7 GENDER ANALYSIS OF FARMING HOUSEHOLDS' ACCESS TO LIVELIHOOD RESOURCES IN SELECTED LOCAL GOVERNMENT AREAS OF NIGER STATE, NIGERIA

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ABSTRACT

The study analyzed rural farming households' access to livelihood resources along gender lines in selected Local Government Areas of Niger State, Nigeria. The specific objectives of the study were to: describe the socio-economic characteristics of the rural farming household along gender lines; examine their access to livelihood resources; determine the factors influencing access to livelihood resources along gender lines and examine the constraints associated with accessing livelihood resources. Three-stage sampling procedure was used to select 130 rural farming household heads (67 male and 63 female). Semi-structured questionnaire complemented with an interview schedule was used to obtain primary data which was analyzed using descriptive statistics and Probit regression model. The results revealed that majority (71.7%) of the males were between 41-50 years of age with a mean of 46 years, while 47.6% of the females were in the age range of 41-50 years with a mean of 44 years. More so, 71.6% and 63.5% of the males and females farming households respectively, had household size of 1 – 5 people with mean of 6 persons. Majority (82.1%) of the males farming households had access to farmlands, while most (68.7%) of the females had no access to farmlands. In addition, more than half (56.7%) of the males had access to communication facilities, while 55.6% of the females had no access. Probit regression analysis revealed age of the males (0.0466; P<0.05), cooperative membership (1.6684; P<0.01) and annual income (-2.83e-06; P<0.10) to be positive and significant. In the same vein, age of the females (0.1429; P<0.01), cooperative membership (1.8387; P<0.05) and annual income (5.55e-06; P<0.10) were positive and significant, while marital status (-0.4836; P<0.05) was negative and significant. Poor credit and unfavorable government policy were the most serious constraints faced by the rural farming households along gender lines in the study area. The study recommended that government and other relevant stakeholders should provide the rural households with credit at subsidized rate to enable them enhance their livelihood. Favorable government policies should be put in place that can improve livelihood of the rural households in the study area.

Keywords: Gender, rural household, livelihood, resources, access

INTRODUCTION

Agriculture plays a pivotal role in the provision of employment opportunities and income to most rural inhabitants in developing nations, Nigeria inclusive. However, many of the rural farming

communities continue to produce at subsistence level using crude implements which result in low output, thus, making farming less productive, less profitable and unattractive endeavour. This might not be unconnected to their inability to access livelihood resources. Livelihood could be described as the way people combine and use their assets, capabilities and undertake activities to secure a means of living (Micheal *et al.*, 2021). The various activities undertaken by people in order to earn income help to reduce vulnerability and increase their overall living standard within the subsisting social, economic, political and environmental influence on livelihood strategies (Eneyew and Bekele, 2012).

Nwandu *et al.* (2016) averred that the choice of livelihood activities depend largely on access to and control over five major livelihood assets/capitals which include; human, physical, social, financial and natural capitals. However, poor households face livelihood problems such as exposure to risks, malnutrition, shorter life expectancy and inadequate access to social and economic services as well as limited opportunities for income. It is a fact that, both men and women do not have the same access to livelihood resources, despite the equal roles they play in agricultural production activities. FAO (2009) posits that rural women do not have equal access and control over assets as men, particularly land and fund, reducing their socioeconomic well-being. Oyesola and Ademola (2012) stressed that rural women lack access to social assets such as networks and associations which mar their ability in political decision making. However, the female gender face inequalities in accessing education, skill development and training opportunities, particularly in the Northern part of the country attributable to religious and cultural beliefs, and this impede their capabilities. These therefore call for strategies that can help in reducing gender inequalities in accessing livelihood resources as this will not only improve nutrition, health and education outcomes, but it will help in the realization of both immediate and long-time economic and social benefits for families, communities and the nation as a whole (Aliyu *et al.*, 2021). The study was therefore conceived to extend the frontier of knowledge of farming households' access to livelihood resources along gender lines as well as factors influencing their access to such resources in the study area.

METHODOLOGY

The study was carried out in selected Local Government Areas (LGAs) of Niger State, Nigeria. Niger State lies between Latitude 8°20' and 11°30' North, and Longitude 3°30' and 7°40' East of the equator. The state covers an estimated land area of 74,244 km² with a human population of

3,954,772 people (NPC, 2006). However, the population was projected in 2021 using 3.2% growth rate of National Bureau of Statistics (NBS) to be 6,343,324 people. The state experiences two distinct seasons namely; wet and dry, with annual rainfall varying from 1100mm-1600mm. The temperature ranges from 23°C-37°C (Niger state Agricultural and Mechanization Authority (NAMDA, 2018). The major occupation of the people is farming (Crop and livestock). Four-stage sampling procedure was used to select respondents. First stage involved purposive selection of three LGAs (Bosso, Chanchaga and Wushishi) due to their predominant livelihood activities along gender lines. Second stage was random selection of two villages from each of the selected LGAs to get a total of six villages. The third stage involved stratification of the registered rural households in each of the villages selected along gender lines based on the list obtained from Niger State Agricultural Mechanization and Development Authority (NAMDA). The fourth stage involved proportionate selection of 67 males and 63 females from the stratification to get a total of 130 respondents for the study. Primary data were collected using semi-structured questionnaire complemented with an interview schedule. Data were analyzed using descriptive (frequency counts, percentage and mean) and inferential (Probit regression model) statistics.

Model Specification

Probit regression model was used to estimate the factors influencing access to livelihood resources along gender lines in the study area. The model estimates the probability of events based on dichotomous variables. A dichotomous dependent variable assumes only two values (either zero or one). Thus, the implicit form of the Probit model is specified as in equation (1):

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8)$$

$$(1)$$

The Probit regression model in its explicit form is expressed as in equation (2):

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + e$$

$$(2)$$

Where;

Y = Access to livelihood resources by the respondents measured as 1 if access, 0 if otherwise.

X_1 = Age (years)

X_2 = Marital status (1 if married; 0 if otherwise)

X_3 = Household size (number)

X_4 = Education (years)

X_7 = Occupation (1 if employed; 0 if otherwise)

X_8 = Extension contact (1 if contact; 0 if otherwise)

X_9 = Cooperative membership (1 if member; 0 if otherwise)

X_9 = Credit (1 if access; 0 if otherwise)

X_9 = Annual income (Naira)

X_{10} = Savings (Naira)

X_{11} = Cooperative societies (number)

e = Error term

β_0 = Intercept

$\beta_1 - \beta_{11}$ = Coefficients of the independent variables

$X_1 - X_{11}$ = Independent variables

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents

The socioeconomic characteristics of the rural farming household, described along gender lines are presented in Table 1. Majority (71.6%) of the male headed households were in age bracket of 41-50 years with a mean of 46 people while 47.6% were female headed who aged between 41-50 years with a mean of 44-years. This implies that most of the household heads in the study area were in their active productive age, capable of undertaking livelihood activities. This finding disagree with that of Obi-Egbodi et al. (2021) who in their study in Ogun State found female household heads to be above their active productive age. This may have negative implication on their access to livelihood resources. Table 1 also shows most of the household heads to be married with household size of 6 persons on the average. More so, about 35.8% of the males and 47.6% of the females had no education. Although, a greater proportion of the males possess one form of education or the other which is expected to be an advantage for the them over the females in accessing livelihood resources.

Gender Access to Livelihood Recourses

The results in Table 2 revealed that majority (82.17%) of the males had access to farmland as against 31.3% of the females who had access to farmland. This implies that greater proportion of males had access to farmland in the study area which could help them to engage more in livelihood activities like crop diversification. This finding substantiates that of Adebola et al. (2015) who

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noted that historically, in most cultures, females' access to land involved right of use, but not ownership and that when common land is converted into state ownership and then to private land, women often lose their traditional right and are not always considered when new laws are enacted. Results in Table 2 revealed that greater proportion of both males (64.2%) and females (57.1%) had no access to improved technology. This implies that rural farming households in the study area had poor access to improved technology and this could likely impact negatively on their well-being. In addition, more than half (56.7%) of the males had access to communication facilities as against 44.4% of the females rural farming households. This may be attributed to better literacy attainment by the males. Better of higher literacy level assist individual to understand how to use communication facilities and its benefits. Group membership was high for both gender, about 79.1% of the males and 88.9 % of the females were members of social group. This implies that rural greater proportion of the rural farming households in the study area were members of one group or the other. This might be attributed to their understanding of benefit derivable in group membership, as most government or international donor assistance to rural farming households are targeted at group rather than individuals.

More so, majority (62.7%) of the males were involved in decision making as against 49.2% of the females. This implies that in decision making, males have better opportunity to partake in decision making than females which could be attributed to a typical aspect of gender inequality. This finding concurs with that of Adebola et al. (2015) who reported the low participation in decision making by females to be a typical aspect of gender inequality. As shown in Table 2, most (61.8%) of the males and 57.1% of the females had poor access to financial resources. In terms of government support fund like grant, just a few proportion of both gender (25.4% of males and 30.2% of females) had access to such livelihood resources. This implies that majority of the rural farming households were poorly assisted which could likely impact negatively on their well-being. Furthermore, more than half (53.7%) of the males had access to quality education as against 47.6% of the females, implying that greater proportion of the males had better access to quality education. Table 2 showed that both gender (71.6% of males and 82.5% of females) had access to rural labour. This implies that the females had access rural labour which could be attributed to their ability to socialize and easily mobilize labour resources for farm operation as compared to the males. Similarly, more than half (56.7%) of the males had access to skill acquisition, while 44.4% of the

Table 1: Socio-economic characteristics of the respondents

Variables	Males (n = 67)		Females (n = 63)	
	Frequency	Percentages	Frequency	Percentages
Age (Years)				
31 – 40	10	14.9	18	28.6
41 – 50	48	71.6	30	47.6
51 – 60	4	6.0	14	22.2
Above 60	5	7.5	1	1.6
Mean	46		44	
Marital status				
Married	48	71.6	40	63.5
Divorced	6	9.0	7	11.1
Widow	9	13.4	10	15.9
Single	4	6.0	6	9.5
Household size (number)				
1 – 5	42	62.7	45	71.4
6 – 10	18	26.9	15	23.8
Above 10	7	10.4	3	4.8
Mean	6		6	
Level of education				
Non formal	24	35.8	30	47.6
Primary	20	29.9	21	33.4
Secondary	14	20.9	8	12.7
Tertiary	9	13.4	4	6.3

Source: Field Survey, 2021

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Table 2: Rural households' access to various livelihood resources

Livelihood Resources	Males (n = 67)		Females (n = 63)	
	Frequency	Percentages	Frequency	Percentages
Physical resources				
Access to farmland	55	82.1	20	31.7
Access to important technology	24	35.8	27	42.9
Access to communication facilities	38	56.7	28	44.4
Group membership	53	79.1	56	88.9
Participation in decision making	42	62.7	31	49.2
Financial resources				
Access to credit facilities	26	38.8	27	42.9
Access to government support fund (grants)	17	25.4	19	30.2
Human resources				
Access to quality education	36	53.7	30	47.6
Access to good health service	56	83.6	42	66.7
Access to rural labour	48	71.6	52	82.5
Access to skills acquisition	38	56.7	28	44.4

Source: Field Survey, 2021

females had access implying that the female rarely had equal opportunities with males in participating in skill acquisition which could enhance their livelihood activities.

Factors influencing Rural Household Access to Livelihood Resources

Table 3 revealed the result of Probit model used in analyzing the factors influencing rural farming households' access to livelihood resources. Age is positive and significantly influence males access to livelihood resource ($P<0.05$), age of the females is positive (0.1453) and significant ($p<0.01$). This implies that as the respondents along gender lines in the study area advances in age they were more likely to access livelihood resources. The marital status of the females is negative (-0.4836) and significantly influenced access to livelihood ($p<0.01$), implying females that were unmarried have less chances to access livelihood resources. Cooperative membership of the males was positive (1.6684) and significantly influenced their access to livelihood resources ($p<0.001$).

Similarly, females cooperative membership had positive coefficient (1.8387) and significantly influenced their access to livelihood resources (p<0.10). This result revealed males that were members of cooperative societies were more likely to access livelihood resources more than the females. This might be due to disparity in recognition females always experience in the society. The result in Table 3 further indicated that total annual income of males had positive coefficient (2.83e-06) and significantly influenced their access to livelihood resources (P<0.10). In the same vein, the coefficient of total annual income of the females had positive coefficient (5.55e-06) and significantly influenced their access to livelihood resources (P<0.05). This implies that, the more total annual income of the respondents, the more likelihood to access livelihood resources as it is believed that individuals with good socio-economic disposition were more likely to pay for whatever assistance they have received in form of loans. More so, number of cooperative membership had positive coefficient (0.5388) and significantly influenced female access to livelihood resources (P<0.10). This implies that the number of cooperative societies females belong, the more likely to access livelihood resources.

Constraints faced by Rural farming households in Accessing Livelihood Resources

Table 4 revealed that some constraints faced by the males considered to be very serious includes poor credit facilities (x̄=2.30), unfavorable government policy (x̄=2.26), lack of basic infrastructure (x̄=2.24), poor transportation and inadequate farmland (x̄=2.22), and high level of illiteracy. Similarly, some of the constraints considered by the females as very serious are poor credit (x̄=2.95), unfavorable government policy (x̄=2.56), lack of basic infrastructure (x̄=2.52), poor transportation (x̄=2.38) and poor storage facilities (x̄=2.22).

CONCLUSION AND RECOMMENDATIONS

The study concluded that most of the rural farming households along the gender lines in the study area are in their middle age where they could actively engaged in productive activities. They all have access to livelihood resources with males gender have more opportunities than the females. Variables such as age, annual income and cooperative membership significantly influences male gender access to livelihood resources, while age, marital status, annual income, cooperative membership and number of cooperative societies participated in significantly influences female gender. The respondents are faced with problem of poor access to credit facilities as well as unfavorable government policies on livelihood resources. It was therefore recommended that, government and well to do individuals should assist rural farming households in the study area

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with subsidized credit facilities to enable them increase production. In addition, favorable government policies should be put in place that can improve livelihood of the rural households in the study area.

Table 3: Factors influencing rural household's access to livelihood resources

Variables	Males (n = 67)		Females (n = 63)	
	Coefficient	t-value	Coefficient	t-value
Age	0.0465909	1.91**	0.145299	2.45***
Marital status	0.0766397	1.29	-0.4835588	-3.14***
Household size	-0.0246522	-0.27	0.0116074	0.04
Education level	1.867527	1.56	1.096088	0.39
Occupation	-0.4770486	-1.14	0.6114843	-0.73
Extension contact	-0.4770486	-0.04	0.4257184	0.73
Cooperative membership	1.668409	3.53***	1.838672	1.66*
Access to credit	-0.6108885	-1.27	-0.3582717	-0.78
Annual income	2.83E-06	1.79*	5.55E-66	2.40**
Income savings	0.090145	0.21	0.2878936	0.65
Number of cooperatives	-0.0483143	0.54	0.538755	1.81*
Constant	-4.929692	-2.84***	-6.439628	-1.69*
Chi-Squared		24.26		32.27
Pro>chi²		0.0143***		0.00134***
Psendo R²		0.2612		0.3778

Source: Field Survey, 2021

Note: ***, ** and * implies significant at 1%, 5% and 10% level of probability

Table 4: Constraints faced by rural household access to livelihood resources

Constraints	VS (%)	S (%)	NS (%)	WM (x̄)	Decision
Males (n = 67)					
Poor credit facilities	27 (40.3)	33(49.3)	7(10.4)	2.30	Serious
Unfavorable Government policy	26 (38.8)	32(47.8)	99(13.4)	2.25	Serious
Lack of infrastructure	24 (35.8)	35(52.2)	8(11.9)	2.25	Serious
Poor transportation system	29 (43.3)	32(35.8)	14(20.9)	2.22	Serious
Inadequate farmland	25 (37)	32(47.8)	10(14.9)	2.22	Serious
Community culture, value and norms	16 (23.9)	33(46.3)	18(26)	1.97	Not Serious
High level of illiteracy	22 (32.8)	31(46.3)	14(20.9)	2.12	Serious
Poor storage facilities	6 (9.0)	25(37.3)	36(53.7)	1.55	Not Serious
Females (n = 63)					
Poor credit facilities	30 (47.6)	23(36.5)	10(15.9)	2.95	Serious
Unfavorable Government policy	41 (65.1)	16(25.4)	6(9.5)	2.56	Serious
Lack of infrastructure	37 (58.7)	22(34.9)	4(6.4)	2.52	Serious
Poor transportation system	31 (49.2)	25(39.7)	7(19)	2.38	Serious
Inadequate farm land	23 (36.5)	20(31.7)	13(20.6)	2.16	Serious
Community culture, value and norms	19 (30.2)	20(31.7)	24(38.1)	1.92	Not Serious
High level of illiteracy	10 (15.9)	35(55.6)	18(28.6)	1.87	Not Serious
Poor storage facilities	21 (33.3)	35(55.6)	7(11.1)	2.22	Serious

Source: Field Survey, 2021

Note: VS = Very Serious, S = Serious, NS = Not Serious and WM = Weighted Mean

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