, Seppala (1996). When non-agricultural diversification is pursued to ensure survival, for example because of land constraints, it is also referred to as distress-push diversification, Barrett, Reardon and Webb (2001). Such diversification will be in low-return nonagricultural activities and may be an indication that the non-agricultural sector is absorbing labour that cannot be employed in agriculture. In contrast, rural households may face new opportunities outside agriculture because of technological advances, the intensification of links with markets outside the local economy, or local engines of growth, such as commercial agriculture or proximity to an urban area. If non-agricultural income diversification can be traced back to such factors, it is also regarded as demand-pull diversification.

Determinant of Non-Farm Activities

While the aggregate prevalence of the specific type of non-agricultural diversification in a region (or country) will hence be driven by meso (or macro) determinants, household characteristics will decide on the individual household's diversification decision. The literature has stressed asset availability and educational endowments as key participation determinants of non-agricultural diversification (Barrett, Reardon and Webb 2001; Escobal 2001). Whereas entry barriers to low-return diversification should be low, they can be considerable for high-return activities. In the presence of underdeveloped credit markets, the latter typically require sufficient cash income, in particular from livestock, cash cropping, and/or remittances, both for initial investment and as working capital (Reardon et al. 2000; Barrett, Bezuneh and Aboud 2000). Skill requirements may impose another important entry constraint (Dercon and Krishnan 1996; Reardon 1997).

Some high-return non-agricultural activities such as skilled wage employment are restricted to those with formal education. Another household level factor correlated with participation in nonagricultural activities is the size and structure of the household (Corral and Reardon 2001; Reardon 1997). Reardon (1997) shows that a larger size enables households to supply more labour to non-agricultural activities, since sufficient family members remain at home to meet labour demands for agricultural subsistence. As regards community level determinants, most empirical studies confirm an important role for physical and institutional infrastructure, such as paved roads, efficient communication facilities and provision of rural electrification.

METHODOLOGY:

A two-stage sampling technique was used for the study. The first stage involved the random selection of one village from each of the 5 districts in the study area. In the second stage 20 households were selected from each of the 5 villages, therefore, a total of 100 respondents were selected for the study. Primary data were used for the study and were collected with the aid of a structured questionnaire and interview which was administered to the sampled households by the researcher and his assistant. Data were analyzed using Simple Descriptive Statistics and Ordinary Least Square (OLS) Regression Analysis. The regression model was expressed as follows:

$$Q = a + b1T1 + b2T2 + b3T4 + b4T4 + b5T5 + b6T6 + b7T7 + b8T8 + U$$

Where;

Q = No. of Non-farm activities of the household (actual number)

a = Constant term

b1 - b7 = Regression coefficients

T1 = Total Household income from agriculture (N)

T2 = Household access to credit
T3 = Years of formal education of household head (years)
T4 = Age of household head (years)
T5 = availability of electricity in the household
T6 = Total household farm size (hectares)
T7 = Dependency ratio of household (number of dependents) Household size
T8 = Cooperative Membership
U = well behaved Error term

STUDY AREA:

Ankpa is a Local Government Area in Kogi State, Nigeria. Its headquarters are in the town of Ankpa on the A233 highway in the west of the area at 7°22′14″N 7°37′31″E / 7.37056°N 7.62528°E / 7.37056 7.62528. It has an area of 1,200 km² and a population of 267,353 at the 2006 census. The agricultural sector offers considerable promise in view of the local government importance in Kogi state. Its development is basic to hunger and poverty reduction, generation of economic growth, food import reduction and improved agricultural export trade. The agricultural sector therefore provides a very wide opportunity for investment. Agriculture is, indeed the main economic activity of the people of Ankpa. About 80 percent of the population is engaged in agriculture.

In Ankpa, there is a wide stretch of arable land for farming, good grazing ground for livestock and large bodies of water for fishing. Food and cash crops commonly grown in commercial quantities include yam, cassava, rice, maize, Beniseed (sesame), guinea corn, cocoa, coffee, cashew, oil palm. These agricultural potentials are very good sources of raw materials for agro-allied industries such as flour mills, fruit juice processing, starch, animal feeds, vegetable oil and soap production among others. As we all know agriculture is central to the economy of this great country, providing employment for about 70% of the population in rural areas, raw materials for industries, food and a major source of foreign exchange. Prior to the discovery of oil, agriculture was the mainstay of the Nigerian economy with cocoa, groundnut, rubber, oil palm and cotton being the major sources of foreign exchange. Today, the scenario has changed. In the last two decades, Nigeria has depended almost solely on oil, but also faced with huge import bills on food. This is largely due to the neglect of agriculture occasioned by the oil boom necessitating the need for the diversification of activities by exploring nonfarm options.

PRESENTATION DATA AND DISCUSSION OF FINDINGS

Table 1: types of Nonfarm diversification

Types	Frequency	Percentage %
Wages employment	33	33
Self employment	67	67
Total	100	100

Source: Field survey, 2010

The table revealed that most of the households (67%) had diversified into self employment activities. The respondents had in their households, self employed blacksmiths, food vendors, petty traders, automobile mechanics, cloth weavers, cobblers and masons. 33% of the respondents were wage employees namely; security guards, Police and paramilitary personnel, Civil servants i.e. local state government administrative staffs, teachers and office cleaners. This implies that self employment opportunities are more common in the study area compared to wage employment. The level of education of the respondents may be a major driven force behind this scenario.

Table 2: Reasons for Non-farm diversification

Reason (s)	Frequency	Percentage%
Create additional income and improve standard of living	23	23
Compensate for unstable return on agriculture	19	19
Reduce risk	11	11
Investment in personal development and education of household member	18	18
Gain prestige through non-farm self employment	15	15
Create employment opportunities	14	14
Total	**100**	**100%**

Source: Field survey, 2010

The reasons why households diversify into non-farm activities are presented in Table 2. The table shows that majority of the households (23%) in all diversified into non-farm activities because it creates additional income and helps to maintain the standard of living of the households. It was also observed that 18% of households diversified to generate income in order to invest in the general personal development of the household members. Other households diversify in order to reduce the risk that may occur from agricultural production (11). This risk could be in the form of bush fire outbreaks, crop failure and unfavorable weather conditions which might lead to low agricultural output. Similarly, 19% of other household revealed they took to nonfarm activities because it compensate for unstable agriculture return on income while 14% it was because of its employment creation and opportunities. This finding correlates with a similar research carried out by Ibrahim and Onuk in 2009 around Doma, Nassarawa state, Nigeria.

Table 3: Determinants of Non-farm diversification

Variables	Estimated coefficient	Standard Error	T-value
Constant	1.538	0.370	4.169***
Household Income (T1)	-0.316	0.044	6.898***
Access to credit (T2)	2.465	0.039	0.6449**
Education (T3)	1.589	0.065	0.249^{NS}
Age (T4)	0.248	0.182	1.370^{NS}
Electricity (T5)	3.831	0.055	0.072^{NS}
Household farm size (T6)	-4.726	0.005	-1.056***
Dependency ratio (T7)	1.647	0.025	0687***
Cooperative membership (T8)	-6.122	0.047	-1340^{NS}

Source: Field survey, 2010

R2 = 0.69

F-Ratio = 12.002** = Significant at 10% *** = Significant at 5% ** = Significant at 1%* NS = Not Significant

The factors that determine non-farm diversification are presented in Table 3. The table revealed that 69% of the variation in the number of non-farm activities was explained by the variables included in the model. Household income and total household farm size had negative and significant coefficients. This implies that the lower the household income and household farm size, the higher the tendency to diversify into non-farm activities and vice-versa. Households with smaller farms are likely to combine farm and non-farm activities than those with larger ones. Dependency ratio and access to credit had positive and significant coefficients. A household with a very high ratio of dependants has a higher tendency to diversify into other non-agricultural activities in order to cope with the needs of the household. According to Ibrahim and Onuk (2009), access to credit plays a crucial role in the decision to diversify. Increase in access to credit by a given household will increase the level of non-farm diversification. The reason is because the increase in the capital base will enable them to have enough resources to support members of the household. A given household may also decide to start up another business apart from the previous one because there is available disposable capital (credit). Access to credit without any means of increasing farm size will cause the households to invest in non-farm activities in order to increase the rate of return to capital investment.

Table 4: Challenges to Non-farm diversification

Challenges	Frequency	Percentages%
High competition	22	22
Job insecurity	29	29
High financial risk	38	38
Lack of information	11	11
Total	100	100%

Source: Field survey, 2010

The constraints to non-farm diversification are presented in Table 4. The table shows that the major constraint to non-farm diversification was high financial risk. The risk of investing a huge sum of money into a business has become a challenge and is a constraint to household members in the study area. This is because of the uncertain outcome from any given non-farm activity. Another serious constraint was high competition. It is assumed that since there are many people who are engaged in a given business activity, there will be high competition in the marketing of whatever is offered for sale. Another major constraint is lack of information on starting competition. It is assumed that since there are many people who are engaged in a given business activity, there will be high competition in the marketing of whatever is offered for sale. Another major constraint is lack of information on starting a business.

Conclusion and Recommendations

Micro, small and medium-sized enterprises – much of the 'informal' economy – provide most employment in developing countries. Small and microenterprises create livelihood opportunities and can yield very high returns to investment. Labour productivity can be low, and many start-up enterprises fail quickly. However, medium-sized units provide the best medium-term potential for growth and employment creation, though labour and environmental standards can be poor. Large-scale investment may be necessary, but the local economy may benefit little unless there is strong local sourcing and profit-sharing from taxation. Diversification into non-farm activities is very high in the study area. However, some socio-economic characteristics of the respondents influence their level of non-farm diversification. Based on the findings of this study the following are therefore recommended; Government policies and programmes to encourage rural non-farm

diversification should focus on increasing households' access to credit, improving the land tenure system and providing basic amenities such electricity.

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