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Socio-economic Factors Influencing Women Participation in Agricultural Productivity in some Yam Producing Areas of Ebonyi State

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ABSTRACT
This work studied the information on social economic factors affecting female participation in yam production in Ebonyi State, Nigeria. Respondents (150) were selected by random sampling using a structured questionnaire. Data was analyzed using descriptive statistics and Multiple Linear Regression. Majority of the respondents (72.7 %) were married. Highest number (47.3 %) of the women yam farmers were within >40 years of age. Highest number (38 %) of respondents had no formal education. Highest number (41.3 %) of respondents earned between N100,000 and N199,000. Most of the respondents (44 %) had less than 2 hectares of land. Majority (43.3 %) of the women respondents were farmers. Majority (34%) of the respondents had between 11and 15 years of farming experience. Precision of the model that evaluates the factors influencing women farmers' participation in yam production showed that the variable in the model accounts for 91.1 % of the variations observed. Age, household size, educational level and primary occupation of the respondents were the major issues affecting the involvement of women in participating in yam production in Ebonyi State.
Keywords: Socio-economic, women participation, yam producing

INTRODUCTION

Nigeria has one of the lowest recorded female labour force participation rates well below that of their foreign counterparts. They have no or minimal part in decision making process regarding agricultural development, food security and food production. Gender inequality is therefore dominant in the sector and this constitute a bottleneck to agricultural development. The gender disparities are the outcomes of specific socio-cultural factors that affect women position in the household and wider society and their ability and willingness to participate in agricultural productivity. Gender participation also affects yam production despite the widespread assumption, men make the key farm management decision but women play a dominant role in yam production. This was confirmed by the finding of study financed by the United Nations Development Programme (UNDP) which revealed that women make up 60 – 80 % of agricultural labour force in Nigeria depending on the region and produce two-thirds of food crop (World Bank, 2008). The involvement of males and females in seed yam production activities and in different parts of the yam value chain is shaped by socially defined norms of behaviour, social roles and responsibilities (Ewuziem and Ironkwe, 2019). They face difficulties than men in gaining access to resources such as land, credit and improved inputs. Tijani and Tijani (2019) reported that lack of title to land prevents women from exercising or improving their expertise in crop production particularly seed

yam production; decision-making on seed yam production, processing, marketing, control of income. Oladosu *et al*. (2018) have analyzed gender differentials in accessing agricultural production resources among yam farmers in Saki agricultural Zone of Oyo state. However, there is need to determine the socio-economic problems influencing women participation in agricultural productivity in some yam producing areas of South-eastern Nigeria. This work is therefore an attempt to contribute to the investigation of the socio-economic issues affecting women participation in yam production in Ebonyi State.

METHODOLOGY

Survey was carried out in Ebonyi State located in South-eastern part of Nigeria which lies approximately within latitudes 5° 40' and 6° 45' North and longitudes 7°30' and 8°30'East. The mean temperature range within the study area is usually between 27° to 30° C over the years (Ogbuene, 2010). Temperature is highest from February to April and it is about 31° C (Ogbodo, 2013). The soil is texturally clay loam, fairly to poorly drain with gravely subsoil in some locations especially the upland adjacent to lowland areas (Ekpe *et al*., 2005). Agriculture is a major industry in Ebonyi State, an estimated eighty-five per cent of the population earn their living from one form of agricultural activity (Ogbodo, 2013). The presence of large arable land, rivers and streams has made farming very attractive. Crops grown in the area include; rice, yam, cassava, cocoyam, groundnut, cowpea and vegetables. Livestock farming, especially the extensive system of rearing sheep, goats and native cattle, is also practiced by the people.

Sampling technique

A multi-stage sampling technique described by Aidoo (2009) was employed in the study. A sample group comprising 150 respondents was formed in the following manner:

1. Purposive and systematic sampling of three Local Government Areas (LGAs) in Ebonyi (Abakaliki, Afikpo and Izzi) State Nigeria where yams are currently grown intensively.
2. Simple random sampling was used to select 50 respondents from each Local Government Area.

Data Collection

Data for this study was obtained by use of structured and validated questionaaire.

Data Analysis

Descriptive statistics was used to analyze socio-economic characteristics of the women farmers involved in yam farming. Multiple linear regression model was used to determine social economic factors conditioning and constraining female participation in yam production using Statistical Package for Social Scientist (SPSS version 21).

Simple model specification for the study is given as;

$Y = f(X1, X2, X3, \ldots\ldots\ldots\ldots Xn)$……eqn 1

The model is explicitly specified as follows;

$Y = \alpha + \beta 1X1 + \beta 1X2 + \beta 1X3 + \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$eqn 2

The econometric form of the model is express thus:

$Y = \alpha + \beta 1 \log X1 + \beta 2 \log X2 + \beta 3 \log X3 + \beta 4 \log X4 + \beta 5 \log X5 + \beta 6 \log X6 + \beta 7 \log X7 + \beta 8 \log X8 + \epsilon$ ……eqn 3

Y = 1 if the person participated in Agriculture and Y = 0 if otherwise

Variables X1…X8 represent; X1 = Marital status (1 for married, 0 for otherwise)

X2 = Age (years); X3 = Educational Level (years); X4 =Annual income (naira)

X5 = Farm area (ha); X6 = Yam farming experience (years); X7 = Household size (number)

X8 = Primary occupation; $\beta 1 - \beta 8$ are the slope coefficients of the regressors or multipliers that describe the size of the effect the independent variables are having on dependent variable

α represents the vertical intercept showing values of Y when variable x1 to x8 are zero

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents

The distributions of respondents according to their socio-economic characteristics are summarized in Table 1. Majority of the respondents (72.7 %) were married whereas 27.3 % were not married. This finding implies that married women dominates yam farming in the study area. This suggests that married women are more involved in agriculture than single women. This observation can be attributed to the restrictions that bar women from gaining access to agricultural resources such as land, credit and improved input and are considered to be dependent. The report of this finding is supported by Zaidi *et al*. (2016) who reported that women are considered to be dependents without experience and not able to handle property matters and valuable physical assets and are further considered to be member of their husband's family. Giving them control over property is akin to giving it away to her husband and his family. Similar observation was reported by Tijani and Tijani (2017) that more married women than single are engaged in agricultural productivity due to the great responsibility of married women to in their households by providing food, generating income and other basic household needs. Thus, engage in agriculture to generate income and provide food; and other basic households' needs.

It was observed that 6.7 %, 19 3%, 26.7 % and 47.3 % of the women yam farmers were within the age range of 25 – 30, 31 – 35, 36 – 40 and >40 years of age respectively (Table 1). Table 1 shows that the highest number (47.3 %) of the women yam farmers were within >40 years of age, while the least number (6.7 %) of women yam farmers were within 25 to 30 years of age. The finding shows that less number of the women farmers were in their active and productive age limit. The age of farmer is a vital factor because, it could be used to determine the type of agricultural activities performed by the women farmers. This is a clear indication that the women yam farmers in the study area were above middle-aged that

Table 1: Socio-economic characteristics of respondent

Variable	Frequency	Percentage
Marital status		
Not married	41	27.3
Married	109	72.7
Age (years)		
25 -30	10	6.7
31 - 35	29	19.3
36 - 40	40	26.7
>40	71	47.3
Educational level		
No formal education	57	38.0
Primary	41	27.3
secondary	31	20.7
tertiary	21	14
Annual income (N)		
< 100,000	26	17.3
100,000 – 199,000	62	41.3
200,000 – 299,000	45	30
300,000 and above	17	11.3

Table 1 cont'd

Variable	Frequency	Percentage
Farm area (ha)		
<2	66	44
2 - 6	59	39.3
>6	25	16.7
Farm experience (yrs)		
<5	13	8.7
5- -10	27	18
11 - 15	39	26
16 - 20	59	39.3
>20	12	8
Household size (No)		
1 - 5	34	22.7
6 - 10	76	50.7
>10	40	26.7
Primary occupation		
Farming	65	43.3
Business	34	22.7
Civil service	41	27.3
Student	10	6.7

could not be very energetic to undertake tedious operations with yam farming. The more number of older yam farmers reported in this study might be attributed to practice of gender norms, which left land ownership at the level of inheritance system, which encourages only married women to have access to farmland. This report agrees with the findings of Ameh and Iheanancho (2017) who reported that some social and cultural norms, such as land acquisition might affect the number of farmers involved in agricultural productivity. Less number of younger women farmers reported in this study might probably be due to the great responsibility of older women in their households by providing food and other basic household needs, thus, engaging in agriculture to generate income and provide food; and other basic households' needs (Tijani and Tijani, 2019).

The result of the analysis indicates that 38 % of the women farmers had no formal education, while 14% had tertiary education whereas 27.3 % and 20.7 % had primary and secondary education respectively. This reveals that most of the women farmers in the study area did not undertake any form of formal education. The level of education attained by farmers to a large extend determine the farmers level of adoption of new agricultural innovations without difficulties which might in turn increase their farm output and subsequently the profit obtained by the farmers (Iheanacho, 2000).

With respect to income of the farmers, 41.3 %, 30 %, 17.3 % and 11.3 % of the women yam farmers earn annual income that ranged from N100,000 to N199,000, 200,000 to 299,000, <100,000 and 300,000 and above respectively. Low income adversely affects productivity because it leads to low capital investment.

The result shows that most 44 % of the women farmers had less than 2 hectares of land, while 39.3 % had farm area that ranged between 2 and 6 hectares and 16.7 % of the respondent had the farm size that was above 6 hectares in the study area. This indicates that most of the women farmers had less than 2 hectares of land. This implies that that most of the women are small-scale farmers who cultivate less than 2 hectares of land. This is coincides with the finding by FAO (1998) that most of the farmers in Nigeria are small-scale farmers who cultivate less than 5 hectares of land.

The result also indicates that 39.3 %, 26 %, 18 %, 8.7 % and 8 % of the women farmers had farm experience that ranged from 16 to 20, 11 to 15, 5 to 10, <5 and >20 farming experience respectively. The result shows that most of the women farmers have reasonable farming experience which will have

positive impact on productivity. The number of years spent in farming by a farmer, the more he becomes aware of new production techniques, socio-economic policies and factors affecting agriculture and the higher the output he obtain on the farm (Iheanacho, 2000).

Majority (50.7 %) of the women farmers had the household size of between 6 and 10 while less number (22.7 %) had 1 and 5 household size. This observation further re-affirmed the claim that majority of the women farmers were married who engage in agriculture to satisfy basic households' needs.

Table 1 also shows that majority (43.3 %) of the women respondents were farmers while 6.7 % were students whereas 27.3 and 22.7 % of the respondents were civil servants and business women. The least number (6.7 %) of respondents observed with students is supported by the earlier report in this study that majority (72.7 %) of the respondents were married who engage in agriculture to generate income to supplement household food and other basic needs.

The result also indicates that 34% of the women farmers had between 11–15 years farming experience, while 10% had 20 years and above in the study area. The result shows that most of the women farmers have reasonable farming experience in the study area. The higher the number of years spent in farming by a farmer, the more he becomes aware of new production techniques, socio-economic policies and factors affecting agriculture and the higher the output he obtain on the farm (Iheanacho, 2000).

The precision of the model that evaluated the factors influencing women farmers' participation in yam production is presented in Table 2. The joint effect of the explanatory variable in the model accounts for 91.1 % of the variations in the factors affecting women participation in yam production. A value of 0.911 observed in this study indicates a good level of prediction that Socio-economic factors influence women participation in agricultural productivity. A good fit was observed with the model. The value of 82.2 % of variations was explained by the socio-economic factors that significantly affect women participation in yam production.

Age significantly ($p < 0.05$) affected women participation in yam production in the survey location. The positive coefficient (0.41) of the age suggests that participation in yam production was lower among the younger women. This conforms to what was reported earlier in this study that the least number (6.7 %) of younger women (25 -30 years) and more number 72.7 %) of married respondents participated in yam farming) (Table 1). Analysis of the result in Table 2 indicates that the coefficient of Educational level of the respondents was negative (-0.28) and significantly ($p < 0.05$) affected the participation of women in yam production in the survey area. This implies that participation in yam production was low among literate than illiterate women. This is supported by the highest number of respondents (38.0 %) with no formal education (Table 1). Tijani and Tijani (2019) reported similar that observation that literate women with higher qualification tend to attach greater importance in

Table 2: Multiple regression analysis of the factors influencing women farmers' participation in yam production

Socio-economic variables	Coefficients	Standard error	t-value	Sig.
Age	0.41	0.06	3.21	0.002
Educational level	-0.28	.06	-2.10	0.038
Household size	-0.82	0.05	-10.64	0.000
Farming experience	0.27	0.06	1.73	0.087
Farm area	0.02	0.06	0.18	0.860
Annual income	-0.17	0.05	0.87	0.872
Primary occupation	-0.42	0.05	-3.49	0.001
Constant	1.45	0.06	23.66	0.000

Diagnostic statistics

R^2	0.830
Adj. R^2	0.822
R	0.911
F-statistics	99.22

Search of white collar jobs than agriculture which can be partly attributed to cultural restrictions on females from ownership of agricultural assets (Afzal et al., 2020). The result further showed that household size exhibited significantly ($P < 0.05$) negative relationship with the participation of women to yam productivity. This negative relationship between household size and yam productivity is not in consistent with the finding of this study. Nevertheless, this does not conform to the expectation that women participation in yam productivity is influenced positively by household size. Primary occupation was found to be significantly ($p < 0.05$) and negatively influence participation of women to yam productivity in the Ebonyi State. This observation is in agreement with the observation of Tijani and Tijani (2017). The negative coefficient of primary occupation suggests that Women participate more in off-farm activities such as micro food processing; petty trading, harvesting etc whereas men make the key farm management decision (Ogunniyi et al., 2013).

CONCLUSION AND RECOMMENDATIONS

Evidence from this study has shown that yam productivity in the study area was dominated by married women that were above 40 years of age and with no formal education. Majority of the women yam farmers are small-scale farmer that earned an annual income that ranged from N100,000 to N199,000 and cultivated less than 2 hectares of land. Farming was the primary occupation of the majority of the female respondent who had reasonable farming experience and were engaged in yam production to supplement household need and other basic needs. Variables such as age, educational level, household size and primary occupation were key determinants of women participation in yam production in the study area. It is therefore recommended that government should enact a law that should put into considerations changes in policies and institutional reforms in agricultural (yam) productivity that take into account these socio-cultural realities in order to ensure sustainable food security.

REFERENCES

Afzal, A., Jayasuriya, S. & Meehan, S. (2020). Gender issues and horticulture markets in Pakistan. Review: May 2020: Mangan, T. and Ummul, R. (2018), "Preliminary Report on the Growers' and Marketing Channel Surveys (Chilli) in Sindh", Draft Report N0.1, Policy and Institutional Reforms to Improve Horticultural Markets in Pakistan (ADP/2014/043), entre for Development Economics and sustainability, Monash University

Aidoo, R. (2009). An analysis of yam consumption patterns in Ghanaian urban communities. Thesis for doctorate degree of philosophy. Department of Agricultural Economics, Agribusiness and Extension, Faculty of Agriculture, Knust, Kumasi.

Ameh, M. & Iheanancho, A.C. (2017). Socio-economic factors influencing agricultural loan acquisition among small-scale rice farmers in Benue State, Nigeria. International Journal of Innovative Agriculture and Biology Research. 5 (4): 8 – 17.

Aweto, R. A. (1996).Agricultural Cooperatives. Stand and Printers Builds Limited, Ibadan, pp. 141 – 142.

Bravo-Ureta B. E. & Evenson RE (1994).Efficiency in Agricultural Production: A Case of Peasant Farms in Eastern Paraguay. Agricultural Economics. 10:27-37.

Ekpe, E. G., Okpone, E. N., Ogbodo, N. & Nwite, J. N. (2005). "Physico-chemical properties of four ultisor under different vegetation cover in South-eastern Nigeria." Journal of Science of Agriculture, Food Technology and Environment. 5: 74 - 78.

Ewuziem, J. E. & Ironkwe, A. G. (2019). Social diversity in seed yam producing communities of Bwari area council, FCT Abuja Nigeria: A gender situation analysis. Nigerian Agricultural Journal. 50 (2) 210 – 227.

Iheanacho, A. C. (2000). "Pattern and Technical Efficiency of Resource Use in Millet-Based Crop Mixtures in Borno State of Nigeria. Research Journal of Science. Vol. 6 No. 1 and 2, pp. 97 – 103.

IITA (2007). Root & Tuber System: Yam. International Institute for Tropical Agriculture, Ibadan.

Ogbodo, E. N. (2013). "Assessment and management strategies for the receding watersheds of Ebonyi State, Southeast Nigeria". Journal of environment and earth Science, vol 13, no3.

Ogbuene, E .B. (2010). "Impact of Meteorological Parameters on Rice Yield: An Approach for Environmental Resource Sustainability in Ebonyi Rice Farmland". Journal of environmental issues and agriculture in developing countries, vol 2, No 2 and 3.

Ogunniyi, L.T., Adepoju, A.A., Olagunju, F.I., Ojedokun, I.K. & Ganiyu, M.O. (2013). Gender differential in yam production in Ogbomoso Agricultural Zone of Oyo State: Data envelopment Analysis. International Journal of Agricultural Sciences.3 (3): 445 – 449.

Ogunlela, Y. I & Aisha, A. M. (2009). Gender issues in Agriculture and rural development in Nigeria: The role of women. Humanity and Social Sciences Journal. 4 (1): 19 – 30.

Oladosu, I. O., Afolabi, J. O. & Buhari, A. K. (2018). Gender Differentials in the Accessibility of Agricultural Production Resources among Yam Farmers in Saki Agricultural Zone of Oyo State. Nigeria. Journal of Agricultural Science and Food Research. 2: 29-37.

Tijani, B. A. (2007). Comparative Economic Analysis of Weed Control Methods for Selected Crops in Marte Local Government Area of Borno State, Nigeria. *Unpublished M.Sc Dissertation*, Department of Agricultural Economics and Extension, University of Maiduguri, Nigeria. 93p.

Tijani, B. A. & Tijani, H. (2019). Socio-economic factors influencing women participation in agricultural productivity in Damaturu Local Government Area, Yobe State,Nigeria. International Journal of Economics, Commerce and Management. Vol. VII, Issue 12.

World Bank (2008) Gender in Agriculture Sourcebook. Washington DC.

Zaidi, Y. S. & Farooq, S. (2016), Women's Economic Participation and Empowerment in Pakistan - Status Report 2016, UN Women Pakistan, Islamabad.