Determinants of Access to Landholding in Female-Headed Cassava Farming Households in Abia State, Southeast Nigeria.

Henri-Ukoha, A[1]; O.C. Korie[1]; U.C. Ibekwe[1.], N.M. Chidiebere-Mark[2], Ejike, R, D[1] and G.I. Okparadim[1]

1 Department of Agricultural Economics, Federal University of Technology, Owerri

2 Department of Agricultural Economics, Imo state University, Owerri

e-mail:haukoha@yahoo.com; henriukoha@gmail.com

Abstract

This study on determinants of access to landholding by female-headed households involved in Individual tenure system in Abia State, Southeast Nigeria was carried out to ascertain the access to farmland by gender in individual tenure systems in the area as well as identifying the factors affecting access to landholding of female-headed cassava-based farming households under individual tenure system. A multi-stage random sampling technique was adopted for this study while data were collected through primary sources. The sample size consists of male and female headed households involved in individual tenure system respectively making a total of 234 cassava farming household respondents. Descriptive statistics as well as multiple regression technique were employed in analyzing the field data. Male headed households had more access to farmland than female headed households. Results show that age, income, asset size, farming experience, level of education, access to credit, land prices and location of farmland were factors affecting access to landholding by female headed households under individual tenure system in the study area.

Introduction

Unequal access to land and insecure land tenure have had the most profound effect on the livelihood of smallholder farmers. The poor, with access to small plots of over utilized and degraded land, cannot feed themselves, yet most of the best agricultural land is used for the production of export crops, with little of the produce finding its way into the local market and even less to local communities who largely have to depend on nature. The inequitable distribution of land in Africa has contributed to the declining state of resources in these countries, thereby creating the conditions that could lead to food insecurity. Food and Agricultural Organisation (2001) pointed out that access to land is essential for food production. Mintzer (2010) asserts that female headed households work on small parcels of land that are either leased to them or have been acquired through family bonds or purchase. But all too often, they are not given the means to produce as much as men – many studies agree that national economies could largely improve if policies enabled women to contribute in a larger proportion to its agricultural production (FAO, 2005).

Land shortage is common among women. Compared to men, women farm smaller and more dispersed plots and are less likely to hold title, secured tenure, or the same rights to use as men, improve or dispose of land. Some researchers argue that women may actually have more direct use and management of land than men through lesser rights than ownership (Benshop, 2004). Women have land tenure rights only through their male children or male relatives from their husband's lineage. Often a woman must seek permission from her husband before undertaking or committing family resources. This hampers effective use of resources and also lowers the motivation of women to invest in the land they use. Even when local custom affords women certain land rights, they may be reluctant to demand them for fear of losing social benefits. Widows and divorced women have virtually no tenure or inheritance rights with which to ensure food security for themselves or their children (Benschop, 2004).

Under most customary systems, a woman is expected to marry and give up land previously accessed from her father or brother in her paternal village to acquire use rights to land owned by her husband in his village. Women therefore rarely inherit land from their fathers, while the primary rights to the land they access when they are married remain in the hands of their husbands. Men decide what land women are given and how much, and oftentimes control the proceeds that women earn from working on their land. Laws that stipulate land should be bequeathed to a single heir or failure to recognize consensual unions and polygamy often exclude women from inheritance (Knox *et.al.,* 2007)**.**

In addition to increasing vulnerability to evictions, exclusion of women from decisions on the use, control and transfer of land has also led to a decrease in food security and sustainable development (Agarwal, 2002). It also stemmed from the fact that land settlement schemes granted resources mainly to male heads of household, who were perceived to be the ones responsible for the sustenance of their family (FAO, 1993). This ignored the fact that in many parts of the world it is in fact the women farmers who are largely responsible for food production and food security. Security of tenure for women must be viewed as a key link in the chain from household food production to national food security (FAO, 2004).

Women's access to and ownership of land is also limited. Less than 50% of the Nigeria's cultivable agricultural land is under cultivation (Manyong *et.al.,* 2003). This is because the custodian of food production are not maximizing their potentials of food production due to limited access to land. This problem limits agricultural investment and scale of operation (FAO, 1998). Women need equal and unrestricted access to land, management and control of land based resources and economic incentives that security of tenure provides. This according to Lambert (2010) is because women farmers can play big role in reducing world hunger. Different tenure arrangements have one effect or the other on agricultural production. For instance, communal tenure, according to Arua (1980), acts as a strong cohesive force in an agrarian society and affords a cultivator a stake in the major assets of the community and assures him a secure place in society. In terms of individual tenure, Johnson (1982) states that such landowners have the advantage of almost complete security of tenure, no rent exploitation, the freedom to farm as they want, the ability to mortgage their land for capital, and the knowledge that improvements are for their own benefit. According to Igbozurike (1980), well-designed individual freehold or long-term leasehold is essential for efficient agricultural production and land resource conservation. Also the intensity of use impedes agricultural productivity. The study therefore identified the determinants of access to landholding in female-headed cassava farming households in Abia state, Southeast Nigeria.

Materials and Methods
There are three agricultural zones in Abia state. Multi-stage random sampling was used in the selection of respondents. Firstly, three(3) agricultural zones were selected. Secondly, two(2) Local Government Areas were purposively selected from each of the agricultural zones making 9LGAs, this was due to their predominance in cassava cultivation. This was followed by a random selection of two(2) villages from each of the LGAs. A proportionate sampling was then used to select the respondents from the sampling frame compiled by the Abia Agricultural Development Programme extension agent. The proportionate sampling model is stated as follows:
$N_h = N_n (n/N)$
Where,
$\quad n_n \quad = $ sample to be selected from each stratum
$\quad N_n \quad = $ population of farmers in each stratum
$\quad n \quad = $ required sample size for the study
$\quad N \quad = $ total population of farmers in all the strata

 Five and eight male and female headed cassava farming households respectively were selected from each of the 18 communities making a sample size of 234 farming households (comprising 90 male headed households and 144 female headed cassava farming households under individual tenure). Data were collected from both primary and secondary sources. Primary data were sourced using structured questionnaire. Secondary sources of data were obtained from current literature. Data were collected on socio-economic characteristics of the farmers such as age, gender, years spent in school (level of education), household size, years of farming experience, extension contact, membership of association, inputs, prices, produce consumed, stored and sold, farm income of a household, farm size of households, land ownership pattern etcetera Though some households had both individual and communal lands, but data were restricted to individual tenure systems which is most predominant. Farmlands obtained by rent, outright purchase and inheritance were classified under individual tenure.
Multiple linear regression model involving the use of ordinary least square estimation technique as well as simple descriptive statistical tools such as mean, frequencies and percentages, were employed in analysing field data. The multiple linear regression model employed is expressed implicitly as follows:

$Q = f (X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, e)$ …………………….. eqn_1
Where,
 Q = Land holding access (hectares)
X_1 = Age of household head (years)
$X_2 = $ Income of household head (naira)
$X_3 = $ Asset size of household head (naira)
$X_4 = $ Farming experience of the household head (years)
$X_5 = $ Membership of co-operative society of household head (number of associations)
$X_6 = $ Level of education of household head (number of years spent in school)
$X_7 = $ Land Prices paid by household head (naira)
$X_8 = $ Transaction costs of the household head (naira)
$X_9 = $ Household head's access to credit facilities (dummy variable 1 if yes, and 0 if otherwise)
$X_{10} = $ Location of the farmland of household head (km)
 e = error term

It is expected a priori that the coefficients of $X_2, X_3, X_4, X_5, X_6, X_9, X_{10} > 0$; $X_1, X_7, X_8, X_{10} < 0$.

Four functional forms were tested. These include the linear, semi-log, double log and the exponential functions. The function that gave the best fit was selected based on the magnitude of the coefficient of the multiple determination (R^2), the size and signs of the estimated coefficients and the statistical significance of the parameter estimates.

Results and Discussion

1: Access to Farmland

Table 1shows the distribution of respondents according to access to farmland.

Table 1: Distribution of respondents according to Access to Farmland in the study area.

Access to Farmland	Individual			
	Male HH		Female HH	
	F	%F	F	%F
Good access	56	62.22	3	2.08
Fair access	19	21.11	12	8.33
Restrictive access	11	12.22	34	23.61
No access	4	4.44	95	65.97
Total	90	100	144	100

Source: Field Survey Data (2013)

Table 1 shows that (62.22%) of the male headed households and (2.08%) of the female headed households under individual tenure system had good access to farmland. Good access guarantees tenure security. The female headed households who had good access were probably those who purchased their farmlands. Also (21.11%) and (8.33%) of the male headed households and female headed households respectively had fair access under individual tenure system whereas (16.67%) of the male headed and (15.28%) of the female headed households under communal system had fair access. This could be due to the fact that women do not inherit land in the state and can only get and from the ones inherited from either their sons, male relatives or spouse which only accord usufruct rights to them, but men inherit land hence their good access. Fair access does not also guarantee tenure security. This is consistent with the findings of Adebayo *et.al*., (2007) who observed that the greater number of women got their farmlands through their spouses while the remaining 46% acquired theirs through purchases, lease and other sources. They do not have enough farmland at their disposal yet they would want to continue playing their dominant role in food production (Rahman and Alamu, 2003).This analysis of access to land shows that women may not be able to make long term commitments to the land; it also hinders them from getting credit. If tenure is insecure, farmers will not be able to maximize the use of their farmland. This impacts negatively on food security.

2: Factors affecting land holding access by female headed households involved in individual land tenure system

Regression analysis on the factors affecting the land holding access of female headed households involved in individual land tenure system is presented in Table 2 below.

Table 2: Estimates of Multiple Regression analysis on factors affecting Land Holding Access by Female Headed Households involved in Individual Land Tenure System

Variables	Linear	Semi-log	Double log	Exponential
(X₁) Age	16.0914	2.3404	0.0591	0.0064
	(1.1542)	(1.1542)	(2.8413)**	(3.3084)**
(X₂) Income	13.1304	1.5291	0.0649	0.0081
	(2.4811)*	(1.0964)	(3.1971)**	(2.8929)**
(X₃) Asset Size	14.2103	3.0126	0.0883	0.0058
	(2.0209)*	(1.0021)	(4.2249)**	(2.0714)*
(X₄) Experience	17.9348	3.7743	0.0558	0.0067
	(1.1287)	(1.2154)	(3.4024)**	(1.1758)
(X₅) Coop. Membership	18.9217	1.8724	0.0924	0.0091
	(1.1203)	(1.1678)	(1.1337)	(0.0964)
(X₆) Education	10.8127	3.7021	0.0678	0.0053
	(1.1779)	(1.1756)	(3.4416)**	(1.0816)
(X₇) Land Prices	-19.0354	-4.1904	-0.0922	-0.0074
	(-1.0604)	(-2.1481)*	(-2.8902)**	(-1.1746)
(X₈) Transaction	-17.0384	-7.0822	-0.0744	-0.0083
	(-1.0725)	(-1.1604)	(-1.2137)	2.8621)**
(X₉) Credit Access	17.9213	3.9214	0.0514	0.0087
	(2.2313)*	(1.3654)	(3.1152)**	(1.2254)
(X₁₀) Location	-15.2913	-2.1183	-0.0654	-0.0082
	(-1.0984)	(-1.0516)	(-3.0704)**	2.8276)**
Constant	309.4607	247.9928	178.0924	133.4617
R²	0.5138	0.4316	0.7538	0.5928
F-Value	13.8865	10.0372	39.6737	19.1226
SE	23.0839	19.4002	0.0208	0.1522
Deg of Freedom	133	133	133	133
No. of Observations	144	144	144	144

Figures in Parenthesis are t-ratios: * = Significant at 5%; ** = Significant at 1%

Source: Field Survey Data (2013)

From the Table 2, the double log function was chosen as the lead equation. The table further shows that age, income, asset size, farming experience, level of education, access to credit, land prices and location of farmland were significant at 1%. The implication is that these variables are very important factors influencing the landholding access of female headed cassava farming households, under individual land tenure system in Abia state. Moreover, age, income, asset size, farming experience, level of education and access to credit were all positively related to landholding access. This means that landholding access increases with increase in the magnitude of these variables. However, land prices and location were inversely related to land holding access, implying that the higher they are, the less will be the land held by the farmers ceteris paribus.

The coefficient of age was positive and significant at 1% level indicating that the older the farmer, the larger will be the land holding access. Older farmers by virtue of their income and asset ownership are better opportune to acquire more and larger farmlands.

The coefficient of income was positive and significant at 1% level indicating that the higher the level of the farmer's income, the larger the landholding accessed by him. This suggests that farming households with higher income can buy and acquire more farmlands.

The coefficient of asset size was positive and significant at 1% level indicating that the larger the asset base of the farmer, the larger the land holding accessed. This has implications for expansion of farms. Larger size of asset is associated with higher income levels as it can either be sold or used as collateral which affords the farmer more opportunities to acquire more farmlands.

The coefficient of farming experience was positive and significant at 1% implying that the more the experienced the farmer is, the larger the land holding access.

The coefficient of level of education was positive and significant at 1% implying that the more educated a farmer is, the more land he will be able to access. This conforms with Orebiyi *et.al.,* (2000) that education and training produce a labour force that is skilled. This has implications for higher income and larger farm sizes.

The coefficient of access to credit was positive and significant at 1% indicating that the more access a farmer has to credit, the larger the landholding access. With credit, farmers can acquire more farmlands. This justifies emphasis on credit policies towards female headed farm households.

The coefficient of land prices was negative and significant at 1% level of significance implying that the higher the value of a piece of land, the less will be their land holding access. This agrees with the first law of demand. Location of farmland was negative and significant at 5 percent implying that the farther away the farmland is, the less will be the land holding accessed by the farming household. This is because distantly located farms involve more costs such as transportation and a risk of loss of produce to theft. Moreso, distant farms also lowers productivity as a result of long distant trekking by the farmers. This explains why the farmers are not keen to access more landholdings especially when they are far.

The coefficient of multiple determination (R^2) was 0.7538 implying that the model has correctly specified the non-zero relationships in the model. The F-ratio of 39.6737 was found to be significant at 1 percent which shows that the joint effect of all the included variables were significant. However other variables which were positive but not significant include membership of co-operative organisation and transaction cost. These variables had no influence on access to landholding, hence were ignored.

Conclusion

From the study, male headed households had more access to landholding than female headed households. Again, age, income, asset size, farming experience, level of education, access to credit, land prices and location of farmland were determinants of access to landholding by female headed households under individual land tenure system.

Recommendation

Women empowerment should be geared towards female headed households having more access to farmland especially the female headed households to ensure increased food production vis-avis food security. Existing policies on education of the girl-child, access to credit and extension visits, should be reviewed.

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