

## **ECONOMIC ANALYSIS OF THE ROLE OF MICROFINANCE BANKS IN FUNDING AGRICULTURE IN RURAL AREAS OF KWARA STATE, NIGERIA**

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### **Abstract**

The quest to meet the credit need of the Nigerian farmers necessitated the focus of this study. Specifically, the study examined the contribution of microfinance banks (MFBs) towards agricultural development, analyzed and compared the loans given out by these banks to agricultural sector with those given to other investment activities in the study area, examined the repayment level of the various sectors and identified the constraints hindering efficient contribution of the banks to agricultural development in the study area. Data obtained from ten MFBs in Kwara State were used for the study. Descriptive and inferential statistics were used for data analysis. The study revealed that most of the banks' loan were granted to trade and commerce sector while the agricultural sector obtained just about one-fifth of loan disbursement annually. As regard loan recovery however, the agricultural sector compared more favourably than other sectors to which more loan was disbursed. The problems facing the MFBs in making more contribution to agricultural development in the study area include less saving habit of farmer clients, limited loan products, shortage of logistics in rural areas, less willingness of the commercial banks to lend MFBs, shortage of experienced human resources, inadequate capital to operate and lack of effective management information system. The study calls for more contribution to the agricultural sector by the banks and proffers solutions to the constraints limiting their role in agricultural development.

**Keywords:** Credit, role, microfinance banks, agricultural development, problems.

### **Introduction**

In Nigeria, agricultural production is dominated by small-scale farmers who account for about 95% of the country's agricultural production (Mafimisebi et al, 2007). This system of farming is characterized by low asset base, low fixed capital, labour intensive production, small farm size, low investment and expenditure on farm inputs, crude tools and equipment and low productivity, among others (Ijere, 1986; Olayide and Heady, 1982, Mafimesebi et al, 2007). According to Verheya (2000), although increased agricultural production in Nigeria is constrained by a number of factors, such as non-availability of complementary inputs in the right quantity and quality, poor conditions of feeder roads and other transport facilities, inadequate technologies, youth apathy to agriculture and so on, credit is the most limiting factor among them. Consequently, this results in inability of the farmers to optimize potentials, food insecurity, and poverty at individual and national levels. Hence, boosting agricultural production through adequate finance becomes imperative.

Credit is an invaluable ingredient to agricultural development of any country. Berger (2002) argued that microfinance is an effective and efficient mechanism in poverty reduction all over the world. Micro-credit is also an effective means of improving quantity and quality of agricultural production (Abe, 1981; Osugiri et al. 2011). Availability of credit is also a major determinant of scale of agricultural production, adoption of modern technology, ability to purchase modern inputs and induce farmers to take risks (Adegeye and Ditto, 1982; Madaki, 1986).

In order to make Nigerian populace, including farmers, have access to credit facilities the Central Bank of Nigeria (CBN) set up the microfinance scheme as an instrument to access financial services when succour was not coming from the conventional financial institutions in the country. According to Olawuyi et al. (2010), microfinance banks (MFBs) believe in people and not collaterals solely, it recognizes the credibility of the people and trusts them. Haruna (2007) also noted that these banks use the approaches of collective appraisal to loan application, loan utilization; monitoring, peer pressure and cross guarantee to enforce repayment. The policy framework establishing MFBs in Nigeria saddles them with the responsibility of providing diversified, affordable and dependable financial services to the active poor in a timely and competitive manner. It is intended to enable the MFBs to undertake and develop long-term, sustainable entrepreneurial activities, mobilising savings for intermediation and creating employment opportunities, and increase the productivity of active poor in the country, thereby increasing their individual household income and uplifting their standard of living. In addition, it the duty of these institutions is to enhance organized, systematic and focused participation of the poor in the socio-economic development and resource allocation process, provide veritable avenues for the administration of micro credit programmes of government, and high net-worth individuals on a non-recourse case basis (Hope, 2009).

Therefore, this study examines the roles played by MFBs towards the funding of agriculture in Kwara State, Nigeria. Specifically, the study examines the contributions of microfinance banks towards agricultural development; analyzes and compares the loan given out by the banks to agricultural sector with the ones given

to other investment activities in the study area; examines the repayment level of the various sectors and identifies the constraints hindering efficient contribution of the microfinance banks to agricultural development in the study area.

### **Methodology**

This study was carried out in Kwara state of Nigeria. The state lies between latitude 7°15' and 6°18' N of the equator. The state shares boundaries with Oyo, Osun, Ondo, Kogi, Ekiti, and Niger states. It shares an international boundary with the Republic of Benin. The state has a population of about 2.37million people and comprises sixteen Local Government Areas (LGAs) (NPC, 2006). A humid tropical climate prevails over the state and it has two distinct seasons - the rainy and dry seasons. The rainy season lasts between April and October and the dry season between November and March. The rainfall ranges between 50.8mm during the driest months to 2413.3mm in the wettest period. The mean annual rainfall is about 1500mm. The minimum average temperature throughout the state ranges between 21.1°C and 25.0°C while, maximum averages temperature ranges from 30°C to 35°C (Kwara State Ministry of Information, 2002). Agriculture is the mainstay of the state's economy and is practised mainly in the rural areas of the state (KWADP, 2010). As at the time of the study, there were 24 microfinance banks (MFBs) in the state located in seven LGAs of the state (CBN, 2011).

Purposive sampling technique was adopted for this study. This was based on the location of the MFBs in the state and information obtained from the state's Ministry of Agriculture that agricultural loan is mostly given by the MFBs in the rural area of the state. Thus, primary data were obtained from with the use of structured questionnaire administered to 10 MFBs in the rural areas of the state coupled with interview schedule with the bank officials. Information obtained covered a period of four years (2008 – 2011) of the banks' activities. Data obtained include the socio-economic characteristics of the farmers who had benefitted from the credit facilities of the banks, amount of loan granted over the period, loan repayment by the beneficiaries, other ways through which the banks assisted the agricultural sectors, and the constraints to the activities of the banks. Secondary data were also sourced from journals, CBN reports, the internet and grey literature.

Both descriptive and inferential statistics were used for this study. Descriptive statistics such as the use of mean, percentages and frequency distributions were employed to identify the contribution of the MFBs to agricultural sector and other investment activities (sectors) and constraints hindering the role of MFBs in the study area. Analysis of variance (ANOVA) was used to measure variability in the loan given out to the different sectors and Duncan's multiple range test was used to test the significant difference between the loan repayment levels in the other sectors with the agricultural sector.

## Results and Discussion

### Demographic Characteristics of the MFBs' Beneficiaries

The demographic characteristics of the farmers who had benefitted from the credit facilities of the MFBs are presented in Table 1. Investigations revealed that 3,545 farmers benefitted from the banks within the period under survey. A higher proportion (62.9%) of the beneficiaries were male. Most (77.3%) of the farmers were married.

Ninety-two percent of the farmers had formal education. This is in consonance with Olagunju and Adeyemo (2008) who opined that farmers who have formal education readily respond to innovations that would enhance better returns from farm investment. Oladeebo and Oladeebo (2008) also shared this view, that literate farmers repay more of the loans obtained than illiterate farmers having understood the benefits of credit to farm production hence have more propensity to access credit for agricultural operations.

**Table 1: Demographic Characteristics of the Beneficiaries (Farmers) of the MFBs**

Characteristics	Frequency	Percentage
<b>Sex</b>		
Male	2,231	62.9
Female	1,314	37.1
<b>Total</b>	<b>3,545</b>	<b>100</b>
<b>Marital Status</b>		
Single	596	16.8
Married	2,740	77.3
Divorced	209	5.9
<b>Total</b>	<b>3,545</b>	<b>100</b>
<b>Educational Level</b>		
No formal	29	0.8
Primary education	598	16.9
Secondary education	1,076	30.4
Tertiary education	1,842	51.9
<b>Total</b>	<b>3,545</b>	<b>100</b>

Source: Field Survey, 2012

### Contribution of the Microfinance Banks to Agricultural Development

Table 2 shows the various means by which MFBs contribute to agricultural development in the study area. Most (60%) of the microfinance banks provided advisory services to the farmers (clients). Survey revealed that the services ranged

from provision of guidelines on sales practices, proper and judicious use of fund for the intended purposes. Also, 10% of the banks pointed human capacity development, establishment of loan utilization policy, provision of storage facilities and farm input subsidization as ways through which they contribute to agricultural development.

The period of time it takes to process loan from the MFBs varied. Based on investigations, the variation was due to difference in the administrative processes and the amount of loan involved. Analysis of the duration of loan processing of microfinance banks under study shows that 40% of the microfinance banks process their loan within one month, while 20% of them process within one week. The result also shows that it takes only 48hours for 40% of the banks to process loans to various sectors. According to the respondents, that was done for their regular customers as compensation for frequent patronage. Overall, processing of loan takes 2 – 30 days by the clients (farmers).

Continuous guarantee, salary and landed property were the collateral required for securing loan by the farmers. Sixty percent of the MFBs disbursed loan on the basis of continuous guarantee while the remaining 40% employed the use of salary and other assets such as buildings and landed property. For loans involving agriculture, the microfinance banks preferred visiting the farm and comparing its worth with the loan the farmer applied for. If the client were a salary earner however, the loan was deducted from the client’s salary on monthly basis.

**Table 2: Contributions of MFBs to Agricultural Development in the Study Area**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Methods of contribution</b>		
Advisory services	6	60
Human capacity development	1	10
Storage facilities	1	10
Establishment of loan utilization policy	1	10
Farm input subsidization	1	10
Total	10	100
<b>Duration of loan processing by the clients</b>		
2 days	4	40
1 week	2	20
1 month	4	40
Total	10	100
<b>Required Collateral for Securing Loan</b>		
Continuous guarantee	6	60
Salary and other assets	4	40
Total	10	100

Source: Field Survey, 2012

**Loans Disbursement by the Microfinance Banks****Table 3: Loan given out by the Microfinance Banks (2008 – 2011)(₦'000)**

*MFBs	SECTORS					
	AGRIC.	MANUFACTURING	COMMERCE	TRANSPORT	R/ESTATE	OTHERS
<b>A</b>	264,968	0	133,062	0	0	9,250
<b>B</b>	72,829	7,729	417,945	4,375	4,073	0
<b>C</b>	17,000	4,305	17,256	3,300	7.0	0
<b>D</b>	55,000	30,000	166,000	9,000	2,000	14,341
<b>E</b>	8,809	0	22,224	5,852	0	7,692
<b>F</b>	19,123	7,542	28,100	8,574	0	6,518
<b>G</b>	80,490	23,550	24,500	16,000	9,000	0
<b>H</b>	0	9,500	696,000	4,677	3,000	40,000
<b>I</b>	2,851	0	115,851	0	0	0
<b>J</b>	8,800	0	130,209	4,550	0	8,280
<b>Total</b>	529,870	82,626	1,751,147	56,328	18,773	86,081
<b>Ranking</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>3</b>

Note: \* A to J are the selected Microfinance Banks in the State  
Field survey, 2012

Table 3 and Figure 1 present the amount the loan granted by the MFBs. The Table shows that a sum of ₦2,188,473,000 was given out as loans by the ten selected Microfinance Banks in 2008 – 2011. Trade and commerce sectors received the highest amount of loan (₦1,751,147,000) while the agricultural sector received a sum of ₦529,870,000 and it was ranked second. This was followed by 'other sectors' which include health, education, housing and consumer sectors which received a sum total of ₦86,081,000 and followed by manufacturing sector, transport sector and real estates which received ₦82,626,000, ₦56,328,000 and ₦18,773,000 respectively. The results show that Bank A gave the highest loan to Agricultural sector.

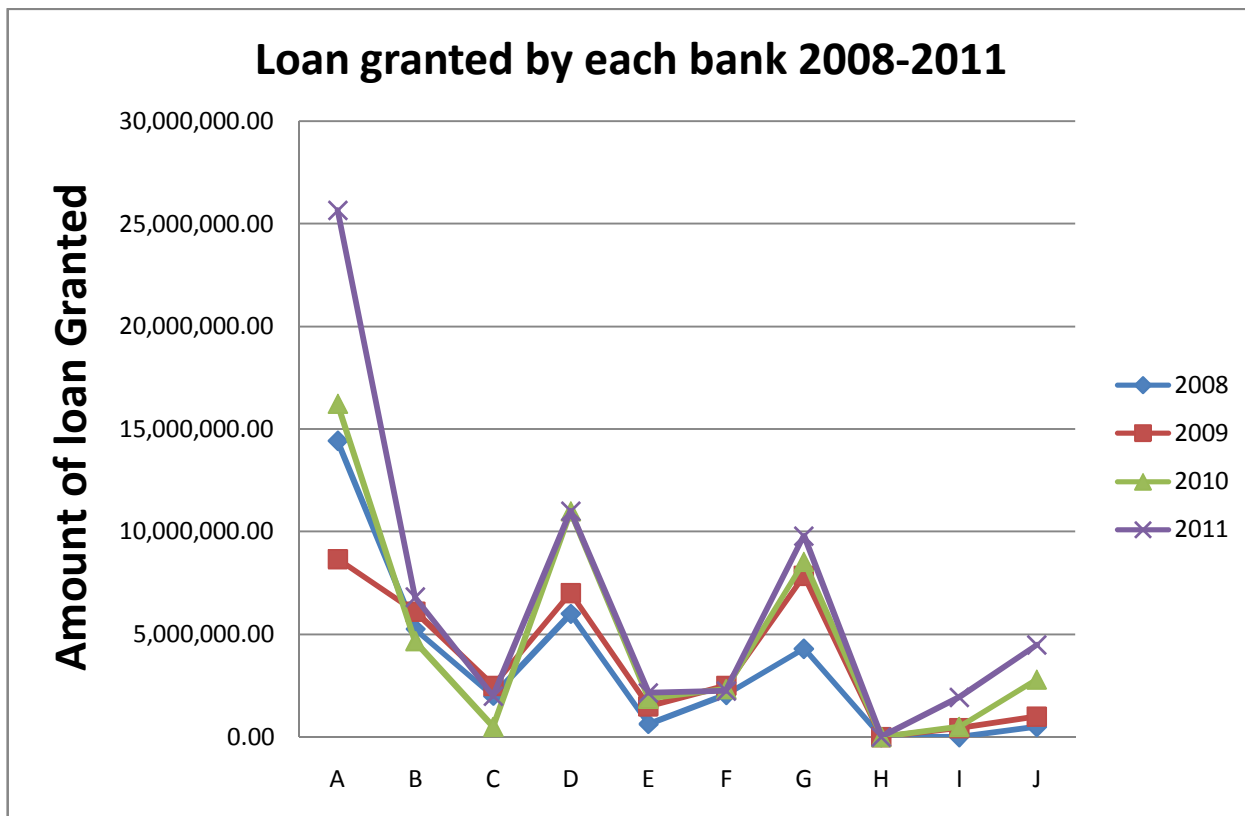


Fig .1: Graphical representation of the loans granted by each Microfinance Bank Table 4 and Figure 2 compare the amount of loan of loan granted to all the sectors by the MFBs. From the results, a total of about ₦232,680,000 loans were granted to the nine sectors in 2008. Trading and commerce sector received the lion share of the amount granted. This represented about 63.8% of the total loan given out. Next to the share of trading and commerce was the share of agriculture, which represented about 16 % of the total loan granted to all the sectors. The least share of the loan granted by the microfinance bank in the study area in 2008 went to the consumer sector which comprises the people that collected loan for consumption.

**Table 4: Amount of loan granted to each sector per annum (N'000)**

YEAR	AGRIC	MANUFACTURING	TRADE & COMMERCE	TRANSPORT	REAL ESTATE	HEALTH	HOUSING	EDUCATION	CONSUMER	TOTAL
<b>2008</b>	40,000	18,437	140,484	10,000	4,037	9,912	9,040	481	294	232,685
	16.0%	8.4%	63.8%	4.7%	1.8%	4.5%	4%	0.2%	0.1%	100%
<b>2009</b>	375,353	22,085	1,122,712	12,101	3,648	15,715	362	608	169	1,216,939
	3.1%	1.8%	92.4%	1.0%	0.3%	1.3%	0.03%	0.1%	0.01%	100%
<b>2010</b>	48,439	19,408	246,431	12,187	5,362	20,608	808	811	121	353,634
	13.7%	5.5%	69.7%	3.4%	1.5%	5.7%	0.2%	0.2%	0.03%	100%
<b>2011</b>	66,078	22,696	241,520	22,040	5,724	24,909	496	753	994	385,215
	17.25	5.9%	62.7%	5.7%	1.5%	6.5%	0.1%	0.2%	0.3%	100%
<b>AVERAGE</b>	<b>132,467</b>	<b>20,656.5</b>	<b>437,786.7</b>	<b>14,082</b>	<b>4,692</b>	<b>17,786</b>	<b>2,676.5</b>	<b>663.25</b>	<b>394.5</b>	<b>547,118.25</b>

## Field survey, 2012

A similar case was recorded in 2009. Trade and commerce sector received the biggest share of about 92.4% leaving only about 7.6% of the total loan of N1,216,939,000 granted by the microfinance banks under study to other eight sectors. The proportion of loan received by agricultural sector to the total loan granted in the year was about 3.1%. The manufacturing sector rated third with a loan proportion of about N22,085,000 in the year. The consumer sector again received the least percentage of the total loan granted by the microfinance banks under study in 2009.



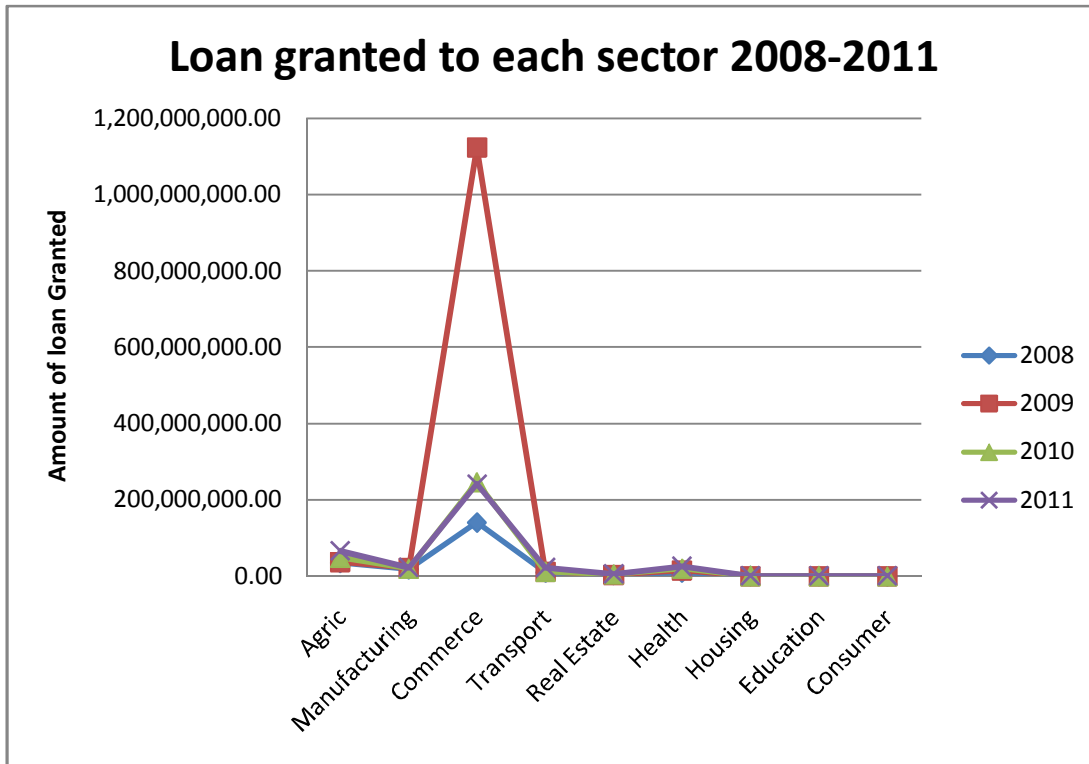


Figure 2: Graphic representation of loans granted by sector (2008-2011)

Analysis of loan granted to the various sectors under study by the MFBs in the state in 2010 revealed that pattern of the share of loan received by different sectors corresponds to those of previous years. Trading and commerce sector also received the highest loan share of about ₦246,431,000 representing about 69.7% of the total loan granted that year. Agricultural sector followed with 13.7% (₦48,439,000) of the total loan granted by the MFBs in the year 2010. Manufacturing sector also placed third with total loan of ₦19,408,000 which was 5.5% of the total loan and consumer sector also received the least loan.

2011 analysis of the amount of loan granted to various sectors by the surveyed MFBs in peri-urban and rural areas of Kwara State reported a total loan amount of about ₦385,215,000. Agricultural sector received about 17.2% of the total amount while trading and commerce was still ranked highest in terms of the amount of loan granted to the sector. These analyses show that the MFBs preferred given loan to trading and commerce than other sectors.

Table 5 shows the results of the Duncan Multiple Test carried out to ascertain the statistical significance of the observed differences in the amount of loan granted to various sectors under study. In each of the year under analysis, the amount of loan granted to trade and commerce sector was significantly different from that

granted to other sectors. However, the amount of loan granted to agriculture was not significantly different from all other sectors with the exception of the trade and commerce sector. This could be deduced from the analysis that the credit facilities of the MFBs was mostly concentrated on trade and commerce activities (see Table 4 and Figure 2). These results imply that there were no much changes in the loan given to trade and commerce for the four years under observation.

**Table 5: Duncan Multiple Range Test**

Sectors	Years			
	2008	2009	2010	2011
<b>Agriculture</b>	3,516.4 <sup>a</sup>	3,753.5 <sup>a</sup>	4,844.0 <sup>a</sup>	6,607.9 <sup>a</sup>
<b>Manufacturing</b>	1,843.7 <sup>a</sup>	2,208.6 <sup>a</sup>	1,940.6 <sup>a</sup>	2,269.6 <sup>a</sup>
<b>Trade and Commerce</b>	14,048 <sup>b</sup>	11,22.7 <sup>b</sup>	26,644 <sup>b</sup>	24,152 <sup>b</sup>
<b>Transport</b>	1,042.3 <sup>a</sup>	1,2102 <sup>a</sup>	1,218.7 <sup>a</sup>	2,204.1 <sup>a</sup>
<b>Real estate</b>	403.8 <sup>a</sup>	364.9 <sup>a</sup>	536.2 <sup>a</sup>	572.5 <sup>a</sup>
<b>Health</b>	991.2 <sup>a</sup>	1,571.6 <sup>a</sup>	2,006.1 <sup>a</sup>	2,490.9 <sup>a</sup>
<b>Housing</b>	90.4 <sup>a</sup>	36.20 <sup>a</sup>	80.8 <sup>a</sup>	49.6 <sup>a</sup>
<b>Education</b>	48.1 <sup>a</sup>	60.9 <sup>a</sup>	81.1 <sup>a</sup>	75.4 <sup>a</sup>
<b>Consumer</b>	29.4 <sup>a</sup>	16.9 <sup>a</sup>	12.2 <sup>a</sup>	99.4 <sup>a</sup>

Note: Mean with the same alphabet are not significantly different

Source: Field Survey, 2012

### Loan Repayment by Sectors

Table 6 shows analysis of loan repayment by the various sectors under study. The Table revealed that in 2008, trading and commerce sector ranked first, as 89.12% of the loan given by the banks was recovered and agricultural sector ranked third (82% loan recovery) while transport sector ranked last with 35.2% of the loan been paid back. In 2009, trading and commerce sector was ranked first because 93.91% of the loan was recovered and agricultural sector was ranked fifth with a loan repayment of 76.82%. In 2010 and 2011, commerce and agricultural sectors ranked first and second respectively. Investigations were further made on the frequency of loan recovery

**Table 6: Analysis of Repayment Level by Various Sectors (N'000)**

SECTORS	2008 AMOUNT	%	RANK	2009 AMOUNT	%	RANK	2010 AMOUNT	%	RANK	2011 AMOUNT	%	RANK
<b>CONSUMER</b>	200	68.02	8	90.5	53.55	8	98.2	81.16	8	895	90.04	4
<b>HOUSING</b>	7,100	78.53	6	320.1	88.92	2	760	86.63	6	390	78.63	9
<b>EDUCATION</b>	380.6	79.13	5	500	82.24	4	681.1	83.98	7	612	81.27	7
<b>REAL ESTATE</b>	3,137.5	77.72	7	1,948	53.40	9	4,000.98	74.62	9	4,724	82.53	5
<b>HEALTH</b>	7,912	79.82	4	12,000	76.36	6	17,894	86.83	5	19,905	79.91	8
<b>MANUFACTURING</b>	15,693	85.12	2	18,936	85.74	3	17,890	92.18	3	21,120	93.0	3
<b>AGRICULTURE</b>	32,800	82.0	3	288,353	76.82	5	44,752	92.39	2	61,701	93.38	2
<b>TRANSPORT</b>	3,520.53	35.2	9	7,610.23	62.89	7	19,540	88.66	4	10,000	82.05	6
<b>COMMERCE</b>	125,204	89.12	1	1,054,300	93.91	1	233,260	96.58	1	230,060	95.25	1

Source: Field Survey, 2012

from the sectors. Forty percent of the MFBs reported that agricultural sector paid back loan more often while 50% of them pointed that trading and commerce sector pay back loan more often and 10% of the banks said it was the educational sector. These results imply that level of loan recovery from agricultural sector is encouraging, compared to some other sectors to which more loan is disbursed.

### **Problems facing the Contribution of the MFBs to Agricultural Development**

The problems facing the MFBs in meeting the needs of the agricultural sector are presented in Table 7. Seventy percent of the MFBs reported less savings habit of the clients and limited loan products to be problems that limit their contribution agriculture while 60% of them pointed shortage of logistics in rural areas as the constraint hindering their effectiveness. Fifty percent of the banks identified less willingness of the commercial banks to lend to MFBs and shortage of experienced human resources. Other problems facing the contribution of the MFBs to agricultural development in the study area were lack of effective management information system, inadequate capital to operate the banks and inability of the farmers to provide collateral security.

**Table 7: Constraints to Contribution of the Microfinance Banks to Agriculture**

<b>*Problems</b>	<b>Frequency</b>	<b>Percent (%)</b>
Less saving habit of the clients	7	70
Less willingness of the commercial banks to lend to MFBs	5	50
Shortage of experienced human resources	5	50
Limited loan products	7	70
Shortage of logistics in rural areas	6	60
Lack of effective management information system	2	20
Inability to provide collateral security	1	10
Inadequate capital to operate	2	20

Note: \* multiple response Field survey, 2012

### **Conclusion**

This study examined the role of MFBs in agricultural development in Kwara State Nigeria. This study showed that most MFBs disbursed loan to male married well educated farmer clients. It can also be inferred that most of the banks render advisory services to the farmer clients while just few assisted the farmers through farm input subsidization, storage facilities, human capacity building and establishment of loan utilization policy. The study also revealed that most of the banks' loan were granted to trade and commerce sector while the agricultural sector obtained just about one-fifth of loan disbursement annually. As regard loan recovery

however, the agricultural sector compared more favourably than other sector to which more loan was disbursed. The problems facing the MFBs in making more contribution to agricultural development in the study area include less saving habit of farmer clients, limited loan products, shortage of logistics in rural areas, less willingness of the commercial banks to lend MFBs, shortage of experienced human resources, inadequate capital to operate and lack of effective management information system.

### **Recommendations**

Based on the findings of this study, it is recommended that more loan should be provided by the banks to the agricultural sector. Besides, effort should be made by MFBs in the area of human capacity development, provision of storage facilities, farm input subsidization and establishment of loan utilization policy. This will not only enhance their contribution to agricultural development but also improve agricultural production in the country.

### **References**

- Abe, S. I. (1981). "Nigerian Farmers and their Financial Problems." Agricultural Credit and Financing in Nigeria: Problems and Prospects. CBN Seminar, April, 1981
- Adegeye, A. J. and Dittoh, J. S. (1982). "Essentials of Agricultural Economics". CAED University of Ibadan, Ibadan. Pp 251.
- Berger, M. (2002). "Microfinance and Emerging Markets". Inter-America Development Bank, 2002.
- CBN (2011). "List of Microfinance Banks in Nigeria".
- [www.cenbank.org/Supervision/fstitutions.asp#Micro](http://www.cenbank.org/Supervision/fstitutions.asp#Micro). Accessed on November 14, 2011.
- Haruna, D. (2007). "The Nigeria Microfinance," A Newsletter of International Year of Micro-credit, Vol. 4, June, 2007.
- Hope, M. A. (2009). "Poverty level still high despite 840 Microfinance Banks," Businessday News, May 11, 2009.
- Madaki, M. O. (1986). "Self-Sufficiency in Food Production in Nigeria: A Myth or a Reality". Seminar Paper on Agric. Dev. Kafanchan Nov, 1986.

- Mafimisebi, T. E., Oguntade, A. E. And Mafisebi, O. E. (2007). "A Perspective on Partial Credit Guarantee Schemes in Developing Countries: The Case of the Nigerian Agriculture". Presented at the Department of Agricultural and Rural Development, Nigeria Institute of Social and Economic Research. Pp22.
- Oladeebo, J. O. and Oladeebo, O. E. (2008). "Determinants of Loan Repayment among Smallholder Farmers in Ogbomoso Agricultural Zone of Oyo State". *J. Soc. Sci.*, 17(1):59-62.
- Olagunju, F. I. and Adeyemo, R. (2008). "Evaluation of the Operational Performance of the Nigerian Agricultural Credit Cooperative and Rural Development Bank (NACRBD)." *Journal of Agricultural Economics and Rural Development*, 1(1):53-67.
- Olawuyi, S. O., Olapade-Ogunwole, F., Fabiyi, Y. L. And Ganiyu, M. O. (2010). "Effects of Micro-finance Bank Credit Scheme on Crop Farmers' Revenue in Ogbomoso South L.G.A. of Oyo State". In: J.N. Nmadu, M. A. Ojo, U. S. Mohammed, K. M. Baba, F. D. Ibrahim and E. S. Yisa (eds) *Commercial Agriculture, Banking Reform and Economic Downturn: Setting a New Agenda for Agricultural Development in Nigeria*. Proceedings of 11th Annual National Conference of National association of Agricultural Economists (NAAE). Pp 12 - 16.
- Olayide, S. O. and Heady, E. O. (1982). "Introduction to Agricultural Production Economics". Ibadan University Press, University of Ibadan. Pp 67-81.
- Osugiri, I. I., Korie, O. C., Onyemauwa, C. S., Ejiogu, A. O. and Osuagwu, O. C. (2011). "Credit Acquisition, Defaults and Consequences on Small-holder Poultry Production in Owerri Agricultural Zone, Imo State". In: P. O. Erhabor, C. I. Ada-Okungbowa, C. O. Emokaro and M. O. Abiola (eds) *From Farm to Table: Whither Nigeria*. Proceedings of 12th Annual National Conference of National association of Agricultural Economists (NAAE). Pp 328-332.
- Verheye, W. (2000). "Local farmers would be able to feed Africa if they were given the chance." *Nature*, p 404-431.