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Gender disparity in accessibility to credit among dry season farmers in Ogun state, a case study of Odogbolu local government

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Abstract

The study investigated the gender disparity in access to credit among dry season farmers in Ogun State, Nigeria. Multistage stage sampling technique was employed to select 200 respondents with a purposive selection of a local government and random selection of two communities from same local government. Results shows that 54 percent of the farmers have access to credit of which 38 percent are male farmers and only 14.81 percent of the farmers obtained credit from formal sources. There is a disparity in access to credit by male and female farmers, with male farmers having more access to credit than their female counterparts. While farm size, farm experience directly influences farmer's accessibility to credit in the study area, gender was not significant. This study hereby recommends that government should create more awareness on gender equality in inheritance, formal credit organizations are implored to make credits more available to rural farmers.

Keywords: Gender, disparity, credit, agricultures

1. Introduction

In sub-Saharan Africa, both women and men play very significant roles in socio-economic activities at the family and community levels through smallholder agriculture. Meanwhile, agriculture is the livelihood of nearly 70percent of the economically active population (Tiruneh *et al.*, 2001) ^[20]. The agricultural sector in Africa has three main characteristics. First, it is grossly fragmented into a myriad of small-scale farms. Second, it is a major area of economic activity for women. Finally, productivity is generally low and even lower for women farmers compared to men (Kilic, Palacios-López & Goldstein, 2015) ^[13]. Gender has over the years been defined in different ways, both in research and among the general public. Gender involves and has to do with men as much as it does women. It is beyond the differences between women and men, in fact the term means different things to different people. It refers to those aspects that are shaped by social forces or to the meaning that a society gives to biological differences (Riley, 1997) ^[19]. Women have been the core subject of gender and the term gender issues 'has been majorly used to refer to disadvantages faced by women in the field of agriculture despite the theoretical meaning of gender as roles of males and females (Anaglo, Boateng & Boateng, 2014) ascertains. In Nigeria, women contribute 70% of agricultural work force (AfDB, 2015) yet; they have greater difficulty than men in accessing resources such as land, agricultural inputs and other financial services such as credit which can help in increasing their efficiency and productivity. To have an increased productivity in agriculture, gender equality cannot be over emphasized. Gender equality is a basic human right that requires that men and women be treated equally with respect to resources e.g. credit, education, legislation and policies. Gender-based discrimination results in serious gaps in political, social and economic participation. The end result is a situation of persistent gender inequality (UN, 2012) ^[21]. Importance of credit as an essential input in production has been emphasized by Agbor (2004) ^[5] and Oboh (2010) ^[16] that productivity growths have been found to be usually hindered by limited access to credit facilities by smallholder farmers in Nigeria. Several factors have been identified to influence household access to formal and informal credit facilities. These include household socio-economic characteristics, institutional factors, and production characteristics (Vaessen, 2001) ^[22]. Credit has been considered as one of the critical inputs in agriculture. It is also regarded as an effective means of economic transformation and poverty alleviation (Nwankwo, 2008) ^[15] has been asserted in the literature that access to agricultural credit remains a critical challenge to smallholder farmers in many developing countries (Anang *et al*, 2015) ^[7].

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Farm credit make available new production techniques such as improved inputs, adoption of new technologies and expansion of business size, thereby increasing the farmer’s productivity. Increase in productivity levels of the farmers lead to increase in quantity and quality of produce and consequently increases their farm income which invariably enhances their purchasing power and therefore reduces poverty in their midst (Berret, 1999) [8]. Meanwhile, Farming in Nigeria is majorly seasonal but there are farmers that are into production of crops all year round (dry season farmers or Fadama farmers). Fadama is known as flood plains or swamps which are terrestrially flat areas of land within a river/lake valley or ocean channel but which are elevated above the level of the Main River or ocean channel (Adeniyi, 1993) [2]. It has rich alluvial soils as a result of rivers overflowing their banks during raining season (Ita *et al* 1996) [12]. Types of crops grown by fadama farmers are vegetables classified into two groups based on the part of the plant consumed, which are leafy and fruity vegetables. Having this background this study was undertaken, to fill the information gap on gender disparities in credit access among dry season farmer. This study will address some questions which include; does gender have anything to do with credit accessibility in the study area?, does parameter of credit institution in giving out credit affect gender?, does range of credit accessible by the farmers gender specific?, Are there gender disparities in other areas apart from credit?, Answers to these question will be derived from an empirical investigation of gender disparities in credit access among dry season farmers.

2. Methodology
Study Area

The study was carried out at Odogbolu, in odogbolu local government Ogun state. It is located 110 km by road north-east of Lagos south-western Nigeria. It is within 100 km of the Atlantic Ocean in the eastern part of Ogun State and has a warm tropical climate. It lies squarely within the tropical lowland Rain Forest region. Dry season farmers cultivate okra mainly in the area. Other crops cultivated in this area include cassava, oil palm and water yam in the urban and peri-urban area. The primary data was used. It was collected with the aid of well-structured questionnaire. Information on the socio economic characteristics of farmers of dry season (okra farmer) was requested for. These include their age, gender, marital status, farming experience, size of farm. Credit activities of the respondent like membership in credit association, farmer’s involvement in different sources of credit, credit access experience, availability of collateral, interest rate charged and sources of credit to each respondent was obtained. In addition information on their farm characteristics was collected.

Sampling Technique

The study employs multistage stage sampling technique. A purposive selection of 5 communities in Odogbolu local government area in Ogun state is the first stage. The choice is dictated by the fact that large number of dry season farmers operate in the area. The second stage involves random selection of two communities in the local government area. A total of two hundred (200) questionnaires were administered. A representative sample of both male and female farmers was obtained. Data collected were analyzed using descriptive statistics

(frequencies, percentages, mean, and standard deviation) t-test statistics and the linear regression model. The demographic profile was processed using descriptive statistics. Linear regression model of the ordinary least square (OLS) approach was used in order to ascertain the effect of gender on access to agricultural credit. The use of (OLS) is informed by the fact that under normality assumption for e_i , the OLS estimator is normally distributed and are said to be best, unbiased linear estimator. The model is implicitly specified as follows; the model is implicitly specified as follows;

$$Y = f(X_1, X_2, X_3 \dots X_n + e_i) \quad \text{eq (1)}$$

The model is explicitly specified as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 \dots \beta_k X_k + e_i \quad \text{eq (2)}$$

Where: α = intercept

Y = Amount of credit applied for (in naira).

$\beta_1 - \beta_{10}$ = Regression coefficient

E_i = Error term designed to capture the effects of unspecified variables in the model.

α = Constant term

The α and βS are the parameters for estimation and these are the error terms. The regression analysis was run using SPSS package so as to determine the order of importance of the explanatory variables in explaining the variation observed in the dependent variables. The t-test was also performed to test the significance of each of the explanatory variables at the alpha levels of 5 percent.

Farm characteristics

X_1 = Farm size in hectares.

X_2 = Quantity of labor in man-days.

X_3 = Quantity or cost of chemical

Farmer’s characteristics

X_4 = Age of the farmer (year).

X_5 = Sex (male=1, female=0)

X_6 = Year of formal of farmer (years).

X_7 = Marital status of farmer (married = 1, otherwise = 0).

X_8 = Primary occupation of farmers (farming = 1, otherwise = 0).

X_9 = Value of Asset.

X_{10} = Farming experience (years).

3. Analysis and Results

3.1 Socio economic characteristics of respondent

3.1.1 Gender

Table 1 shows Male farmers represented half of the respondents while the other half were female which gives an equal representation of both genders. This goal is to allow for an unbiased evaluation of the population.

Table 1: Respondent’s distribution by gender

Gender	Frequency	Percentage
Female	100	50
Male	100	50
Total	200	100

Source; Field Survey, 2019

3.1.2 Age

The result in Table 2 shows that 68 percent of the female farmers fall between the age ranges of 40-49years while 40 percent of the male farmers fall between same ranges. A large percentage i.e. 54 percent of all the farmers fall

between the age ranges of 40-49years which indicates that farmers within this age group are the most active working age in the study area. In all it shows that farmers within ages 40-59 years represent 85 percent of the economically active farmers.

Table 2: Respondent’s distribution by Age

Age (years)	Female		Male		All	
	Frequency	%	Frequency	%	Frequency	%
30-39	8	8	12	12	20	10
40-49	68	68	40	40	108	54
50-59	22	22	40	40	62	31
60-69	2	2	8	8	10	5
Total	100	100	100	100	200	100

Source; Field Survey, 2019

3.1.3 Marital Status

82 percent of the respondents in Table 3 are married, 15 percent are widowed, and 2 percent are single while 1 percent divorced. Almost equal numbers of male and female are married and they represent the largest number of

farmers.

Table 3: Respondent’s distribution by marital status.

Marital status	Female		Male		All	
	Frequency	%	Frequency	%	Frequency	%
Married	80	80	84	82	164	82
Single	0	0	4	4	4	2
Widowed	20	20	10	10	30	15
Divorced	0	0	2	2	2	1
Total	100	100	100	100	200	100

Source; Field Survey, 2019

3.1.4 Highest Educational

Table 4 shows that 26 percent of the female farmers had secondary education while larger percentage only have access to primary education compared to their male counterpart which have 34 percent of them with secondary education. This shows that male farmers had access to higher educational level than female farmers in the study area.

Table 4: Respondent’s distribution by highest educational qualification.

Highest educational qualification	Female		Male		All	
	Frequency	%	Frequency	%	Frequency	%
No formal	16	16	16	16	32	16
Primary	54	54	38	38	92	46
Secondary	26	26	34	34	60	30
Tertiary	4	4	12	1	6	8
Total	100	100	100	100	200	100

Source; Field Survey, 2019

3.1.5 Household size

Majority of the household have family sizes within the range of 6 - 9 people (67 percent) in Table 6 followed by 16 percent of them having between 10-13 persons per household. This shows that 83 percent of the respondents

have between 6-13persons per household which in turn allows for the use of family labor among the respondents. Most times when family labors are used it reduces the cost of hiring labor among farming households.

Table 6: Respondent’s distribution by household size.

Household size	Female		male		All	
	Frequency	%	Frequency	%	Frequency	%
< 5	0	0	10	10	10	5
6-9	70	70	64	64	134	67
10-13	14	14	18	18	32	16
>13	16	16	8	8	24	12
Total	100	100	100	100	200	100

Source; Field Survey, 2019

3.1.6 Farming Experience

Table 7 shows that higher percentage (54) female farmers have been involved in farming for between 8-12 years while

only 32 percent of male farmers have been involved for the same number of years. In all, 64 percent of them are well involved in agriculture for between 8-17 years.

Table 7: Respondent’s distribution by farming experience.

Farming experience (years)	Female		Male		All	
	Frequency	%	Frequency	%	Frequency	%
<8	4	4	4	4	8	4
8-12	54	54	32	32	86	43
13-17	20	20	22	22	42	21
18-22	10	10	22	22	32	16
>22	12	12	20	20	32	16
Total	100	100	100	100	200	100

Source; Field Survey, 2019

3.2 Farm characteristics

3.2.1 Farm size

44 percent of the female farmers in Table 8 have a farm size of between 3-4 hectares while 51 percent of male have between the same sizes. Meaning male farmers have larger farm size compared to the female farmers in the study area. Lower percentage of the farmers have more than 6 hectare meaning that farmers do not have much hectares of land in the area.

Table 8: Respondent’s distribution by farm size

Farm size (hectare)	Female		Male		All	
	Frequency	%	Frequency	%	Frequency	%
1-2	28	28	22	22	60	30
3-4	44	44	58	58	102	51
5-6	18	18	18	18	36	18
>6	0	0	2	2	2	1
Total	100	100	50	100	200	100

Source; Field Survey, 2011

3.2.2 Method of Land Acquisition

The result in Table 9 shows that 46 percent of the female farmers acquired their land through inheritance as well as 58 percent of the male farmers. In aggregate, 52 percent of the farmers acquire land through inheritance followed 19 percent farmers that acquired their land through rental. This is in line with (Davison, 1988) ^[9] where historically, men gained access to land as lineage members, but in the majority of cases, women gained access as wives; in a few cases, women inherited land as lineage daughters. Indeed, most women do not own the land which they farm. Customary practices and to a lesser extent legal provisions limit women’s access to land and other productive resources (Action Aid, 2011) ^[1].

Table 9: Respondent’s distribution by method of land acquisition.

Method of land acquisition	Female		Male		All	
	Frequency	%	Frequency	%	Frequency	%
Leased	18	12	12	12	24	12
Rented	22	22	16	16	38	19
Purchased	20	20	14	14	34	17
Inherited	46	46	58	58	102	52
Total	100	100	100	100	200	100

Source; Field Survey, 2011

Table 11: Respondent’s distribution by access to credit

Credit accessibility	Female		Male		All	
	Frequency	%	Frequency	%	Frequency	%
No	68	68	24	24	92	46
Yes	32	32	76	76	108	54
Total	100	100	100	100	200	100

Source; Field Survey, 2019

With 54 percent of the respondents having access to credit, this study goes further to know their different sources of credit, amount of credit requested and obtained, range of credit accessed and distance to credit sources.

3.3.3 Credit source

Table 12 shows that the sources of credit available and patronized by farmers in the study area is grouped into two; formal source and informal source of credit. Higher percentage of the farmers gets their credit from Informal sources (money lenders cooperative, contribution, friends

3.3 Credit access and sources

3.3.1 Membership of credit group

In Table 10, 54 percent of the respondents do not belong to any credit group due to reasons such as lack of interest in credit groups, contentment in level of production, enough funds for production etc. while the remaining 46 percent belong to one credit group or the other. For both male and female farmers the larger percentage does not belong to any credit group. This means that they are able to borrow from other sources of credit without necessarily being in a group example of such is borrowing from money lenders, family and friends etc.

Table 10: Respondent’s distribution by membership of credit group.

Membership of credit group	female		Male		All	
	Frequency	%	frequency	%	Frequency	%
No	68	68	40	40	108	54
Yes	32	32	60	60	92	46
Total	100	100	100	100	200	100

Source; Field Survey, 2019

3.3.2 Access to credit

Table 11 shows that 54 percent of the farmers have access to credit while 46 percent do not have access to credit. Out of the 54 percent that have access to credit, more male farmers i.e. 38 percent have access while 16 percent of female have access to credit. Female farmer’s access to credit is lower relative to that of men. (Fletschner 2009) ^[11] ascertains that several reasons have been adduced for this as men may try to limit the working capital available to them (female) by restricting their access to family funds; by making it difficult for them to go to the financial institutions or participate in committee meetings; by not helping them pay membership shares; or by not granting them access to property that can be used as collateral. Meanwhile in india, Mazumder, Dastidar and Bhandari (2017) ^[14] analyzed and ascertains that the gender of the entrepreneur has a dominant and significant impact on access to credit, indicating gender discrimination in access to credit where male respondents were more favored in accessing formal credit than females.

and family). For both male and female savings/ contribution and cooperative are their main sources of credit while it is mainly cooperative for female farmers. This agrees with the study by Okunade E.O, 2007 that the major sources of credit available to the farmers are cooperative societies among others this is because the major problems facing the women’s accessibility to credit are inaccessibility to loan and loan information, administrative bureaucracy, high interest rate and untimely disbursement of loan which is required by formal sources of credit.

Table 12: Respondent’s distribution by credit sources

Credit access and sources	Female		Male		All	
	Frequency	%	Frequency	%	Frequency	%
Commercial bank	2	6.25	2	2.63	4	3.70
Microfinance bank	2	6.25	10	13.15	12	11.11
Cooperative bank	10	31.25	20	26.31	30	27.77
Contribution	6	18.75	20	26.31	26	24
Money lenders	8	25	10	13.15	18	16.67
Friends and Family	4	12.5	14	18.42	18	16.67
Total	32	100	76	100	108	100

Source; Field Survey, 2019

3.3.4 Credit Requested and Credit Obtained by Farmers. The result in Table 13 shows that out of 54 percent of farmers that requested for one amount or the other only 40 percent were able to get the exact amount they

requested for. The minimum amount of credit requested by both male and female farmers is #10,000 while the maximum amount requested by female and male farmers is #100,000 and #150,000 respectively.

Table 13: Respondent’s distribution by amount credit requested and obtained

Credit Amount in Naira	Amount requested			Amount obtained		
	Female	Male	All	Female	Male	All
10, 000-30, 000	8 (25)	16 (21)	24 (22.22)	8 (30.76)	16 (29.62)	24 (30)
40, 000-60, 000	20(62.5)	44 (57.89)	64(59.25)	18(69.23)	32 (59.25)	50 (62.5)
70, 000-90, 000	0 (0)	2 (2.6)	2 (1.85)	0 (0)	2 (3.7)	2 (2.5)
100, 000 and above	4 (12.5)	14 (18.42)	18 (16.65)	0 (0)	4 (7.4)	4 (5)
Total	32	76	108	26	54	80

Source; Field Survey, 2019

3.3.5 Range of Credit Accessible

59.25 percent of the farmers which is the highest percentage have access to between #40,000-#60,000 in Table 14 meanwhile only 22.22 percent of the farmer having access to between 10,000 and 30,000. In aggregate, 81.47 percent

of the farmers have access to between #10,000 and #60,000, with male farmers having more percentage. The minimum credit accessed by both male and female farmers is #10,000 while the maximum amount accessed by them is #100,000.

Table 14: Respondents distribution by range of credit accessed

Range of credit accessed in Naira	Female		Male		All	
	Frequency	%	Frequency	%	Frequency	%
10,000-30,000	8	25	16	22.22	24	22.22
40,000-60,000	20	62.5	44	61.11	64	59.25
70,000-100,000	4	12.5	16	22.22	20	18.51
above 100,000	0	0	0	0	0	0
Total	32	100	72	100	108	100

Source; Field Survey, 2019

3.4 Factors affecting farmers access to credit

Table 15: Factors affecting farmer’s access to credit

Independent variable	Regression coefficient	Standard error	t- ratio
Farm size	0.9842***	0.1988	4.35
Man days of labour	1.3330***	0.4725	3.54
Quantity of chemical	-0.2533**	0.01597	-2.08
Sex	0.3422	0.1565	1.42
Age	0.0887	0.1238	0.56
Number of years spent in school	-0.00983	0.0127	-0.78
Marital status	0.0871	0.1038	0.65
Primary occupation	0.0960	0.1073	0.80
Total input	-2.14	8.42	-2.86
Farming experience	0.04186*	0.0127	1.73
Household size	0.0027	0.0221	0.12
constant	11.8904	0.5502	21.61

R-squared=0.5909, Adjusted R-squared = 0.4920

Note: The signs (***), (**), (*) indicate the level of significance of the variables at 1 percent, 5 percent and 10 percent respectively. The coefficient of multiple determination (R²) is 0.59 in Table 15 and it shows that 59

percent of the variation in the dependent variable is explained by the independent variables. In all, the model represents a good fit of the data. The negative coefficient implies an inverse relationship between the explanatory and

the dependent variable while positive coefficients implies a direct relationship between the dependent and independent variables. It should be noted that not all the independent variables carried the expected signs. Three independent variables were found to be statistically significant at different levels and these variables include farming experience, farm size and quantity of chemical. The farm size has a positive coefficient and is significant at 1 percent. Explaining that farm size directly influences farmers accessibility to credit in the study area i.e a hectare increase in farm size of the farmer brings about increase in amount of loan the farmer can assess by #0.98 The quantity of chemical has a negative coefficient and is statistically significant at 1 percent. Meaning it has a negative relationship indicating that an increase in the number of dependents in the family will bring about a decrease in amount of loan the farmer can assess by #25.00. The coefficient of farming experience is positive and is statistically significant at 10 percent level. This means that there is a direct relationship between farming experience and accessibility to credit indicating that a year increase in farming experience will bring about an increase in farmers access to credit by #4.10. The coefficient of man days of labour is positive and has a confidence level of 99 percent. This means an increase in man days of labour will result in an increase access by the amount of loan the farmer can access by # 33.3 Other independent variables in the model that are not statistically significant are sex, age, number of years spent in school, marital status, primary occupation, total input, household size. It is important to mention that gender as a factor was not significant in influencing access to credit.

4. Summary of Major Findings

The study shows that both male and female farmers are well represented with a percentage of 50 percent each. The majority of the male and female farmers were in their active working age with 85 percent ranging from 40-59 years. The population of the male and female farmers is dominated by married people representing 82 percent. In contrast to rural farmers, about 84 percent of both gender had education. The mean household size for female farmers is 10 while for male farmers is 9. The mean farm size of the female farmers is 3 hectares while the mean farm size of male is 3.5 hectares. Farm land for male and female farmers follow the same trend with a percentage of 52 percent acquiring land through inheritance. Majority of the farmers are full time farmers with about 60 percent of the total number of respondents. The mean farming experience for female farmers is 14 years while for male farmers is 16 years. The study further found out that 46 percent of the farmers belong to different credit groups of which male farmers are 30 percent and female farmers 16 percent. Also, 54 percent of the farmers have access to credit with male farmers having 38 percent and the female 16 percent which shows that male farmers have more access to credit than female farmers. Meanwhile 85 percent of both gender obtain their credit mainly from informal source while 14.81 percent obtain theirs from formal sources. The mean amount accessed by the female farmers is N16, 500 and that of male farmers is N 35,500 showing that there is a significant difference between the amount accessed by female and male farmers.

The results also showed that there is a disparity in access to credit by male and female farmers, with male farmers

having more access to credit than their female counterparts. The study revealed that higher percentage of the male farmer acquired their land through inheritance this is in line with Adeolu and Taiwo (2004) ^[3] which revealed that most communities in Nigeria are agricultural or farm based; reports have it that there are unequal gender access to productive resources such as land, labor, and capital at farm level. From the analysis, the joint effect of the explanatory variable in the model account for 59.1 percent of the variations in the factors influencing farmers access to agricultural credit.

5. Conclusion

Based on the findings of this study, there is disparity in credit access among the dry season farmers of odogbolu local government. Male dry season farmers have access to credit than female farmers and they both prefer credit obtained from informal and non institutional sources. This is due to their inability to meet the lending requirement as well as non availability of appropriate formal sources of credit which will make loans available to farmers at relatively lower and bearable interest rate. The study also concludes that almost all the farmers that have access to credit prefer to belong to credit groups so that credit can be obtained anytime and when required. This study hereby recommends that government should create more awareness on gender equality in inheritance of land in different cultural settings, formal credit organizations are implored to make credits more available to rural farmers on time and at a relatively lower interest rate, Non-governmental organizations are urged to create additional platforms for more female farmers to harness opportunities in accessing agricultural loans.

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