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# Factors Influencing Homestead Farming in Umuahia South Local Government Area, Abia State, Nigeria

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#### Abstract

**Keywords**: Homestead, Socio-economic characteristics, food production

#### 1. Introduction

Food is crucial for the well-being of any living creature. The inability of Nigerians to provide adequate food in quality and quantity to feed the ever-growing population has resulted in food shortages, under nourishment, malnutrition, starvation, hunger, and ill health. According to World Food Council report, a growing number of lives are being lost due to hunger and malnutrition. It was estimated that the world in the 1980s was five times what it was in the 1970s. By 1989, the total number of chronically hungry people was estimated at 550 million. The figure was over 1 billion people before 2002. Africa was reported to have experienced the largest increase in hunger cases between 1970 and 2002. Before 1991 and 1998, the number of food insecure people decline by 76 million in China and increased by 40 million in other developing countries, African countries inclusive (IFPRI, 2002). Martins *et al* (2006) opined that the difference between peace and anarchy in most countries is a matter of only of few days without food.

One distressing and costly manifestation of food insecurity is malnutrition among pre-school children to condition that children's mental and physical development. Malnutrition is a factor in more than 5 million deaths of children under the age of five annually, accounting for 20%-25% of the economic impact of childhood disease in the developing world. While pre-school deaths due to malnutrition increased by 6% in Asia, it rose by 13% in sub-Saharan Africa (IFPRI, 2002).

Globally, famine and starvation are becoming severe. As the world population expands, the food problem, on the other hand, continues to becoming increasing severe, with the number of those malnourished reaching 3 billion (Olajide-Taiwo *et. al.*2012,). If this population is to be fed adequately, the present food production level will have to be increased and other viable food production strategies/approaches devised and/or encouraged. One of such strategies or approaches that need some level of assessment is the homestead farming (Ndaeyo, 2007).

Home gardening is the intimate, multi-storeyed combination of various trees and crops in association with domestic animals around the homestead (Kumar and Nair, 2004). Home gardening is also referred to as compound farming, backyard farming, or homestead farming. However, whatever name or description given to homestead farming, the bottom-line is that it

is carried out around the homestead and involves husbandry of crops in most cases livestock. Homestead farming is also the cultivation of small portion of land which may be at the back of the house or within a walking distance from home (Odebode, 2006). Homestead farmers are therefore people who cultivate small portion of land which may be at the back of the house or within a walking distance from home. No developing country can afford to ignore the phenomenon of home gardening and urbanization, which will be one of the strongest social forces in coming years, especially in developing countries (Nwaobiala *et al.*, 2009). However, in Nigeria even people who practice home gardening in particular and urban agriculture in general, are not recognized as farmers. The objectives of the study are to examine the socio-economic characteristics of the respondents and to determine the effect of home gardens on farmers' income.

# 1.1. Hypotheses of the Study

• H<sub>0</sub>; There is no significant relationship between the socio-economic characteristics of the respondents and the output in homestead farming.

# 2. Methodology

The study was conducted in Abia state. The State lies between latitude 50 25 north and longitude 70 30 east. It is located in south-eastern Nigeria. The capital of the State is Umuahia. Abia is made up of 17 local government areas grouped into three agricultural zones namely, Ohafia (Abia north), Aba (Abia south), and Umuahia (Abia central). The area enjoys abundant sunshine and rainfall, with two distinct seasons; rainy season and dry season. Umuahia has an average population of 359,230(NPC, 2006).

The study population was made up of farmers who have homestead farm(s) in the study area. A combination of purposive and random sampling technique was used in collecting data for the study. The data for the study was collected from both primary and secondary sources. Primary data was collected through the use of structured questionnaire and secondary information was obtained from literatures. Data collected was analyzed with the use of both descriptive and inferential statistics.

The hypothesis was analyzed using multiple regression which is stated explicitly as; Y=F(X1+X2+X3+X4.....Xn)

Where;  $Y_1$  = The output in homestead farming

X<sub>1</sub>= Gender (dummy variables; male=1, female=0)

 $X_2$ = Age (years)

 $X_3$ = Income (naira)

X<sub>4</sub>= Educational level (years)

 $X_5$ = Marital status (dummy variables; married=1, single=0)

X<sub>6</sub>= Occupation (dummy variables; farming=1, non-farming=0)

X<sub>7</sub>= Household size (number of persons in a household)

 $X_8$ = Farm size (ha)

 $X_9$ = Membership to cooperative (dummy variables; yes=1, no=0)

Xn= error term

# 3. Result and Discussion

The objective one which is to examine the socio-economic characteristics of the respondents considered (age, sex, marital status, level of education, primary occupation, household size, farming experience, monthly income, and membership to

cooperative. Table 1 shows socio-economic characteristics of respondents from the study area. Majority of the homestead farmers (57.5%) were women and about 43.5% were men. The Table also indicates that majority of the homestead farmers (87.5%) were above 40 years regardless of their gender. This implies that most of them were getting old. This result agrees with the view of Farinde et al (2007) that older generation were now left to farm while most of the able-bodied men and women migrate to the urban areas in search of better life. There is also an indication that most of the farmers are married (50%) and only 17% were single. If marriage is perceived as facilitating household farming and processing activities (Ekong, 2003). Only 10% of the farmers lacked formal education as majority of them (90%) had formal education. This also implies increase in production as the education attainment of a farmer does not only raise his productivity but also increases his ability to understand and evaluate the information on new techniques. (Ani et. al., 2009). Majority (37.5%) of the farmers had farming as their primary occupation. Majority (75.25%) had over 3 persons in their household. The larger the household size the more the likelihood for labour efficiency (Oluwana, 2004). Majority of the farmers had over 5 years farming experience which implies increase in productivity. Long period of farming experience could serve as an advantage for increased participation in farming activities since experience is important for effective agricultural production (Nenna, 2014). Majority of the respondents (53.75%) received monthly income of less than #50,000. The implication is that the farmers had inadequate funds and small-holdings. Most of the farmers (67.5%) do not belong to any cooperative society. This has implication for their loan mobilization ability (Aminu et al., 2014). This may be as a result of poor extension contact and may also lead to lack of access to agric loan. This is necessary because as cooperative members, it might enable the farmers access farm input, credit and subsides collectively instead of individually (Onumadu and Olatunji, 2014).

| Socio-economic                  |           |            |
|---------------------------------|-----------|------------|
| Characteristics                 | Frequency | Percentage |
| Sex                             |           |            |
| Female                          | 46        | 57.5       |
| Male                            | 34        | 42.5       |
| Age                             |           |            |
| 20 -30                          | 3         | 3.75       |
| 31 - 40                         | 11        | 13.75      |
| 41 – 50                         | 32        | 42.5       |
| 51 - 60                         | 33        | 43.75      |
| 61 - 70                         | 1         | 1.25       |
| Mean                            | 49.93     | 1120       |
| Marital status                  | 19.55     |            |
| Single                          | 14        | 17.5       |
| Married                         | 40        | 50.0       |
| Widowed                         | 22        | 27.5       |
| Separated                       | 4         | 5.0        |
| Separated<br>Level of education | <b>'</b>  | 3.0        |
| No formal education             | 8         | 10.0       |
|                                 | 1         |            |
| Primary                         | 16        | 20.0       |
| Secondary                       | 31        | 38.8       |
| Tertiary                        | 25        | 31.2       |
| Occupation                      |           |            |
| Farming                         | 30        | 37.5       |
| Civil servant                   | 15        | 18.8       |
| Trading                         | 12        | 15.0       |
| Unemployed                      | 7         | 8.8        |
| Self-employed                   | 16        | 20.0       |
| Household size                  |           |            |
| 1 – 3                           | 19        | 23.8       |
| 4 – 6                           | 41        | 51.25      |
| 7 – 9                           | 11        | 13.75      |
| 10 - 12                         | 9         | 11.25      |
| Mean                            | 5.6       |            |
| Farming experience              |           |            |
| 1 - 5                           | 12        | 15.0       |
| 6 – 10                          | 26        | 32.5       |
| 11 - 15                         | 14        | 17.5       |
| 16 – 20                         | 13        | 16.25      |
| 21 – 25                         | 12        | 15.0       |
| 26 – 30                         | 12        | -          |
| 31 - 36                         | 3         | 3.75       |
| 51 – 50<br>Mean                 | 15.5      | 3./ 3      |
|                                 | 13.3      |            |
| Monthly income (#)              | 4.2       | F2.75      |
| 10,000 - 50,000                 | 43        | 53.75      |
| 51,000 - 100,000                | 24        | 30.0       |
| 101,000 - 150,000               | 8         | 10.0       |
| 151,000 – 200,000               | 5         | 6.25       |
| Mean                            | 27,513.75 |            |
| Membership to cooperative       |           |            |
| No                              | 54        | 67.7       |
| Yes                             | 26        | 32.5       |
| Total                           | 80        | 100.00     |

Table 1: Distribution of the Respondents According to Their Socio-Economic Characteristics Source, field survey, 2015

| Parameter       | Linear      | exponential | Semi-log+   | Double-log |
|-----------------|-------------|-------------|-------------|------------|
| (Constant)      | -2338.142   | 8.980       | 103387.027  | 11.173     |
|                 | (-0.032)*** | (9.566)***  | (4.714)***  | (4.507)*** |
| Sex             | -447.06     | -0.511      | -891.993    | -0.743     |
|                 | (-1.310)    | (-1.44)     | (-1.044)    | (0-551)    |
| Age             | 4.023       | 0.009       | 648.511     | 0.370      |
|                 | (2.290)***  | (1.907)*    | (2.348)***  | (1.072)    |
| Years of        | 28.923      | 0.004       | 399.629     | 0.071      |
| education       | (5.950)***  | (0.132)     | (5.050)***  | (1.830)*   |
| Monthly income  | 0.422       | 1.823E-6    | 474.305     | 0.113      |
|                 | (2.071)**   | (0.705)     | (7.037)***  | (5.768)*** |
| Farm experience | 1950.902    | 0.010       | 14972.501   | 0.089      |
|                 | (1.983)*    | (0.832)     | (4.160)***  | (2.767)**  |
|                 |             |             |             |            |
| Farm size       | 45359.9     | 0.707       | 11285.434   | 0.341      |
|                 | (4.439)     | (1.765)*    | (5.093)***  | (1.359)    |
| Occupation      | 29053.553   | 0.075       | -4496.109   | 0.72       |
|                 | (0.454)     | (0.925)     | (-0.250)    | (0.353)    |
| Household size  | -43.500     | -0.014      | 220.904     | 0.045      |
|                 | (-0.743)    | (-0.390)    | (0.613)     | (0.255)    |
| Farm input      | 0.000       | 2.301E-7    | 52.349      | 0.117      |
|                 | (0.586)     | (6.988)***  | (3.3330)*** | (1.716)*   |
| R-square        | 0.656       | 0.527       | 0.715       | 0.616      |
| R adjusted      | 0.599       | 0.510       | 0.688       | 0.577      |
| F-ratio         | 11.711***   | 16.221***   | 21.881***   | 19.922***  |

Table 2: Multiple Regression Estimates of the Determinants of Homestead Output Source: Field Survey, 2015

Key: \*Significant @5%, += Lead Equation and the Values in Bracket Are the T- Values.

Table 2 showed multiple regression estimates of the determinants of homestead output in study area. Four functional forms of multiple regressions were tried and semi-log was chosen as the lead equation.  $R^2$  value (coefficient of multiple determinations) of 0.715 indicating 71.5% was accounted for by the dependent variables (Y). the result also showed that six variables were statistically significant and positively related to homestead output. These variables include; age, years of education, income, farming experience, farm size, and input.

The coefficient of age was statistically significant at 5% and positively signed to homestead output. This implies that unit increase in age will lead to a corresponding increase in homestead output. The coefficient of education was statistically significant at 1% and positively related to homestead output. This implies that unit increase in level of education will lead to a corresponding increase in homestead output. The coefficient of farming experience was statistically significant at 1% and positively related to homestead. This implies that unit increase in farming experience will lead to a corresponding increase in homestead output. The coefficient of farm size was statistically significant at 1% and positively signed to homestead output. This implies that unit increase in farm size will lead to a corresponding increase in homestead output.

The F-ratio of 21.881 was statistically significant at 1% indicating 99% significance and also implied high fitness of model used for the analysis. Furthermore, we reject the null hypothesis at 1% and conclude that socio-economic characteristics of the respondent were significantly related to homestead output.

## 4. Conclusion and recommendation

From the findings, we conclude that there is a significant relationship between the socio-economic characteristics of the respondents and the homestead output and that homestead farming has contributed to food production in the study area. It is recommended that urgent attention should be paid to homestead farming and the farmers if food production is to be sustained in the study area. For food production to increase, both in quality and quantity through homestead farming all hands must be on deck. The government should employ strategies to elevate the socio-economic standard of the homestead farmers like encouraging them to join cooperative societies that it affects output.

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