Gender Disparity Among Cooperative Farmers in Accessing Agricultural Credits in Anambra State, Nigeria

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Abstract

Women have been the focus of gender disparity and this has been widely referred to the disparity faced by women in the field of agriculture. Agricultural credit is imperative for sustainable agricultural development in any country of the world. In order to substantiate the assertion, this study evaluated the issues of gender disparity in farmers' access to agricultural credit among cooperative societies in Anambra north zone of Anambra State. Specific objectives were to ascertain the quantum of credit obtained and repaid by female and male members; determine the effect of gender on the quantum of credit obtained and repaid; ascertain critical factors influencing access to credit by cooperative members; determine how gender contributed to credit repayment behaviour of cooperative members and examine perception of members on gender-related issues in credit operations. ANOVA and regression models were used to test hypotheses 1-5. Findings revealed that male members obtained more credit than female members, and female members repay more than their male counterparts. Gender was not a significant determinant of credit obtained and repaid by cooperative members and gender issues in credit operation were handled among cooperative members. However, the researcher recommended that the issues of gender inequality should not be encouraged. Both males and females should have equal access to credit and repayment of credit operation; despite the membership strength, more members should be encouraged to join cooperative societies in order to access credit and repay accordingly and cooperative officers should set up friendly credit scheme to ensure a functional and effective credit access.

Keywords: agricultural credit, gender disparity, agriculture produce, cooperative management, farm inputs, women cooperatives, rural development

1. Introduction

Women have been the focus of gender studies and the term 'gender issues' has been widely used to refer to the disparity faced by women in the field of agriculture, (Anaglo, Boateng, & Boateng, 2014). Agricultural credit is very important for sustainable agricultural development to be achieved in any country of the world. Farmers are particularly in need of such instrument, because of the seasonal pattern of their activities. Adegeye and Dittoh (2005) described agricultural credit as the process of obtaining control over the use of money, goods and services in the present in exchange for a promise to repay at a future date. Imoudu and Onaksapnome (2012) contended that agricultural loan is a crucial input in smallholder agriculture because it enables small-scale farmers to establish and expand their farms as this would increase their income and ability to repay loan.

Borrowed agricultural fund which is also described as agricultural credit is one of the pre-requisites for farmers to increase the agricultural output in the process of agricultural development of a country. As cited by Oladeebo and Oladeebo (2008), agricultural lending involves giving out of credit (in cash and kind) to small- scale farmers for the purpose of farming. According to Nwachukwu et al (2010) Credit is an important instrument for improving the welfare of the poor directly through consumption smoothening that reduces their vulnerability to short term income. It also enhances the production capacity of the resource-poor farmers through financing investment in their human

and physical capital. There is no doubt that in recent times, considerable interest has been shown by agricultural economists, planners, policy makers, agribusiness managers, agriculturists, and financial institutions on the need to pay more attention to farmers in Nigeria. In modern farming business in Nigeria, provision of agricultural credit is not enough but efficient use of such credit has become an important factor in order to increase productivity. Credit is not only needed for farming purpose, but also for family and consumption expenses especially during the off season period. Credit has also been discovered to be a major constraint on the intensification of both large and small-scale farming (Von-Pischke, 2001)

Women have a principal role in agribusiness, food processing and consumer-related activities. Women perform the bulk of substance production (70%) and the reproductive work (Bryson, 2012; International Labour Organization (ILO), 2013). The International Labour Organization (2013) estimated that 78% of women in Africa are active in agriculture, compared to only 64% of men. Jiggins (2007) reveal that women play pivotal role in food security because of their strategic position in the household and productive work they do outside. They further stated that out of 95% small-scale farmers in Nigeria who actually feed the nation, 55% of them are women. Women have been found to contribute 60% of the labour force, produce 80% of food, and earn 10% of the money income but own one percent of the farm asset.

In Nigeria and most African Countries, women farmers play a very important role in agriculture (broiler and other food crops production) (Adinya, 2011). Women are regarded as the bedrock of food production particularly in developing countries (Agbor, 2012). Kuye (2006) revealed that the contributions of women to national development, has been a major area of interest and the focus of a considerable amount of research activity. They further stated that in the recent years, researchers have focused on the dynamic role women have played in changing the rural communities. It has been discovered that women constitute a potential group in rural development combing domestic, procreative and other activities, to ensure survival of their families.

Despite the various contributions and efforts by women in broiler production, studies reveal that there are some constraints that militate against women's role in broiler production in Cross River State, Nigeria, Africa and the world at large. For instance, findings from the poverty and development study conducted by the World Bank in Nigeria using participatory poverty assessment method indicated that the consequences of being a woman in Nigeria include amongst others, the likelihood of having very limited coping strategies and safety nets and constantly living with a sense of insecurity (World Bank, 2009; Adeolu and Taiwo, 2004). These authors 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, labour, and capital at farm level. Therefore, this study set out to specifically aim at ascertaining the quantum of credit obtained and repaid by female and male members; determining the effect of gender on the quantum of credit obtained and repaid; ascertaining critical factors affecting access to credit by cooperative members; determining how gender contributes to credit repayment behaviour of cooperative members.

1.1 Hypotheses

Ho_1: Female members' access to agricultural credit is not significantly different from those of male members.

Ho_2: Gender is not a significant determinant of access to agricultural credit.

Ho_3: Gender is not a significant determinant of credit repayment by cooperative members.

1.2 Theoretical Framework

This study adopted the social action theory. The social action theory was introduced by Max Weber in 1932. The Social Action Theory is a community-oriented model that is used to increase the problem-solving ability of entire communities through achieving concrete changes towards social justice. That is, individuals within communities come together to redress the imbalance of powers or privileges between a disadvantaged group and society at large, although this community-community-organization model is applicable to many social issues, that are disproportionately affecting certain communities. The Social Action Theory applies key concepts and tenets that are used within many community-organizing and community-building models. As described in the literature (Minkler, Wallerstein and Wilson, 2008; Glanz, 2008), these key concepts and tenets include empowerment, critical consciousness, community capacity, social capital, issue selection, and participation and relevance, which are defined below.

Empowerment is any social process that allows people to gain mastery over their lives and their community. In doing so, empowerment aims to transform power relations between communities, institutions, and governmental agencies. For example, communities may feel more empowered when they work together to strengthen their cultural identity and their community assets.

Critical Consciousness is a mental state by which members in a community recognize the need for social change and are ready to work to achieve those changes. Although this process is not obvious, it is completely necessary in achieving community involvement. We can raise critical consciousness by engaging individuals in dialogues, forums, and discussions that clearly relate how problems and their root causes can be solved through social action.

Community Capacity is a characteristic of a community that affects their ability to mobilize and identify and solve social problems. These characteristics include the presence of leadership, participation, skills, sense of community, and more. Community capacity can be enhanced in many ways, such as through skill-building workshops that allow members of the community to become more effective leaders.

Social Capital is community resources that exist via relationships formed between community members. Social resources such as trust, reciprocity, and civic engagement can connect individuals in a fragmented community across social boundaries and power hierarchies, facilitating community building and organization. Social networking techniques and enhancing social support are important methods that build social capital.

Issue Selection is the process by which communities identify winnable, specific goals that unify and build community strength. In this process, individuals work together to select issues they feel are relevant to the entire community.

Participation and Relevance. Lastly, after selecting an issue, communities need to engage members and work on implementing their plan of action.

Relevance of social action theory as regards to this study shows that individuals may feel more empowered without discrimination when they work together in cooperative to strengthen their businesses, thereby improving their economic status. Again, there is no discrimination in joining cooperative. This was on grounds of the principle of no discrimination on gender of members that govern cooperative movement. So, joining cooperative raises critical consciousness in an individual. This is because joining cooperative avails a member the opportunity of engaging in productive dialogues, forums, and discussions that clearly relate how their social and economic problems and their root causes can be solved through social action. By joining cooperative, capacity building is possible as members are privileged to enhance their leadership and management ability in many ways, such as through skill-building workshops that allow members of the cooperative to become more effective leaders. In cooperative, there is a value of trust, reciprocity, and civic engagement which can connect individuals in a fragmented community across social boundaries and power hierarchies, facilitating community building and organization. Male and female members, therefore, should have equal opportunities to getting cooperative loans provided the member loan applicant had met other loan management requirements.

2. Materials and Methods

2.1 Research Design

This study used survey design method. It entails of asking questions, gathering and analyzing data from a supposedly representative members of the population at a single point in time with a view to determining the current situation of that population with respect to one or more variables under investigation.

2.2 Area of Study

The area of the study is Anambra North Senatorial Zone in Anambra State, Nigeria. This area consists of the following Local Government Area; Anambra east, Anambra west, Ayamelum, Ogbaru, Onitsha North, Onitsha South and Oyi L.G.A. There are fifty six (56) communities in Anambra North Zone. Anambra North people are historically traditional fishermen/women as well as known warriors. It is a State in South-Eastern Nigeria. The boundaries are formed by Delta State to the West, Imo State and Rivers State to the South, Enugu state to the east and Kogi state to the North. Anambra North has notable people such as the late chief Stephen Osita Osadebe, the King of high music etc. The indigenous ethnic group in Anambra State are the Igbos (90% of the population) who lives mainly in the North-Western parts of the State. Anambra North is a projected linked road to other part of the State with a proposed Airport and 2nd Niger Bridge. The State was created in 1991.

2.3 Sample Size and Sampling Procedure

Agricultural cooperative societies with a membership size of one thousand two hundred (1200) members were used. A random sampling technique was used to select four societies each from the five (5) Local Government Areas in Anambra North Senatorial Zone in Anambra State. The selected societies include:

Table 1. Distribution of membership size of selected cooperative societies in the study area

Names of cooperative societies	Male	Female	Total	Sample size
Oganiru Odekpe FMCS	45	15	60	15
Udoamaka Atani fmcs	45	15	65	16
Christ the king iyrowa fmcs	45	18	63	16
Unity Ochuche Fmcs	41	12	53	13
Orabueze Umuname Fcmcs	35	13	48	12
Oganiru Aguleri rice farmer coop soc.	50	20	70	18
Nlidiuto (Udatoin) Umueri fmcs	39	10	49	12
Ekpe 2 Udeabo Umueri Farm Coop Soc	40	35	75	19
Udoka (Igbakwu) Fmcs ltd	36	17	53	13
Egojijw (Omor) Fmcs Ltd	50	30	80	20
Iboji (Umumbo) Fmcs Ltd	45	10	55	14
Ugo farmer Umuogwu Anam Ltd	69	20	89	22
Mercy farmer (Umuogwu-Anam Ltd Fmc	50	15	65	16
Ifite Anam MCS Ltd	35	15	50	12
Obinwanne Umuikwu Anam Mcs Ltd	20	10	30	8
Obinwanne Ogbunike MCS Ltd	41	9	50	12
Njikoamaka Awkuzu MCS Ltd	60	20	80	20
Madonna Awkuzu Mcs Ltd	46	29	75	19
Anuli Oroma-Etiti Anam (Fug) Ltd Mcs	35	25	60	15
Igwebuike (Igbakwu) Fmcs Ltd	16	14	30	8
Total	843	357	1200	300

2.4 Validity and Reliability of Instruments

The measuring instrument used in this study was carefully designed in a systematic way that enabled the researcher elicit opinionated, factual and interpretative information pertinent to the purpose and objective of the study after painstaking and constructive critique from colleagues. The instrument was subjected to test – retest pilot study in order to prove the level of reliability of the research instrument.

A pilot study conducted, copies of the questionnaire for the study were administered to 20 (twenty) respondents in Anambra North Senatorial Zone of Anambra State. The same instrument was administered to the same respondents after two weeks. The coefficient of reliability for their responses was established using Pearson Correlation Coefficient. The Pearson Correlation Coefficient showed a reliability value of 0.811 which was considered high enough for the instrument to be reliable.

2.5 Method of Data Analysis

Data collected were analyzed using descriptive statistics (frequencies, percentages, mean, and standard deviation). Likert scale, ANOVA and linear regression model were also used for further analyses. Hypothesis one was tested using, One Way Analysis of Variance (ANOVA). Hypotheses two and three were tested using regression model estimate.

2.5.1 Regression Model

Linear regression model of the Ordinary Least Square (OLS) approach was used to test hypothesis three and four in order to ascertain the effect of gender on access to agricultural credit obtained and repaid. The use of OLS is informed by the fact that under normality assumption for e.g, the OLS estimator is normally distributed and are said to be best, unbiased linear estimator (Gujarati, 2008).

The models are implicitly specified as follows;

$$Y_1 = f(X_1, X_2, X_3 \ldots\ldots X_n + e.i) \quad \text{Eq(1)}$$

$$Y_2 = f(X_1, X_2, X_3 \ldots\ldots X_n + e.i) \quad \text{Eq(2)}$$

The models are further explicitly specified as follows;

$$Y_1 = \alpha+\beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 \ldots\ldots \beta_kX_k + e.i \quad \text{Eq(3)}$$

$$Y_2 = \alpha+\beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 \ldots\ldots \beta_kX_k + e.i \quad \text{Eq(3)}$$

Where:

α = intercept

Y_1 = Amount of credit obtained for (in Naira).

Y_2 = Amount of credit repaid for (in Naira).

β_1-β_{10}= Regression coefficient

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

X_1 = Gender (male = 0; female = 1)

X_2 = Age of farmer (years)

X_3 = Marital status (married = 0; single = 0)

X_4 = Education (years of formal educations)

X_5 = Years of cooperative membership (years)

X_6 = Income of the farmer (Naira)

X_7 = Amount of savings in cooperative (Naira)

X_8 = Repayment history (Fully repaid=0; not fully repaid=1)

α = Constant term

The α and β_S are the parameters to be estimated and these are the error terms s.

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%.

4. Results and Discussion

4.1 Test of Hypothesis One

Ho_1: Female members' access to agricultural credit is not significantly different from those of male members.

Table 2. ANOVA Table for test of hypothesis one

		Sum of Squares	Df	Mean Square	F	Sig.
Credit obtain	Between group	77073551963.282	1	77073551963.282	4.881	.028
	Within Groups	4705810897603.385	298	15791311736.924		
	Total	4782884449566.667	299			

The results of the One way ANOVA in Table 2 above shows that the access to agricultural credit when examined with the membership of cooperative. It showed F ratio value of 4.881 which was very significant at the conventional 5% level. As a result of this, the null hypothesis as stated above is rejected and we conclude that female members' access to agricultural credit is not significantly different from those of male members. The implication of this is that cooperative member farmers have more opportunities to improve their income level to both male and female farmers. This findings justifies the mean values obtained in Table 4 which revealed that membership of a cooperative has strong influence on income of farmers. Therefore, it shows that females are more favoured than male counterpart in access to agricultural credit.

4.2 Test of Hypothesis Two

Ho_2: Gender is not a significant determinant of access to agricultural credit.

Table 3. ANOVA Table for test of hypothesis three

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	712037794460.377	8	89004724307.547	6.362	.000[b]
	Residual	4070846655106.302	291	13989163763.252		
	Total	4782884449566.680	299			

Table 4. Test of hypothesis three: Regression estimates

Model	B	Coefficient Estimates	T-Value	Significance
(CONSTANT)	304664.814		7.018	.000
$X_{1\ Gender}$	-20058.402	-.079	-1.417	.158
$X_{2\ Age}$	1781.851	.248	4.574	.000
$X_{3marrital\ status}$	2315.891	.004	.075	.941
$X_{4\ education}$	-2307.997	-.104	-1.833	.068
$X_{5\ years\ of\ membership}$	-2362.905	-.074	-1.295	.196
$X_{6income}$	.008	.045	.817	.415
$X_{7saving}$	.050	.035	.616	.539
$X_{8repay\ history}$	-64229.445	-219	-3.866	.000
R	.386			
R^2	.149			
$Adj\ R^2$	.125			
F	6.362			

Dependent Variable: Credit obtained.

In relation with Tables 3 & 4, is an analysis of variance (ANOVA) showing the result which was used to determine the means of the various responses from the sample of Gender disparity as it relates to their level of agricultural credit among cooperative farmers. The result review that there is a significant determinant in access to agricultural credit 0.05 level of significant. The implication is that gender has access to agricultural credit among cooperative farmers. Therefore, the null hypothesis is rejected while the alternate hypothesis is accepted which state that gender is a significant determinant of access to agricultural credit.

In other to evaluate socioeconomic gender on determinant access to agricultural credit, the regression analysis was run. The Table showed the precision of the model. In the general joint effect of the explanatory variables in the model account for 12.5% of the variation in access to agricultural credit. F value is 6.362 which is at the significance level of 5%

Two coefficients (Age and repay history) were significant 1% respectively. Age showed a positive relationship indicating that a year increase in the age of farmer brings about increase in amount of loan the farmer can assess by N1781.851, repayment history showed a negative sign in the amount of loan farmers can repay by N-64229.445 which reviewed that there is a significant in access to agricultural credit. Six variables have expected positive signs suggesting direct relationship with genders income.

It is important to mention that gender is not a significant determinant of access to agricultural credit. This was on grounds of the principle of no discrimination on gender of members that govern cooperative movement. Male and female members had equal opportunities to obtained cooperative credit provided the member credit applicant had met other credit management requirements.

4.3 Test of Hypothesis Three

Ho_3: Gender is not a significant determinant of credit repayment by cooperative members.

Table 5. Test of hypothesis four: Regression estimates

Model	B	Coefficient Estimates	T-Value	Significance
(CONSTANT)	131288.646		3.957	.000
$X_{1\ Gender}$	-15268.584	-.067	-1.521	.129
$X_{2\ Age}$	3867.018	.599	13.566	.000
$X_{3marrital\ status}$	-57607.477	-.114	-2.627	.009
$X_{4\ education}$	2124.160	.106	2.374	.018
$X_{5\ year\ of\ membership}$	266.582	.009	.206	.837
$X_{6income}$	*-.002*	-.012	-.284	.776
$X_{7saving}$	*.009*	.007	.148	.883
$X_{8credit\ obtained}$	*.172*	.191	4.148	.000
$X_{repay\ history}$	*1222.561*	.005	.102	.919
R	.690			
R^2	.477			
$Adj\ R^2$	*.467*			
F	29.335			

Dependent Variable: Credit repaid.

In other to evaluate socioeconomic on gender determinant of credit repayment by cooperative members' the regression analysis was ran. Table 5 shows the precision of the model. The estimates of R^2 and Adj. R^2 suggest that all the variables in the model collectively accounted for more than 47.7% of the variations on credit repayment. F. ratio value of 29.335 was significant at 5% level.

Five variable (gender, membership, income, saving, and repay history) has expected positive signs suggesting direct relationship with credit repayment. However, three variables (age, marital status and education) were significant at the expected level.

Table 6. ANOVA Table for test of hypothesis three

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	1845245900005.187	9	205027322222.799	29.335	.000[b]
1	Residual	2026873750513.054	290	6989219829.355		
	Total	3872119650518.241	299			

Table 6 is an analysis of variance (ANOVA) showing the result which was used to determine the means of the various responses from the sample of Gender disparity as it relates to their level of agricultural credit repayment among cooperative farmers. The result reveals that there is a significant determinant of credit repayment by cooperative members 0.05 level of significant. The implication is that gender responds to credit repayment among cooperative farmers. Therefore, the null hypothesis is rejected while the alternate hypothesis is accepted which state that gender is a significant determinant of credit repayment by cooperative members.

5. Conclusion

In evaluating the issue of gender disparity in farmers' access to agricultural credit among cooperative societies in Anambra North Senatorial zone of Anambra state, it will be instructive to conclude that female members' access to

agricultural credit was not significantly different from those of male members though male members tend to access credit facilities more regularly than female members as a result of their experience. In the case of loan repayment, gender is not a significant determinant of credit repayment by cooperative members and as such, female members are more favoured than male counterpart in handling issues relating to credit operation. It is strongly recommended that Cooperative societies should provide adequate farm credit through the help of government to enable them improved food production, as well as ensure food security in the society.

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