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IMPACT OF MICROFINANCE BANKS' CREDIT FACILITIES ON AGRICULTURAL PRODUCTION IMPROVEMENT AMONG SMALL-SCALE FARMERS IN KWARA STATE

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Abstract

Sustainable agricultural output is a major concern for government at all levels due to the tremendous benefits it creates for both individuals and the economy at large. In a bid to develop the agricultural sector, particularly within the rural space, several programmes had been initiated by past governments; notable among is the microfinance banks (MFBs). This study examined the impact of loans and advances granted by microfinance banks on agricultural production improvement. Three-stage sampling technique was used to select 240 small-scale farmers that were administered with questionnaire for the purpose of having a cross-sectional outlook. The data were analyzed by descriptive and logistic regression model. The regression result reveals that loan from MFBs and farming experience were positively significant at $p < 0.01$ and $p < 0.1$ respectively. Only repayment period and interest rate were negatively significant at $p < 0.01$ and $p < 0.05$. The study concluded that MFBs' loans and advances, farming experience, repayment period and interest rate have significant impact on the likelihood of agricultural output improvement. The study recommended that monetary authorities should implement policies that would encourage MFBs to increase the proportion of loan allocated to the agricultural sector with single digit interest rate repayment. This would specifically help to increase output and thus, generally contribute to the living standard of small-scale farmers.

Keywords: Microfinance, loans, agricultural output, logistic regression, small-scale farmers

1.0 Introduction

A major source of income and sustenance for both individuals and nations is agriculture. Agriculture contributes to the growth of the economy, provides employment opportunities for the teeming population, eradicates poverty and serves as a source of foreign earnings. All basic needs of human are gotten from agriculture; food for human sustenance and clothing for the body and shelter. After independence, Nigeria's agricultural sector was the most important in the economy in terms of contribution to domestic production, employment and foreign exchange earnings (National Bureau of Statistics, 2014). The situation was unchanged for decades until the discovery of oil which impacted negatively on the agricultural sector. Thereafter, the sector became stagnant and unattractive, and this accounted largely for the declining share of its contributions in the Nigerian economy. The trend in the share of agriculture in GDP shows a substantial variation and long-term decline from 60% in the early 1960s through 48.8% in the 1970s and 22.2% in the 1980s (National Bureau of Statistics, 2014). Furthermore, inconsistency in the developmental programmes of government as well as inappropriateness of past economic policies in terms of foreign trade and exchange rate were significant factors responsible for the decline in its contributions to the economy.

In recent times, the agricultural sector has enjoyed considerable boost from the government through the continual intervention of the Central Bank of Nigeria (CBN) by directing commercial banks to give at least 10%

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of their loanable funds to the agricultural sector (CBN, 2004). In addition, the Bank of Industry overtime has launched several micro-credit agricultural schemes aimed at boosting local agricultural production and processing. Apart from granting both direct and indirect credit to farmers, the CBN also provides credit guarantee to local agriculturally-intensive industries by guaranteeing to commercial banks that loans granted to these industries would be repaid. This encourages lending to the sector and allows the commercial banks charge reasonable interest thereby designing convenient repayment mechanism with long moratorium for the agricultural loan borrowers (International Food Policy Research Institute, 2008). It is noteworthy to articulate that loan facilities granted to farmers can be administered either directly or indirectly. When credit facilities are given to individual or organizational farmers, it is a direct financing approach while indirect finance is lending to agricultural institutions established by government or cooperative societies who in turn lend to the individual or organizational farmers.

The development of the agricultural sector significantly impacts on the poverty level of a nation; hence, for the millennium development goal of eradicating extreme poverty and hunger to be achieved, the agricultural sector must be given topmost consideration. According to CBN (2006), shortage of agricultural credit is one of the major causes of declining agricultural production in Nigeria. Several factors accounting for the shortage include: commercial banks' unwillingness to provide credit to the real sector, urban concentration of operation of the banks and high credit risk associated with agricultural loans due to the inability of the farmers to provide collateral. In a bid to improving the contributions of agriculture to the gross domestic product, the Nigerian government initiated different agricultural developmental programmes. These programmes basically were aimed at providing funds in form of loan and equity to indigenous farmers and agricultural cooperative societies. Notable among such programmes was the rural/community banking programme. In order to strengthen the operations of the programme, in 2005, the Nigerian government transformed the then existing community banks into microfinance banks with varying minimum capital base.

In Nigeria, microfinance banks play key roles in the development of the agricultural sector, most particularly in the rural areas. Microfinance banks are saddled with the responsibility of providing financial services such as provision of small loans with near absence of assets-based collateral, micro-leasing, money transfer, and payment services to the rural poor and by extension, urban low income earners. They however have not successfully achieved the purpose for which they were originally conceived. The inability of deposit money banks and microfinance banks to meet the credit needs of rural and semi-urban farmers has been occasioned by challenges faced by the lending institutions and the borrowers. Most of the lending institutions are yet to accept agricultural lending as a profitable business. They face enormous challenges such as infrastructural inadequacies, social misconception, poor legal and regulatory framework, unbridled competition from conventional financial institutions, abandonment of core microfinance function and the lack of qualified workers (Onamahi, 2013). These operational and socio-economic snags have hampered the ability of the microfinance banks to provide finance to the rural poor and the agricultural sector.

Due to the importance of the agricultural sector as well as the significant roles played by the microfinance banks in developing the sector, various studies (Eyo and Asuquo, 2011; Madugu and Bazugu, 2012; Abula and Ilemona, 2013; Olalade and Olagunju, 2013; and Ekwere and Edem, 2014) in the past had been carried out to establish a linkage on the influence credit access has on the agricultural sector. However, to our knowledge, studies that provide empirical attention to agricultural output improvement due to credit acquired by small-scale farmers are generally lacking. The uniqueness of this research lies in the fact that this study seeks to shed light on the distribution of the loanable funds of the MFBs that actually gets to the farmers and ascertain whether these funds have added any meaningful improvement on the output of farmers. As a result, the study tends to proffer solution to the research questions that: what are the socio-economic, farm and financial features of the respondents? and what are the determinants of output improvement due to loan acquisition? The main objective of this research work is to assess the impact of MFBs' credit on agricultural output improvement in Kwara state, Nigeria. Other specific objectives are to: determine the socioeconomic, farm and financial features of the small-scale farmers and assess the impact of MFBs' loan acquisition by small-scale farmers on agricultural output improvement.

2.0 Literature Review

2.1 Conceptual Issues on Micro-financing and Agriculture

2.1.1 Micro-financing and Agriculture in Nigeria

Jamil (2008) describes microfinance as a channel through which funds are made available to micro-entrepreneurs, the poor and low income individuals at a cheap rate, with convenience and on a sustainable basis. His description of microfinance suggests that its purpose is to serve those who are financially excluded or denied access to financial services by the conventional commercial banks on account of their inability to provide tangible assets collateral for credit facilities. Going by its name, micro-finance simply connotes small funds and by its nature, it is a structure conceived and institutionalized by the government to create enabling access of funds to the less privileged members of the society whom on the basis of their social, economic and cultural status have been termed "not credit worthy" by the commercial banks. Hence, the categories of individual or firm who fall into this bracket include the micro and small entrepreneurs, low income earners, farmers, petty traders, artisans etc. According to Mustapha (2009), microfinance can be seen as an art of supplying loans, savings and other financial services to the poor and the practice of delivering those services must be sustainable and accessible to the poor households so that they can build sustainable microenterprise.

CBN (2004) asserts that microfinance institutions have become the main sustainable source of funding enterprises and agriculture in developing countries like Nigeria, Kenya and Pakistan. More so, the ingenuity behind the creation of microfinance institutions is not only to extend micro-credits to the beneficiaries but to promote sustainable entrepreneurship, especially in the areas of agriculture and manufacturing as this will boost and integrate rural financial markets into the global financial markets by creating a relationship between those with financial resources and those who need them. Furthermore, the simplicity in the operation of these institutions is characterized by the ease at which loans are granted to customers in the absence of asset based collateral.

The importance of agriculture in the economy of any nation cannot be over-emphasized. Agriculture plays a prominent role in virtually all social and economic activities of countries; hitherto, agriculture was the main source of survival and livelihood in Nigeria but with the discovery of oil, it became unattractive and receded. Agricultural sector of any country provides fodder for domestic animals, nurtures cows which in turn provide people with milk and provides livestock which also meets people's food requirements. Furthermore, plants and animal which are products of agriculture serve as a good source of raw materials for industrial production. Rubber serves as essential raw materials for the production of plastics; cottons raw materials for the manufacturing of textiles; cocoa for the production of beverages and also animal skins which are used for the production of leather bags and shoes.

CBN (2006) highlights that agricultural sector serves as a main source of foreign exchange to many developing nations. For instance, agricultural products like cassava, sugar, rice, cocoa and spices constitute the main items of exports for countries like India, Thailand and Ivory Coast. A smooth developmental process in the area of agriculture can substantially improve a country's Gross Domestic Product and Per Capita Income. In addition, CBN (2006) observes that the main source of livelihood of many people in the rural areas is agriculture. Approximately 70% of the people directly rely on agriculture as a means of living. The reason for the high percentage of people in agriculture is as a result of the little available white collar jobs which demand some level of dexterity and qualifications from the numerous fast growing job seekers.

2.1.2 Financing Sources Available to Rural Farmers in Nigeria

According to Adubi (2010), sources of rural agricultural finance come from two major segments of the economy. These are the informal rural financial institutions and formal rural financial institutions. The informal rural financial institutions include:

- i. Money lenders: These are individuals who have enough savings and are willing to grant credit to the farmers who are in need of money to engage in some form of farming activities. Under this situation, the interest paid by the farmers to the money lenders is usually not less than 25% of the principal sum per month, that is, 300% per annum (Ketu, 2008).

- ii. **Traditional Savings and Credit Associations:** At times, agricultural farmers in the rural areas come together to form a Thrift and Credit Association with the aim of mobilizing funds from members and granting soft loans to the needy members. The traditional savings and credit association could be rotating and non-rotating. The rotating savings group consists of members who have agreed to make regular fixed cash contributions into a common fund, with each member agreeing to receive the whole or part (cash or kind) of the contribution in turn. On the other hand, the non-rotating savings involve a situation where an individual participant agrees to save regularly on contractual terms with such savings used to finance the needs of other members of the association in form of loans or trade finance (Aredo, 1993).
- iii. **Daily Savings/Itinerant Banking:** This is a common type of self-designed banking involving the thrift collector and his or her clients. Under this arrangement, the contribution size is fixed and a savings-only itinerant banker collects deposits daily and charges the saver one contribution of the 30 deposits made during the month.

The formal rural finance institutions include the following:

- i. **Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB):** This is an initiative of the federal government aimed at providing convenient agricultural finance to the rural dwellers. It is jointly owned by the Federal Government of Nigeria (FGN) and the Central Bank of Nigeria (CBN). Given its statutory operation, its mandate is to serve within the rural landscape, however, in core practice, it extends its deposit mobilization and credit services to the agricultural farmers in the urban settings. NACRDB is required to lend 70% of its loan portfolio at single digit interest rates through loans of N250,000 or less. Adubi (2010) observes that the very low repayment rates of the farmers and the interest rates cap set by the CBN have both undermined the viability of the institution as well as restricting its ability to satisfy the demand for loans from its target client population.
- ii. **The National Poverty Eradication Program (NAPEP):** This is another government initiative specifically targeted at eliminating poverty in the country. The program has several micro-credit initiatives for both the rural dwellers and the semi-urban residents. In a bid to rendering its services, loans from NAPEP are channelled through community based commercial financial intermediaries who in turn grant them to the deserving individuals at low premium.
- iii. **Microfinance banks:** Microfinance banks emerged in 2006 and 2007 from the then community banks as a result of another policy change introduced by the Central Bank of Nigeria (CBN). Through its microfinance policy, the Central Bank of Nigeria (CBN) introduced a new regulatory and supervisory framework in 2005, which made it compulsory for the community banks to obtain a new license and have a minimum share capital of N20m.
- iv. **Non-Governmental Organizations (NGO):** According to Adubi (2010), non-governmental organisations are important financial providers for the rural poor and in Nigeria, NGOs have an estimated average of about 42,000 borrowers, although their overall impact remains small. More so, NGOs are prohibited from mobilizing deposits from the public but are still able to request mandatory savings as loan collateral.

2.2 Theoretical Framework and Empirical Review

2.2.1 Finance and Economic Growth Theory

Economists and finance experts have taken different positions as to the nature of the relationship that exists between the financial sector development and economic growth. In literature, four identified perspectives have been proposed by various scholars (Obademi, 2013). First is the supply leading perspective; the scholars with the view of the supply leading theory opine that finance propels growth in the economy because it engenders efficient allocation of scarce resources among competing productive sectors. In many developing economies, financial institutions serve as the engine growth through financial deepening and inclusion. Hence, proponents of this perspective such as Shaw (1973) and Levine and Sara (1996) assert that attractive financial instruments play a significant role in the growth of all sectors of the economy. Second is the demand following perspective; the proponents of this view such as Robinson (1952) and Kuznets (1955) believe that the financial sector responds to positive changes in the productive sector. In other words, economic activities stimulate

development in the financial sector by creating demand for financial services. This position is feasible as long as performance in the productive sector is sustainably increased over a long period of time. The third view is that of a bi-causal impact of finance and economic growth. This view establishes the fact that the direction of impact depends on the economic indicators being used to measure the relationship. The perspective suggests that in any form of measurement, the relationship between finance and economic growth is of mutual impact. The fourth and last view is that of neutral or no impact perspective. The opinion of the proponents of this view is that no relationship exists between finance and economic growth. Though absurd, the proponents argue that finance is not a key ingredient that propels growth in any economy; other factors such as policy direction and socio-economic palliatives provided by the government are the major impetus for growth (Obademi, 2013). This study adopts the supply leading perspective to ascertain the relationship and impact of credit facilities granted by microfinance banks on the development of the agricultural sector in Kwara state.

2. 2.2 Lewis' Structural Change Model

This model focuses on the mechanism by which underdeveloped economies transform their domestic economic structures from a heavy emphasis on traditional subsistence agriculture to a more modern, more urbanized and more industrially diverse manufacturing and service economy. The Lewis model developed by Lewis (1955), a winner of the Nobel Memorial Prize in Economics in 1979 dominated development theory. First between 1960s and 1970s. Lewis (1955) observed that an underdeveloped economy consists of two sectors. First sector is a traditional, overpopulated rural subsistence sector with surplus labour and the second is a high productive modern sector to which this surplus labour is transferred. The focus of the model is on the process of surplus labour transfer from traditional sector which leads to the growth of output and employment in the modern sector. The model is relevant to the study in the sense that microfinance banks can be the mechanism for agricultural transformation in the economy. Most farmers engage in subsistence agriculture because there is no capital but microfinance banks can provide capital to expand farming towards commercial level.

However, due to the relevance of microfinance banks in developing the agricultural sector in Nigeria, several studies had been carried out in the past to examine the effects and contributions on the agricultural sector. An attempt is made here to review such studies. Eyo and Asuquo (2011) examined farmer's credit reserve and the success of microfinance institutions. The study found out that farmers preferred informal sources of finance to satisfy their credit needs as this would be granted without much bureaucratic procedures. Madugu and Bazugu (2012) also examined the role of financing agricultural activity through commercial banks. The study found that farmers were roped with short repayment period and as a result there's poor patronage to access credit and recommended that financing institutions like microfinance banks are encouraged to lengthen the repayment period and lessen the interest rate of loan to support agriculture. Abula and Ilemona (2013) in their study evaluated that microfinance bank's staff perception and the major constraints of microfinance banks credit facilities to agriculture. The study concluded that banks' staff had difficulties monitoring the loans of the farmers because the farmers diverted part of the loans granted to meet consumption needs, thus making the loans delinquent. The study suggested that group credit delivery approach and intensive monitoring can reduce loan delinquency to the barest minimum. Ololade and Olagunju, (2013) in their own case assessed the determinants of access to credit among rural farmers and concluded that financial institutions should help looking into the conditions of obtaining credit by farmers, so that the less privilege among them will be discouraged in demanding for loan due to high interest rate, guarantor and collateral security. Finally, Ekwere and Edem (2014) examined the evaluation of agricultural credit facility in agricultural production and rural development. It was found that farmers decried the stringent application conditions being levied by the MFBs before loans are considered and approved. The stringent application conditions and bureaucratic processes discouraged more farmers and people who may be picking interest in farming. Based on these reviewed empirical studies, we are unaware of any similar previous study conducted in the past to examine the effect of micro-finance credit facilities on agricultural production improvement; this study was therefore conceived to fill in the gap using small-scale beneficiaries' farmers as a case study.

3.0 Methodology

3.1 Study Area

This study examines the impact of microfinance banks' credit facilities on the improvement of agricultural production in Kwara state, Nigeria. Kwara state is located in the north central geographical zone and it has four main ethnic groups namely: Yoruba, Nupe, Fulani and Baruba. It has a land area of about 35,705km². Correspondence Author's: +2347039295417; +2348176024641
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and it is located between latitude $8^{\circ} 5'' - 10^{\circ} 4''$ N and longitude $4^{\circ} 55'' - 6^{\circ} 5''$ E (NPC, 2006). The average temperature ranges between 27° and 35° C with a mean annual rainfall of 1,000-1,500mm. It has two main seasons: wet and dry. The natural vegetation cover consists of rainforest in the south and guinea Savannah to the North. The landscape comprises of hills, valleys and plains. The state has river Niger as a major river that transverse the state while the other rivers include: Asa, Osin, and Owu fall which serves as Tourists attraction.

3.2 Sampling Technique and Data Collection Method

The population for this study is mainly small-scale farmers that have benefitted from MFB credit from agrarian communities in Kwara State, Nigeria. According to Kwara Agricultural Development Project (KWADP) (1996), Kwara state has four agricultural development project (ADP) zones vis- A (Baruteen and Kaiana), B (Edu and Patigi), C (Asa, Ilorin East, Ilorin South, Ilorin West and Moro) and D (Ekiti, Ifelodun, Irepodun, Oke-Ero, Isin, Oyin and Offa). Three-stage random sampling technique was employed for this study. The first stage is random selection of one local government area from each ADP zone and these are Baruteen, Edu, Moro and Irepodun LGAs. The second stage is the random selection of two rural communities from each selected LGA. This was through the use of sampling frame by collecting the list of contact of small-scale farmers that have benefited from MFB's loan in that last five years. The frame was collected from ADP officials saddled with the responsibility. The third stage involves the random selection of 30 farmers that have enjoyed MFB's loan in the past five years from each selected rural communities. Thus, a total of 240 small-scale farmers were considered and sampled for this study. The criteria set by the study for any individual to be part of the sample were that the farmers must: belong to a farming group; possess functional farm land; and must have enjoyed loan facility from a microfinance bank in the past five years. The method of data collection adopted in this study is primary data. The primary data collection was actualized with the use of questionnaire; other materials used for the study were sourced from CBN Annual Statistical Bulletin (2014) and online research journals. A total of two hundred and forty (240) copies of questionnaire were distributed to the sampled farmers and upon completion, only one hundred and ninety two (192) was found useful.

3.3 Analytical Technique

Both descriptive and inferential analyses were used to analyze data obtained. The descriptive analysis involved the use of frequency and percentages for the demographic analysis of the respondents and binary logistic regression was used to estimate the relationship between microfinance banks' credit facilities and agricultural output improvement. The choice of binary logistic regression is due to the fact that the dependent variable (agricultural output improvement) is in dummy. Field (2009) asserts that when the outcome of a dependent variable is categorical and not continuous, using a linear regression model would be inappropriate; hence, a logistic regression approach would be best alternative. The empirical model adopted is given as:

$$P(Y_i) = \frac{1}{1 + e^{-(b_0 + b_1X_{1i} + b_2X_{2i} + b_3X_{3i} + b_4X_{4i} + b_5X_{5i} + b_6X_{6i} + \epsilon_i)}} \quad (1)$$

Where $P(Y_i)$ = probability of loan improving output (if it improves output = 1, otherwise = 0)
 e = base of natural logarithm of independent variables

b_0 = intercept

X_{1i} = Loan from MFB (N)

X_{2i} = Repayment period (month)

X_{3i} = Interest rate (%)

X_{4i} = Farm size (ha)

X_{5i} = Nature of farming (crop=1, animal=2, fish=3, poultry=4)

X_{6i} = Farming experience (yrs.)

b_{1-6} = coefficients

ϵ_i = error term

The model was estimated using maximum likelihood method in E-view software.

4.0 Results and Discussion

The analysed data proffer the following results:

Table 1: Socio-economic features of the respondents

Properties (n=192)	Frequency	Percentage (%)
Gender		
Male	108	56.25
Female	84	43.75
Age Distribution (year)		
Less than 20	12	6.25
20-50	162	84.38
Above 50	18	9.38
Marital Status		
Single	90	46.88
Married	102	53.12
Educational Level		
No Formal	9	4.69
Formal	183	95.31
Family Size		
1 to 3	55	28.65
4 to 11	135	70.31
Above 11	2	1.04

Source: Field Survey, (2015)

Table 1 shows the socio-economic properties result where male farmers were most prevalent which constitute 56.25% of the respondents. About 84.38% of the sampled farmers' ages fall between the ranges of 20 – 50 years. These farmers were found to be middle-aged and are engaged in farming activities as a way of life to carry family responsibility. Likewise, 6.25% of the farmers' ages fall below 20 years which unfolds the indication of low interest of youth in agriculture. Also, 53.12% of the farmers are married; married farmers have more responsibilities which can only be compromised majorly with increase in farm income unlike single farmers. The result (Table1) shows that formal education (95.31%) was common among the respondents and about 4.69% of the loan beneficiaries' respondents were left as no-formal education. Based on the rate of loan acquisition knowledge of the farmers, it is expected that educated farmers are likely to understand the benefits of credit to carry out modern agriculture and comprehend extension information on sources and utilization of credit. This is in consonance with the findings of Ozowa (1995) who reported that literacy level promotes the understanding of extension activities among farmers in the rural areas. Over 70.31% of the respondents have households size within the range of 4 – 11; this result suggests that majority of MFBs' loan beneficiaries have some dependants who also, indirectly benefit from the income of the farmers.

Table 2: Farm and Credit Characteristics of the Respondents

Properties (n=192)	Frequency	Percentage (%)
Farm Size		
Less than 2	135	70.31
2 to 6	40	20.83
Above 6	17	8.85
Farming Experience(yrs.)		
Less than 1	16	8.33
1 to 10	42	21.88
Above 6	134	69.79
Major Farming Occupation		
Animal production	22	11.46
Crop Production	111	57.81
Fishing	36	18.75
Poultry rearing	23	11.98
Loan Distribution		
Less than 100,000	25	13.09
100,000-500,000	149	77.59
Above 500,000	18	9.38
Repayment Period		
Short (1year and below)	108	56.25
Medium (1-10years)	64	33.33
Long (10years&above)	20	10.42
Loan Status on Farm output		
Improve output	28	14.58
Never improve output	164	85.42

Source: Field Survey, (2015)

In Table 2, in terms of farm size, 70.31% of respondents operate on small farm land size of less than 2 hectares. This implies that the farmers sampled were the small-scale farmers that would need loan to boost their living standard through farm production. Farming experience is an important factor determining both the productivity and the production level in farming. The table shows that most of the respondents have above 6 years of farming experience (69.79%) since most farming households are raised from the onset of their life to become farmers. Furthermore, about 57.81% of the respondents engage in crop production followed by fishing with 11.46% of the respondents and this is because majority of farmers under this category are itinerant farmers. Among the loan distribution, 77.59% of the respondents enjoyed loan range between 100,000-500,000 naira to support and sustain their farming activities. Only less respondents (19.38%) demand for above 500,000 naira of loan and the reason can be attributed to the unbearable interest rate and short repayment period charged by the loan and the reason can be attributed to the unbearable interest rate and short repayment period charged by the loan and the reason can be attributed to the unbearable interest rate and short repayment period charged by the loan. 56.25% of the respondents prefer the repayment period to be short term. This is because medium and long term in terms of repayment period would be associated with interest rate. As many of the respondents were granted loans with unbearable repayment arrangement, the study found that the probable impact of the loan/credit acquired was of no positive reflection on their farm output. This is because only 14.58% of the respondents perceived the loan as being a factor for improvement in their farm activities.

Table 3: Marginal effect of MFB loan facilities on agricultural output improvement

Variable	Coefficient	Standard error	Z-statistics	P-value
Constant	0.351	0.012	29.25	0.000
Loan from MFB (X_1)	0.721***	0.055	3.11	0.006
Repayment period (X_2)	-0.311***	0.014	-22.21	0.000
Interest rate (X_3)	-0.674**	0.376	1.79	0.042
Farm size (X_4)	0.565	0.406	1.39	0.235
Nature of farming (X_5)	0.049	0.031	1.58	0.317
Farming experience (X_6)	0.427*	0.254	1.68	0.078
Prob>f = 0.038				
Pseudo R^2 = 0.532				
log likelihood = 17.345				
Number of observation = 192				

Source: Field Survey, (2015)

Note: ***significance level at 1%, **significant level at 5%, * significance level at 10%

Table 3 shows the regression output of the model; the Pseudo R^2 of the model shows that 53% of the variation in the dependent variable is explained by the independent variables and this was found to be significant at 5% alpha level. The result of logistic regression model fitted to the cross section data show that the regression coefficient of loan from MFBs is significantly positive. The estimate expresses that the rate of change of loan from MFBs per unit change of farm output improvement is less than unity. Out of coefficient estimate, it can be inferred that as loan from microfinance bank is increased by 1%, the probability of MFBs' loan improving output is increased by 72%. This implies that there is positive relationship between loan acquired by farmers and the possibility of the loan to improve farm output. So, the marginal effect in loan from microfinance bank will lead to increase in the probability of improvement in agricultural output.

This position is in line with the study of Ekwere and Edem (2014) whose findings revealed that agricultural credit improves productivity, production and standard of living. The regression result also shows the coefficient of repayment period is significantly negative which suggests a negative impact of repayment period on the agricultural output of farmers. This was found to be significant at 1%. This explains that one unit increase in the repayment period will lead to 0.311 decline in the probable increase in output. This position is in line with the responses of the sampled farmers who decried the short term repayment period of less than a year being required by the MFBs. Abula and Ilemona (2013) in their study also found this same situation among their respondents in Kogi state. Hence, it can be inferred that the shorter the repayment period of loans to MFBs, the poorer the output of the farmers. The result in table 3 also indicates the coefficient of interest rate in the regression function to be negatively significant. This implies that one unit increase in interest rate leads to 0.674 decline in the probable improvement agricultural output.

The result was also in conformity with the findings of Olalade and Olagunju (2013) who studied the determinants of access to credit among farmers. Furthermore, the coefficients of both farm size and nature of farming were 0.565 and 0.049 respectively, but the two variables were found not significant despite their importance to output improvement. This implies that the two variables might be paramount but would not necessarily decline output if the available farm land and interested farming activity are well managed effectively and efficiently. Farming experience is another fitted variable to this cross sectional data and has a coefficient of 0.427 with a marginal effect showing that increase in farm experience will bring about a likelihood of improvement in agricultural output. This position is in consonance with Eyo and Asuquo (2011) who found that farmers with much experience tend to have significant improvement in productivity overtime. Farming is an occupation that requires not so much skills but experience, thus, farmers garner their experience on the job and this makes them get used to modern means of improving output.

5.0 Conclusion and Recommendations

This study concludes that there is low interest for agriculture among youths. The majority of the respondents are married with formal education so as to ensure close proximity to information from MFBs' officials and adoption of new agricultural technology. The inability to secure land for cultivation exposes farmers to enjoy loan ranging between 100,000-500,000 naira to support and sustain their farming activities. However, due to the financial constraints attached to loan acquisition from MFBs' like short repayment period and high interest rate, most of the respondents perceived loan acquired not improving their farm output. The regression result found that loan from MFBs, repayment period, interest rate and farming experience have significant impact on possibility of improving agricultural output. It can therefore be inferred that loans from MFBs have significant impact on improving agricultural output while repayment period and interest rate of loans were the hindering factors that brought about the decline in agricultural output. The study therefore recommends that sustainable loan acquisition process must be put in place by the MFBs in order to improve the output of farmers. In addition, the following measures are also germane for policy implementation.

- Urgent need for the CBN as a matter of policy to review the monetary policy rate to a single digit and subsequently direct microfinance banks to increase lending to the agricultural sector on a single digit interest rate.
- Financial institutional reform must be carried out to ensure a medium or long term spread of principal payment, so as to pave time for farmers to harvest and dispose crops for money in order to ease loan repayment.
- Sensitization through seminars and capacity building by stakeholders like MFBs are necessary to educate farmers on the efficient allocation of the loan towards meeting their farm business target.

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