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# Agripreneurship development among small scale farmers In Anambra State, Nigeria

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The continuing decline in the price of the crude oil in the international market is a pointer to the fact that oil sector can no longer guarantee economic viability and sustainability in any nation. In Nigeria. this realization has led to increased urgency of the need to revitalize the agricultural sector, possibly return to its glorious days in the immediate post- independence. To drive the process, scholars argue for a shift from agriculture to agripreneurship. Using small scale farmers of Anambra as a case, this study interrogates existence and contribution of agripreneurial activities to the rural economy. The study employed multistage, purposive and random sampling techniques to generate relevant data using a structured questionnaire administered to 144 small scale farmers. The data generated were analyzed using descriptive statistics, Probit regression analysis, and factor analysis. The results revealed that majority (61.1%) of agripreneurs were female with a mean age of 43.14 years and an average household size of 6 persons. The results from the Probit analysis showed that household size, educational level, agripreneurship experience, level of annual income and non- farm income were statistically significant and influenced agripreneurship development. The study further identified various factors driving agripreneurship. Based on the findings, the study recommended, among others the establishment of functional micro-finance scheme that can boost the capital base of agripreneurs and streamlining government taxes, levies and checkmating illegal collections.

**Key words:** Agriculture, Agripreneurship, economic development.

#### INTRODUCTION

The economy of every country anchors on the three vital processes of production, consumption and growth (Debertin, 2012). This was the case of Nigeria in the 1960s, when agriculture's contribution to the Gross

Domestic Product (GDP) stood at 90% (CBN, 2014) and had generated over 80% of export earnings and employment (Ahungwa et al., 2014). The oil boom of 1970s relegated agriculture to background. Consequent

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to this; Nigeria was plunged into massive food importation, high poverty rate, hunger and unemployment (Obasesam, 2019). With the fall in the price of crude oil in the international market the oil sector could no longer quarantee economic viability and sustainability (Akinlo, 2012). This development led to calls for diversification and revitalization of agricultural sectors for economic growth and development. Price water house (PwC, 2016) affirmed that an increase in Nigeria's real GDP in Fourth Quarter of 2015, was as a result of improved mechanized farming and introduction of agribusiness value chain in agricultural system. Therefore, to drive the process of development, Ahungwa et al. (2014) argued, there must be a shift from agriculture to agripreneurship as a pathway to revitalize Nigerian agriculture and to make it a sustainable means of economic development.

Anambra state is dominated by people with high achievement motivation and naturally endowed with agripreneurial opportunities. About 80% of farmers are small scale farmers and are the main producers of 98% of the food consumed (Mgbenka and Mba, 2015). They are involved in the production, processing, storage and marketing of several agricultural products in varying degrees and have contributed to employment creation, poverty and hunger alleviation among rural house hold. acknowledged (2011)the existence agripreneurship opportunities in all 21 Local government areas of the state, stating that production, processing and marketing of yams, cassava and livestock are the common agricultural activities observed in most of the local government areas. Fish is predominantly produced in Anambra East and West, Onitsha North and South, and in all the areas with natural water bodies. Upland fish production has also become an accepted business enterprise in many communities. These developments have greatly ushered in changes in the food markets and created new opportunities for the farmers.

At the input production level, there are many enterprise opportunities - bio-fertilizers, bio-pesticides, plants of different species of fruits, vegetables, ornamentals and root media for raising plants in pots. Farmers engage also in agri-processing, with their local technology, they are able to convert maize, cassava, palm oil etc into more refined forms. Post-harvesting and marketing also electronic abound well as marketing (telecommunication) which directly connects farmers to the customers thereby minimizing the role of middlemen in the supply chain. Nwibo et al. (2016) also acknowledged the existence of cold supply chain business which integrates the whole supply chain for perishable products and minimizes the wastage at the production and storage centre.

A number of factors including what Mukembo and Edward (2016), Tripathi and Agarwal (2015) identified as push and pull as drivers of people into agripreneurship. Having realized the enormous potentials of agripreneurship in the economic growth of the state,

government has adopted an integrated approach to agripreneurial development, engaging in the Public Private Partnership (PPP) with the large investors and provision of support to small scale farmers. The government mapped out strategies for improving small scale farming which he believes is the backbone of the state economy. Its interventions include distribution of inputs to small scale farmers; training on bee-keeping farming and School farming programme, which it believes could impact, at an early stage, agricultural skills in the school children.

In spite of the aforementioned opportunities in the state, agripreneurship has not measured up to expectations, evidence from the high cost of agricultural produce, both during peak and lean periods, rising unemployment rate and hunger. This however; can be attributed to some constraining factors. Carr and Rollin (2016) as cited in UNCTAD (2015) identified some challenges to agripreneurial development to include: inadequate information, limited skills, insecurity. inadequate resources, and infrastructure among others. Also Nwibo et al. (2016) observed some impeding factors as socio-cultural, knowledge-base, and economic factors. Notwithstanding, agripreneurship opportunities abound in all parts of Nigeria and can contribute to a range of social and economic development such as employment generation, income generation, poverty reduction and improvement in nutrition, health and overall food security in the national economy (Otache, 2017). In fact a welldeveloped agripreneurship is capable of contributing to the country's economic growth and development in general and Anambra State in particular. It is against this background that the study sought to investigate the existence and contribution of agripreneurial activities to the rural economy. To drive the process, it specifically sought to;

- i) the socio-economic characteristics of the farmers;
- ii) ascertain factors propelling the farmers to becoming agripreneurs
- iii) examine the effects of socio-economic characteristics of the farmers decision in becoming agripreneurs:

#### **CONCEPTUALISING AGRIPRENEURSHIP**

Agripreneurship is a new concept in global agriculture, geared towards transforming agriculture from its largely subsistence status to becoming a competitive enterprise. According to Nwibo et al. (2016), agripreneurship is a profitable fusion of agriculture and entrepreneurship whereby farmers can become determined, creative, innovative, willing to take calculated risks and always looking for opportunities to improve and expand a business. Shailesh et al. (2013), described agripreneurship as a dynamic process of creating incremental wealth from agricultural sector. The above definitions suggest that

sustainable development in agriculture requires the development of agripreneurial and organizational competencies among farmers. Suffice it to say that agripreneurship is all about inventions capable of generating aggregate income, earning country's foreign exchange through value addition and community export (Mukembo and Edward, 2016).

#### THEORITICAL FRAMEWORK

The views of Max and David (1959) were used to drive home the message of agripreneurship development. Weber in his book titled Protestant Ethics and Spirit of Capitalism, in the year 1930, tried to establish entrepreneurship as an offspring of socio-economic behavour. He argued that social and cultural values, ideas and beliefs prevailing in a society propel their economic development. Weber opined that the ancient capitalists were not interested in the maximizing their daily wage but in earning enough to satisfy their traditionally established needs. In the modern capitalist system, however, Weber maintained that individuals were more concerned with the continual accumulation of wealth, by investing and reinvesting. Ahule (2018), in trying to explain Weber's approach, states that entrepreneurship can only be achieved with rational capitalism combined with the drive to accumulate wealth.

Further on Weber's views, David in 1959, emphasized on the psychological motives approach, that is, people being able to exploit an opportunity to shape their destiny. David was referring to people who are willing to work hard to achieve greatness when confronted with opportunity. This desire, he called high achievement motivation or need for achievement, that is to say the desire to do well, not only for sake of social recognition or prestige but also to attain an inner feeling of personal accomplishment. On the whole, however, according to Ahule (2018), the above theories suggest that values and position of inner self are crucial to entrepreneurial development. In other word, suffice to say that entrepreneurship or agripreneurship is not a product of hereditary, but socio-cultural, supporting the argument of Tripathi and Agarwal (2015), those agripreneurship skills are learned through formal and informal experiences.

#### **METHODOLOGY**

#### Study area

The study was carried out in Anambra state in the South-Eastern part of Nigeria. There are four agricultural zones in the state: Awka, Anambra, Aguata, and Onitsha. It was reported to have a total land area of 4,865 sq km with an estimated population of 5,846,198 (Anambra State Agricultural Development Programme (ASADEP, 2011). Vegetation is tropical rainforest. The major occupation of the people are trading and farming. Majority of the farmers are small scale farmers and are majorly known for growing such crops as

rice, cassava, yam, cocoyam, okro, palm oil and melon. Agricultural produce is widely sold in assembled markets in the villages, communities and cities. Each assembled market is identified with one of the four Igbo market days namely Eke, Oye, Afor and Nkwo.

#### Population, sampling technique and data collection

The study population comprised of all small scale farmers in Anambra state. Multi-stage, purposive and random sampling techniques were used to select 144 respondents for the study. In stage 1, two agricultural zones (Anambra and Awka zones) were purposively selected from the four zones in the state. The selection was based on the concentration of agripreneural (farming and food marketing) activities. In stage 11, two Local Governments areas were randomly selected from each zone making a total number of four LGAs. In stage 111, three communities were randomly selected from each four LGA to obtain 12 communities. Finally, 12 agripreneurs were randomly selected from each of the 12 communities to obtain a total of 144 respondents for the study.

#### Method of data analysis

Primary source of data was used for the study. With the aid of research assistants, structured questionnaires were administered personally to the respondents and their responses recorded. This was to quicken the process and maximum return. Descriptive statistics such as mean, frequency and percentage were employed to realize objective i, objective ii was realized using factor analysis and objective iii was realized using Probit regression analysis.

#### **Model specification**

Probit model is employed when the response takes one of only two possible values representing presence or absence. This is expressed by Gujarati (2003) and used by Anyiro and Oriaku (2011).

$$Pi[y=1]=f[Z]$$
 (1)

Where:

$$Z_{i} = \beta_{0} + \beta_{1} X_{i}$$

$$y_{i} = \beta_{1} + \beta_{2} X_{2i} + \dots + \beta_{K} X_{ki} + \mu_{1}$$
(2)

 $y^*$  is unobserved but yi = 0 if  $yi^* < 0$ , yi = 1 if  $yi^* \ge 0$ 

$$P(y_i = 1) = P(y_i^* \ge 0) = P(\mu_1 \ge -\beta_1 - \beta_2 X_{2i} - \dots - \beta_k X_{ki})$$
 (3)

i = 1, 2.....144 small scale farmers

Where: yi = farmers decision to become an agripreneur (Dichotomous variable 1= yes; 0=No);  $\beta = A$  vector of unknown coefficients.  $X_i = vector$  of characteristics of ith individual, and is the independent variables, which are defined as follows;

 $AD=\beta 0+\beta 1AG+\beta 2GEN+\beta 3MS+\beta 4HS+\beta 5EL+\beta 6AE+\beta 7LI+\beta 8NFI+\mu i$ 

Where:AD=Agripreneurship decision- measured as a dummy variable 1 for yes, 0 for no.AG=Age of the respondents measured in years; GEN=Gender measured as a dummy variable 1 for male, 0 for female; MS = Marital Status measured as a dummy variable 1 if married, 0 otherwise; HS=House hold size measured in number of dependents; EL=Educational level measured in number of years

spent in formal education, AE=Agripreneuship experience measured as number of years; TI= Total income measured in naira, NFI=Nonfarm income measured in naira as income from non-farm activities.

#### **RESULTS AND DISCUSSION**

#### Socio-economic characteristics of the respondents

The socio-economic characteristics of the small scale farmers, described and analyzed include; age, gender, marital status, educational level, household size, total annual income and agripreneurship experience. The result (Table 1) indicates that the majority of the farmers (61.1%) were female. The high proportion of female agripreneurs in the area can be attributed to the fact that women constitute about 80% of the small-scale farming workforce. This finding is consistent with Oyemik et al. (2017) who opined that women have done a lot in the development of agriculture. From the analysis, it was observed that the mean age of the agripreneurs was 43.14 years which implied that they are still within the active productive age. This refuted the report of FAO (2008), that the active age of the agricultural work force is between 31-40 years but was consistent with Nwibo and Okorie (2013) who reported 43 mean age of active entrepreneurs in southeast Nigeria. Meanwhile, 68.5% of the agripreneurs are married with an average household size of 6 persons who constitute to the family labour force. This supported the argument of Erenstein (2003) who posited that high household size could serve as a source of farm labour. Majority (47.2%) of them completed primary education (Table 1).

Again, it was observed that the agripreneurs earned an average annual income of seventy-nine thousand, seven hundred and one naira (N69, 944) which according to Nwibo and Okorie (2013) was far below the annual income of general entrepreneurs in the South-East, Nigeria. The result further revealed that the majority (43.1%) of agripreneurs have reasonably stayed in agribusiness at mean years of 10. This implies that most of the agripreneurs have been exposed to agribusiness activities and have relevant experiences. This finding concurs with Nwibo et al. (2016) who reported that higher experience in business exposes an individual to strategies for effective management of one's own business.

#### Propelling factors in becoming agripreneurs

Agriprenuerial motivations as factors propelling farmers to agripreneurs, was one of the items of questionnaire in the instrument of data collection. A lot of motivating factors were identified to propel household farmers to become agripreneurs as shown in Table 2. Agriprenuerial motivations are those factors that propelled individuals to become agripreneurs. The factors were categorized into

economic, socio-cultural and institutional using what was described as the Kalsers rule of thumb as applied by Uche and Familusa (2018) in which any factor that weighs 0.4 and above was taken to have a significant influence on agripreneurship development drive. Analysis of these factors indicated that economic components which are income level (0.521), social amenities, geographical location (0.534) and a place to retire (0.423) were found to influence respondents into becoming agriprenuers. Okeke et al. (2015) were of the same opinion that sufficient returns in a business venture influences individuals into further investment. Geographical location on this note includes market availability and proximity, availability of productive and distribution of resources, all can spur economic activities and consequently agripreneurship area development. Ito and Mbanosori (2011), Simonov and Giannetti (2004) affirmed that market proximity has the advantage of increased productivity, because of reduced transportation costs.

The result also indicated that socio-cultural factors that positively influence agripreneurship drive were: desire for financial independence (0.403),background characteristics (0.665)desire for greatness/ and achievement (0.542). The findings were pointing to the fact that agripreneurship development is rooted in the people's way of life. Ahule (2018) affirmed that the environment where people are born and bred has fundamental impact on attitudes and dispositions towards doing things. This equally confirmed the theory of McClelland (1959: 74-75) that the development of the right values or virtues for entrepreneurship underscores the role of family. Agbaeze (2007) equally reported that a quest for financial independence portrays a desire to become "one's boss" propels one into becoming selfemployed.

The institutional components: access to credit (0.492), tax rate (0.422) and government policy (0.406) were observed to have a positive relationship with agriprenuership development in the area. This result concurs with the findings of Evans and Jovanovic (1989) who argued that access to capital for initial business start-off is very essential. Favourable government policies, programmes, low tax rate are major determinants for agripreneurship development.

### Effects of socio-economic characteristics of small scale farmers in becoming agripreneurs

Socio-economic attributes analysed include age, gender, marital status, household size, educational level, agripreneurship experience, level of annual income and non- farm income. Out of eight variables analysed, five (household size, educational level, agripreneurship experience, level of annual income and non- farm income) were found to be statistically significant and

**Table 1.** Socio-economic characteristics of the respondent farmers.

Gender	Frequency	Percent	Mean
Male	46	31.9	
Female	98	68.05	
Age			
21- 30	9	6.25	
31 - 40	38	26.4	43.14
41 - 50	75	52.08	
51 - 60	22	15.3	
Marital status			
Married	128	88.9	
Single	14	9.7	
Divorced	2	1.4	
Household size			
1 - 3	12	8.3	
4 - 6	82	56.9	6
7 - 9	42	29.2	
10 - 12	8	5.6	
Educational level			
No formal education	38	26.4	
Primary education	68	47.2	
Secondary education	29	20.1	
Tertiary education	9	6.3	
Total annual income			
31, 000 - 60,000	41	28.5	
61,000 - 90,000	66	45.8	69,944
91,000 - 120,000	28	19.4	
121,000 - 150,000	9	6.3	
Farm business experience			
1 - 5	17	11.8	
6 - 10	62	43.1	10.67
11 - 15	36	25	
15 - 20	29	20	

Source: Field survey (2019).

influenced agripreneurship development in the area. The coefficient of household size (-2.1123) is inversely related to agripreneurship at 1% level of probability. The implication is that the pressure of large household size on household resources increases the dependency ratio of farmers. This is in contrast to the findings of Nwibo et al. (2016) who argued that large household can be a good source of labour. Educational level (1.3870) is positive at 5% level of probability. This is in line with Nwibo and Okorie (2013) that education is a driving force in agripreneurial success. Hence education is necessary in understanding the intrigue in any business venture. The

coefficient of agriprenuership experience (2.0611) had a positive relationship with agriprenuerial skills at 1% level of probability and this implies that the higher the experience, the higher the wealth of business intrigues and resource management skills (Table 3).

A similar finding was also reported by Abiodu (2016). The result further indicated that the coefficient of the level of annual income (1.183) was positive and significant at 10% level of significance. This implies that as the income of the household increases, the tendency to engage in agripreneurship becomes higher. Non-farm income (1.4567) gave a positive significant effect on the drive for

Table 2. Factors propelling small scale farmers in becoming an agripreneur.

Variable	Factor 1 Economic	Factor 2 Socio-cultural	Factor 3 Institution
Income level	0.521	0.276	0.189
Fertility of soil	0.021	0.149	0.075
Geographical location	0.632	0.023	0.342
Number of competitors	0.084	0.102	0.016
Availability of social amenities	0.534	0.013	0.094
Type of farming system	0.046	0.032	0.233
Unsatisfactory work environment	0.0282	0.051	0.099
A place to retire	0.423	0.061	0.109
Unemployment	0.386	0.017	0.056
Need for achievement	0.041	0.542	0.049
Financial independency	0.011	0.403	0.05
Background characteristics	0.015	0.665	0.082
Access to credit	0.118	0.061	0.492
Tax rate	0.055	0.092	0.422
Agripreneurial training	0.228	0.196	0.017
Government policy	0.384	0.099	0.406

Source: field survey (2019).

**Table 3.** Determinants of small scale farmers in becoming agripreneurs.

Variable	Estimated co-efficient	Standardized error	t-value
Constant	29.8192	2.0511	15.718*
Age	0.3121	0.0023	0.0300
Gender	0.0470	0.0065	0.0286
Marital status	0.3047	0.0059	0.0114
Household size	-2.1123	0.0007	1.9037***
Educational level	1.3870	0.0294	1.336**
Agripreneurship experience	- 2.0611	0.0171	2.216***
Level of income	1.1830	0.0422	1.264*
Non-farm income	1.4567	0.0058	2.732**
Chi <sup>2</sup>		0.0632	72.121
Number of obs. = 144			
Pseudo $R^2 = 0.5330$			
Log likelihood = -72.001			

<sup>\*\*\*.\*\*</sup> are significant at 1, 5 and 10% respectively.

Source: Computed from survey data (2019).

agripreneurship at 5% level of probability. This suggests that farmers will be able to take advantage of the fund from other sources to increase the scope and hence increase their income. The Chi² has a t-value of 72.121; significant at 10% level of probability reveals a high degree of confidence and goodness of fit. A Pseudo R² value of 0.5330 means that the small scale farmers socioeconomic characteristics explains 53.03% of the variation in their decision to become an agripreneur while the remaining 46.97% was as a result of error beyond their control and a log likelihood of (-72.001) indicates a

good fit since the higher the log likelihood the better the model fit

#### **CONCLUSION AND RECOMMENDATIONS**

Agripreneurship development is a key to a sustainable economy. The study indicated that economic, sociocultural and institutional factors constituted a driving force to agripreneurship among small scale farmers. However, its realization is constrained by lack of capital, high costs of production, insufficient infrastructure, high government levies and taxes, poor access to investment loan and market imperfection. Therefore, the study recommends that farmers should make use of micro credit scheme to increase their capital base for efficient production. Inadequacy of power and water can be improved through direct intervention of government in those sectors. Government should as a matter of necessity streamline levies and taxes being paid by farmers. There is need to introduce agripreneurship in the school curriculum so as to inculcate the spirit of agripreneurship among our young ones at an early stage.

#### **CONFLICT OF INTERESTS**

The authors have not declared any conflict of interests.

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