

Socio-economic Determinants of Engagement in Off-Farm Income Generating Activities among Small-Holder Farming Households in Imo State, Nigeria

G.C. Onubuogu¹ and N. Oleru²

¹Department of Agricultural Economics, Extension and Rural Development

Imo State University, Owerri, Imo State, Nigeria.

²Anambra-Imo River Basin Development Authority, Agbala, Imo State, Nigeria

Corresponding Author's E-mail: onugilock_chin@yahoo.com

Abstract

The study focused on determinants of participation in off-farm income generation ventures among small-holder farmers. Specifically, it examined socio-economic characteristics of the respondents; identified their level of diversification into other areas, determined the influence of some farmers' factors on diversification; ascertain constraints to diversification and made recommendation based on the findings. To achieve these, multi-stage random techniques was employed to randomly select 60 farmers. Then a set of structural questionnaire was used to obtain primary information from the respondents. Data collected were analyzed using descriptive statistics and multivariate logit regression. Results showed that mean age, household size, farm size, years in school and experience of the respondents were 39.15years, 7 persons, 1.6ha, 14.61years and 8.18years respectively. The respondents were mainly males (77.67%) and married (63.33%). They diversified mainly into petty trading (35%), artisanal job (45%), wage income (40%) and manufacturing and construction (15%). Some socio-economic and other factors such as age, education, gender, experience, household size, access to credit, membership of cooperative, access to electricity, potable water and good roads influenced participation in off- farm jobs. The major constraint (70%) of participation was inadequate finance. Farmers should be encouraged to form and join cooperative societies to enable them overcome the problem of inadequate finance which constrained participation. Also agricultural development institutions should be set up in rural areas which will promote access to farm credit.

Key Words: Income generating activities, Small-holder farming, poverty, farming households.

1. Introduction

Small farms also known as family farms can be expressed in many ways. Most common measure in crop farming is farm size of less than two hectares while in livestock farms, this is expressed in terms of number of herd or value of capital invested. It may also be expressed as farming activities dependent mostly on members of the household for labour supply and with the main aim of satisfying is family consumption (Hazell et al,

2007). The World Bank's Rural Development strategy defines small holder farms as those with low asset base, and limited resources endowment relative to others.

Poverty is growing in rural areas in sub-Saharan Africa due to declining farm productivity (IFAD, 2001; Ehui and pender, 2005 and Jones, 2007). Households in the rural areas therefore rely on a variety of

income generating activities alongside agriculture to meet their needs (Odi, 2005, Tsegai, 2007 and IFAD, 2007). Off-farm income generating activities are those economic ventures embarked upon by farmers to meet their income needs and to absorb shocks to agricultural income (Holden, Shiferaw, and Pender 2004; Hoddinott, Dercon, and Krishnan, 2005 and FAO, 2007). In addition to direct income generating off-farm activities, farmers may participate in social groups dedicated to a wide variety of purposes. Participating in such social networking can enhance farmers access to public goods, credits, information sharing, increased solidarity and strengthened reciprocal relationships (Grovtaert and Narayan 2001, Hoddinott, Dercon, and Krishnan, 2005)

Off farm activities have become an important component of livelihood strategies among rural households and these include petty-trading, civil service, artisanal jobs, farm labourer, teaching, craft work and others (Yansum, 2009). Several studies have reported increasing share of off-farm income in total household income (de Janvry and Sadoulet, 2001 and Haggblade et al, 2007). Reasons for engaging in off-farm activities are declining farm incomes and desire to insure against agricultural production and market risks (Reardon, 1997). The diversification may be distress- push or demand pull-". Shrinking per capita land availability is often considered the main reason for increasing off-farm activities (Van Den Berg and Kumbi, 2006 and Matsumate et al, 2006). However, there are relatively little policy efforts to promote the off-farm sector in a pro-poor way and overcome potential constraints (Lanjouw and Lanjouw, 2001). Information is often lacking on the driving force of diversification while evidences on the relationship between total income and the share of off-farm income is mixed and sometimes controversial. Reports of Adams (1994) in rural Parkistan and Reardon, et al

(1992) in Burkina Faso are conflicting (negative and positive relationships respectively). In most developing countries income from non-agricultural activities is estimated to account for 30-50% of rural income (World Bank, 2008). Some researchers have attributed off-farm activities participation to accumulation of wealth (Block and Webb, 2001). While Berg and Kumbi (2006) found that poorer households are more likely to participate in off-farm income generating activities. However, such information is lacking in the study area which necessitated this work to fill the gap in knowledge.

This study was therefore carried out to ascertain the determinants of participation in off- farm income generating activities by small-holder farming households in Imo State. Specifically, the study examined socio-economic characteristics of the farmers in the study area; identified their off-farm engagements; determined the effects of socio-economic characteristics and other variables of the farmers on participation in different off-farm activities, and also ascertain constraints to development of off-farm engagement of income generating activities.

Research Methods

The study was carried out in Imo State of Nigeria. The State is located in the South-eastern part of Nigeria. Imo State lies between latitudes 50 451N and 60 351N of the equator and longitude 60 351E and 70 351E of the Greenwich Meridian.

Sampling Techniques: Multi-stage sampling technique was employed. First the state was stratified into three strata(Agricultural Zones: Orlu, Owerri and Okigwe.) From each of the three strata/agricultural zones of the state, two local Government Areas were randomly selected. In each of the Local Government Area selected, two communities were randomly selected. Then five small- holder farming households were randomly selected

from each of communities which gave a total of sixty respondents. Sampling frame was lists of farming households obtained from community heads/leaders and household heads were the sampling unit.

Primary data used were collected through the use of a set of structured questionnaire which

was administered on the respondents. Data collected were analyzed using descriptive statistics and multivariate logit regression

Results and Discussion

Table 1 is a presentation of the socio-economic characteristics of the farm households.

Table 1: Socio-economic characteristics of the farmers

<u>Variable</u>	<u>Frequency percentage</u>		<u>Mean</u>
<u>Age Range</u>			
20-30	18	30.00	39.15yrs
31-40	21	35.00	
41-50	15	25.00	
51-60	6	10.00	
<u>Sex</u>			
Male	43	71.67	
Female	17	28.33	
<u>Marital status</u>			
Married	38	63.33	
Single	18	30.00	
Widow	4	6.67	
<u>Household Size</u>			
1 – 4	9	15.00	7.00
5 – 8	36	60.00	
9 – 12	15	25.00	
<u>Level of Education</u>			
Primary	3	5.00	
Secondary	22	36.67	
Tertiary	35	58.33	
<u>Experience (years)</u>			
1 -10	45	75.00	8.15yrs
11-20	11	18.33	
21-30	4	6.67	
<u>Farm size (Ha)</u>			
0-1	15	25.00	1.6ha
1-2	36	60.00	
2-3	9	15.00	
<u>Access to Credit</u>			
Access	33	55.00	
No Access	27	45.00	
<u>Cooperative membership</u>			
Member	38	63.33	
Non-Member	22	36.67	

Source: Field survey data, 2015

Table 1 revealed that the mean age of the farmers was 39.15 years. This may be an indication that the farmers were young adults who were energetic to do farm work and with the tendency to combine this with off-farm income activities. The respondents were mainly males (71.67%) and this means that they could combine farm work with other income generating activities. Majority of the respondents were married (63.33%). The implication is that they had family responsibilities which will mostly likely demand more finance hence necessitating the diversification into off-farm income job. The respondents had mean household size of 7 persons indicating that they had large household sizes. The implication is that they would tend towards diversifying into non-farm areas in order to generate enough funds to cater for their large families. Up to 35% of the respondents had tertiary education which shows that farmers were quite educated in the study area. They had mean farm size of 1.6 hectares indicating small holdings which may also account for why diversification may be engaged in considering the need to generate enough income for their family needs. The mean years of farming experience was 8.18 years which an indication that the respondents were quite experienced in farming. Majority (55%) claimed that they had access to credit and they equally belonged to cooperative society.

Identification of the off-farm engagements among the households

The respondents were into several off-farm activities. For crop and livestock, they were into processing and marketing of them. For manufacturing and construction, they engaged in building houses and other structures, they also manufactured sachet water and other table waters. In petty trading, they engaged in retailing of both agricultural produce and industrial goods. Artisanal activities, they engaged in included, repairs, dry-cleaning,

painting, carpentry, hair dressing, tailoring, barbing, tricycle riding, motor cycle riding, cobbler etc.

Determinants of Participation in Off-Farm Activities

The determinants of the farmer's participation in off farm activities was ascertained using multivariate logit model and the result is as shown in Table 2. Findings from the the multivariate logit model revealed that household size was significant at 10% level, wage employment at 5% and manufacturing and construction at 1% level. This shows that the larger their household size the more they embraced these off-farm activities to be able to supplement income from farming.

Gender was significant at 1% for non-farm employment, at 5% for petty trading and 1% for wage employment. This indicated that male headed homes were more likely to embrace these off-farm jobs in addition to their farming.

Education was significant at 1% for non-farm employment, at 5% for petty trading, at 10% for wage employment and at 1% for manufacturing and construction. This showed that as heads of households were educated the more they went into diversified job.

Access to credit was significant at 1% for non-farm employment, at 5% for petty trading and 1% for wage employment. Access to credit can make one go into diversify artisanal work, petty trading and engage in another job that will give him more money.

Co-efficient of farm size was not statistically significant in any of the job options rather it was negatively related to artisanal job and positively related to others. This means that as the size of farm holding of the respondents increased, they reduced engagements in artisanal jobs and increased it in others.

Table 2: Estimated logit multivariate regression model relating various respondents factors to diversified job options

Variables	Artisanal		Petty trading		Wage employment		Manufacturing and construction	
	coeff	t-value	Coeff	t-value	coeff	t-value	coeff	t-value
Constant	-2.699	-1.65	-4.833	-2.95***	-3.196	-2.19**	-1.790	-1.35
Household size	0.291	-1.79*	0.085	0.68	-0.247	-2.27**	-0.40	-3.98***
Gender	0.978	3.35***	1.250	2.22**	1.746	2.88***	0.059	0.080
Age	0.499	0.65	0.720	0.746	-0.071	-0.315	-2.028	-0.847
Education	0.765	2.97***	0.079	2.350**	0.915	1.78*	0.846	5.97***
Access to credit	0.116	4.59***	-0.853	-2.16**	0.148	5.16***	0.882	1.501
Farm size	-0.020	-0.250	0.549	0.69	0.218	0.936	3.071	1.462
Membership of cooperative	0.014	3.06***	4.705	3.47***	0.682	2.10**	1.894	5.03***
Electricity	3.763	2.26**	3.059	1.04	1.294	0.946	2.048	3.53***
Potable water	1.55	14.05***	5.88	0.654	-1.215	-1.219	1.333	1.89*
Tarred road	3.317	1.44	2.012	0.523	0.215	0.130	0.836	1.79*
Distance to market	-0.020	-2.25**	0.143	1.623	-0.059	-0.373	-0.022	-1.90*
Marital status	0.868	1.183	4.690	1.292	0.080	-1.207	0.237	0.25

LOG likelihood -279.8***

Chi-square 37.7**

NB: ***significant at 1% level; ** significant at 5% level; * Significant at 10% level.

Source : Field survey, 2015,

Membership of cooperative societies showed statistical significant to artisanal job at 1% level, same 1% to petty trading, 5% to wage employment and equally 1% to construction and manufacturing. They were equally positively related to them. This shows that membership of cooperative societies helped them to diversify into off-farm jobs.

Access to electricity was statistically significant to artisanal jobs at 5% level and 1% level for manufacturing and construction. This shows that access to energy enabled them to diversify into these job areas. Presence of tarred roads showed positive relationship with all the job areas. This indicates that tarred road was an aid to diversification into the alternative income generating areas.

Constraints of Participation in Off-farm Income Generating Activities

The respondents agreed to some extent on various constraints of diversification into off-farm income generating activities. Results of the constraints to participation in off farm activities is presented in Table 3.

Majority of the farmers (70%) were constrained to diversity into alternative lucrative ventures because of inadequate fund. This is in line with the findings of Minot et al (2006) which emphasized the importance of fund in development of off-farm income activities. Closely linked to inadequate fund is lack of credit facilities (55%) which has prevented farmers from diversifying into lucrative off-farm activities. Labour scarcity also posed problem

to diversification of occupation among the people. Labour is scarce and expensive and therefore small holder farmers could not afford labour to undertake certain income generating activities.

Lack of skill was another constraint to join lucrative ventures. They respondents (20%) lacked necessary skills to join other income generating activities.

Table 3: Distribution of the Respondents on Perceived Constraints to Diversification of Job

<u>Constraint</u>	<u>Frequency</u>	<u>Percentage</u>
Inadequate finance	42	70.00
Lack of access to credit	33	55.00
Scarcity of labour	24	40.00
Lack of necessary skills	12	20.00
Non-access to extension services	18	30.00
Poor road network	14	23.33
Poor access to market	8	18.33

Source: Field survey Data, 2015.

Conclusion

Diversification of income generating activities among small holder farmers plays important roles in uplifting their economic status. Smallholder farmers in the study area could be observed to combined farming with other off-farm income generating jobs. It was discovered that some socio-economic characteristics of the farmers and other factors influenced participation in the off-farm activities. Their diversification had actually helped them to achieve economic well being of their households. However, inadequate fund, lack of credit facilities and lack of necessary skills constrained diversification into lucrative job areas. It is recommended that government and policy makers should enhance the development of infrastructures and institutions which help to develop socio-economic factors of the small holder farmers. Provision of credit facilities to the small holder farmers will help

them to expand their farming activities, generate more income and diversify less. Finance of the farmers can be enhanced if they form and join cooperative societies.

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