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An Assessment of the Impact of Informal Financial Institutions on Agricultural Production in Yobe State, Nigeria

Okpachu Steve Adogwu[1, *], Madu Victor Uzoma[1], Okpachu Godwin Oche[2]

[1]Department of Agricultural Education, School of Vocational Education, Federal College of Education (Technical), Potiskum, Nigeria
[2]Department of Agricultural Education, School of Vocational Education, International Institute for Tropical Agriculture (IITA), Ibadan, Nigeria

Email address
steve_okpachu@yahoo.com (O. S. Adogwu)
[*]Corresponding author

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Abstract
The rural farmers who constitute a large percentage of food producers in Yobe state have problem of access to financial resources from the formal financial institutions because of the institutions' stringent conditions and location. In effect, most of the rural farmers have to rely mainly on the informal financial institutions for funding. This problem of inadequate finance has made them to produce at subsistence level. Therefore this study investigated the Impact of Informal Financial Institutions on Agricultural Production in Yobe State, Nigeria. The source of data for this study was mainly primary that was collected using structured questionnaire from sampled farmers who were participating in three informal financing schemes namely periodic savings; money lending; and rotating savings. 200 rural farmers were selected using purposive random sampling. Data was analysed using inferential and descriptive statistics like regression analysis and frequencies/percentages respectively. The findings indicated that the periodic savings and rotating savings had positive impact on agricultural production through while money lending had negative impact. Based on the results, the study recommended the urgent mobilization of fund int the study area and partnership with micro finance institution.

1. Introduction

The role of agricultural credit as a factor of production to facilitate economic growth and development and appropriately channel credit to rural areas for economic development of the poor rural farmers cannot be over emphasized. Previous studies have highlighted the limited access to financial resources available to agricultural sector compared to other sector of the economy. The agricultural sector is faced with lack of finance which is due to lack of credit facilities and farmers find it difficult to borrow due to lack of collaterals and increase in the interest rate. Hence, the agricultural sector has failed to expand and contribute meaningfully to the growth of Nigerian economy due to inadequate financing. Also, attempts at expanding the economic base of the rural farmers due to rapid agricultural development were frustrated by the scarcity of and restrictive access to available fund [1]. In Nigeria just like other developing nations, there exists a dual financial institution namely; the formal financial institutions like Commercial Banks, Insurance Companies and Mortgage Banks which operate through government regulations and the Informal financial institutions like money lenders, cooperative societies, thrift and loan societies, local bankers, and cooperatives etc. which are not regulated by government. The informal financial sector is an age-long one, an ancient one, that dates back at least to the 16th century and the activities predate those of the formal financial system and are not subjected to Government regulation [2].

Informal financial institutions mobilizes and channels funds to motivate farmers which enables them obtain modern farming tools such as plough, tractors, harvesters e.t.c. and building of modern storage facilities for preservation of farm products. These institutions were therefore created by the local people with the sole aim of making credit/loan facilities more accessible to the people so as help solve their socio-economic problems [3].

It has being observed that the informal financial institutions are easily found in rural settings, hence rural farmers therefore find the services of these informal financial institutions as a convenient source of funding [4]. This study therefore is an attempt to examine the impact of informal financial institution on agricultural production of rural farmers in Yobe State.

2. Conceptual Framework

The concept of informal financial institutions has been defined by variously by researchers and thinkers. The origin, structures and operations of the informal financial institutions in the world can be found in several literatures. It is noteworthy to point out that the rural poor people easily come to mind whenever informal credit institutions are mentioned. Accepting this to be correct, informal credit institutions can be defined as local providers of funds for the people by the people [5].

According to, an informal[6] financial institution is a voluntary association of group of people united to encourage each other to save regularly part of their little earnings with a view of providing themselves with credit facilities at affordable interest rate. According to him, the origin of cooperative society as an informal financial institution dates back to 1st half of the 19th century in Germany when peasant farmers lacked fund to carry out farming activities because as of lack of loans from the formal financial sector. To resolve these problems they resorted to credit facilities from local merchants who unfortunately charged them high interest rate, hence increased poverty level and its associated high default rate. Moved by passion, one of the German friendly-rich leaders by name Raiffeisen reacted to these problems and advocated for and formed societies which have common funds contributed by members and such funds were made available as loans to members at low interest rate without security. This move gave birth to the cooperative thrifts and has to a large extent ameliorated the finance suffering of the poor. Before his death in 1883, about 246 such societies were formed and they later spread to other parts of the world including Africa with different names but the same objectives, According to [7] Informal Financial Institutions (IFI's) could be conceptualised as those institutions that embrace all financial transactions that takes place beyond the functional scope of various countries and other financial sector regulation. These institutions are not controlled directly through major monetary and financial policy instruments but are created by individuals and groups with no legal status. In this study Informal Financial Institutions could be defined as those associations that substitute formal financial institutions, facilitating savings and ensuring easy access to credit to members and operating without direct control of the governmental financial authorities.

2.1. Theoretical Framework

The theoretical framework of this study is based on the dependency theory. Gunder Frank propounded the dependency theory borrowing from Marx's ideas. This theory is in conflict with the modernization theory. The modern theory argues that economic growth and development can only take place in developing nations if they imitate the behavioural traits and structures/institutions of the developed nations. The dependency theory disagrees with the assumption that foreign structures and institutions represent a developmental blue print for developing nations are and emphasised the need to severe to ties with the west and western model of development.

The dependency theory was of the view that rather than imitating the behavioural traits and structures/ institutions of the developed nations, however the dependency theory averred that indigenous institutions can facilitate development. They opined that foreign institutions have failed in improving the economy and socio-economic lives of the people since their sole aim is to maximize profit, exploit the masses and engage in capital flight. On the contrary, the dependency theory, places premium on indigenous institutions promoting development. Hence informal financial institutions which are indigenous creations are seen as institutions with the potential to promote and sustain development in developing nations.

2.2. The Impact of Informal Financial Institutions in Financing Agricultural Sector in Nigeria

Agricultural credit supplied in sufficient quality and judiciously used is a powerful instrument in bringing about a change in production and productivity. Thus, agricultural credit becomes veritable tool for further development. Thus, the availability of credit facilities is an indispensable function on improving agricultural development. The extra cost incurred in processing paper works for credit discourages farmers. Moreover, the formal financial institutions show pretence for lending to large scale enterprises and nonagricultural enterprises over rural peasant farmers. [8] asserted that stated that in Africa, only 5% of the farmers had access to formal credit. Hence it becomes pertinent on Government to associate and work these informal financial institutions that are predominantly found in the rural areas where agriculture thrives.

Though, there are different forms of informal financial institutions in Nigeria financing rural peasant farmers. Yet, their impact on the production and productivity of the rural farmer still leaves much to be desired. However, the informal financial institutions have a huge potential in financing the agricultural sector in Nigeria. The provision of agricultural credit by these rural based informal financial institutions has positively impacted on the income and social wellbeing of the rural farmer which includes amongst others;

i With the provision of agricultural credit by the rural informal institution has enabled rural Farmers to increase their production on a larger landholding with increased farm labourers.

ii The increased financing facilitated by the informal institutions also serve as a source of income to the rural farmer as enough surplus for sale after removing home consumption

iii. Farmers are being motivated by the credit given to them by the informal financial institutions.

iv. Through the loans given to farmers, they are able to buy modern machines for agriculture (e.g. plough, tractors, harvesters etc) thereby, encouraging mechanized farming which leads to increased efficiency

v. Through the loans given to farmers, they are now able to build their own modern storage facilities and this helps farmers to preserve their product for a long time.

vi the mobilization of savings from members' resources;

vii the provision of credits to all accredited financial members;

3. Methodology

The study area Zone B of Yobe State Agricultural Development Programme (Fika, Nangere, Potiskum and Fune Local Government Areas) was purposively selected because of proximity to the researcher and the security challenge in the state. The study was conducted using a survey design All the rural farmers in Yobe State formed the population of the study.. The instrument used in eliciting response from the respondents was a structured questionnaire together with oral interviews. 30 farmers registered with Yobe State Agricultural Development Project (YOSADP) were selected from each Local Government Area(LGA) using simple random sampling technique. The data collected was analysed using regression analysis.

3.1. Model Specification

The work of [7] presumed that there are three types of informal agricultural financing institutions (IFIs) namely: (i) Periodic savings, (ii) lending units (moneylenders) and (iii) deposit mobilization units with some amount of lending to members only, that is, rotating savings. In specifying the model, emphasis was placed on the impact of informal agricultural financing on agricultural production in the rural areas of Yobe State. The model was specified following Rweyemamu, Kimaro and Urassa (2003), Lawal and Abdullahi (2011) method of estimating the impact of informal agricultural financing as follows:

$$APRAs = f(TIFIa, HHc) \quad (1)$$

$$\text{Where } TIFIa = f(APS, ML, ARS) \quad (2)$$

$$HHc = f(Loca, Age, HHs, Edu, Ms, Gder) \quad (3)$$

When equations 2 and 3 are substituted in to equation 1,

$$\text{it becomes: } APRAs = f(APS, ML, ARS, Loca, Age, HHs, Edu, Ms, Gder) \quad (4)$$

Where APRAs = Agricultural Production in the Rural Areas proxied by income generated from agricultural produce in the rural areas, (that is the aggregate of the proceeds of sale of farm produce)

HHc= household characteristics
APS= amount received from periodic savings
ML = amount received from moneylenders
ARS = amount received from rotating savings
Age= age of respondent
HHs= household size
Edu= educational background of respondent
Ms= marital status of respondent
Gder= gender of respondent and
U_i is stochastic error term or disturbance error term.

On transformation, equation 3.4 can be in linear form of the type;

$$APRAs = ao + b_1APS + b_2ML + b_3Esu + b_4Loca + b_5Age + b_6HHs + b_7Edu + b_8Ms + b_9Gder + Ui \quad (5)$$

Apriori Expectations or the expected patterns of behaviour of the independent variables (APS, ML, APR) on the dependent variable (APRAs) in the model are:

$$b1>0,\ b2>0, b3>0, b4>0, b5>0, b6>0, b7>0, b8>0, b9>0$$

3.2. Results

Table 1. Socio-economic characteristics of the respondents.

Variable	Frequency	Percentage
Gender		
Male	120	60
Female	80	40
Age (Years)		
20-30	30	15
31-40	72	36
41-50	78	39
51-60	10	5
>60	10	5
Marital status		
Single	34	17

Variable	Frequency	Percentage
Married	80	40
Widow/Widower	86	43
Household size		
1-5	22	11
6-10	66	33
11-15	93	46.5
>16	19	9.5
Farm size (ha)		
1-2	159	79.5
3-4	32	16
>4	9	4.5
Education		
Informal	144	72
Primary	27	13.5
Secondary	23	11.5
Tertiary	6	3
Experience		
1-10yrs	86	43
11-20yrs	68	34
21-30yrs	28	14
>30yrs	18	9
Sources of finance		
Periodic savings	89	44.5
Cooperatives	63	31.5
Revolving savings	38	19
Money lender	10	5

Source: Field survey, 2016

3.3. Socio-Demographic Characteristics of the Respondents

Table 1 show that 60% of the rural farmers in the study area are male, while the remaining 40% are female. The higher number of male respondents indicates the relative peace being experienced after the security challenge in the area. Majority of the farmers (%) fell within the age bracket of 31 to 50 years of age. This indicates that the respondents are in their prime age and will impact positively on their productivity. The marital status of the rural farmers shows that most of the rural farmers (83%) are married. This implies the cultural and religious value placed on marriage in the study area. The large family size of the respondents is indication that members of the family serve as a source of additional labour on the farm. The distribution of the farmers according to educational status of the respondents shows in Table 1 indicates that majority of the farmers (72%) had informal education, while only 6% attended tertiary education. The farm size of the respondents show that majority of them have farm holdings of 1-2 hectares. This agrees with the subsistence production in the rural areas. This signifies the low level of formal education in the study area. The low literacy level will negatively affect dissemination and adoption of innovations. The existing informal financial institution patronized by majority of the rural farmers (95%) is periodic savings, cooperatives and revolving savings, while only 5% of the farmers patronize money lenders. This support the assertion that the farmers find it difficult to obtain finances from formal sources.

Table 2. *Regression Results of the Impact of Informal Financial Institutions on Agricultural Production in Potiskum Local Government Area of Yobe State.*

Variable	Coefficient	t-values
Constant	8.17	17.23
Periodic savings	0.52	3.23**
Rotating savings	0.85	1.69**
Money lenders	-0,041	-2.73*
Gender	0.19	2.84
Age	0.016	2.33
Marital status	1.16	2.04
Household	0.099	3.75
Farm size	0.086	0.45
Education	0.132	0.062
Adjusted R^2	0.641	
F-Stat	3.092	

Source: Field Survey, 2016

* Statistically significant at 10% level ** Statistically significant at 5% level

3.4. Impact of Informal Financial Institutions on Agricultural Production

Table 2 shows the determinants of informal financial institutions on agricultural production in the study area. The three units of informal financial institutions singled out for focus in this study include periodic savings scheme, money lending and rotating savings scheme. They are regarded as the independent variable, while agricultural production in the rural areas proxied by income generated from agricultural produce in the rural areas is the dependent variable. The result shows the independent variables (periodic savings, rotating savings and money lenders) in the model explained 64% of the variation in the dependent variable (agricultural production as proxied by the rural farmers income). Also, the F-statistics is significant at 1%, which implies that the model is useful in determining if any relationship exists between agricultural production and the independent variables mentioned above. All the socio economic variables have positive coefficient and satisfies a-priori expectations. This implies that increasing them will increase agricultural production. Periodic savings and revolving savings have positive coefficient and are significant at 5% respectively Money lending have a negative coefficient and was significant at 1%. This implies that increasing money lending will negative affect agricultural production in the study area.

4. Discussion

The result of the study shows that periodic savings and rotating savings impacted positively on agriculture production in the study area. In terms of magnitude or strength, the rotating savings scheme has more impact than periodic savings when viewed from the values of the co-efficient. This is expected because in rotating savings, there is a greater tendency for members to know themselves better than in periodic savings. Rotating savings is an association or collection of group of individuals who contribute fixed sums of money and the pooled sum is taken in rotation by the members. It is obvious that element of trust in that scheme is going to be higher where members, in most cases, appear to be close associates than in the periodic savings where the collector of money may be relatively unknown to some members. He only comes around to pick the savings at specific periods which may be daily or weekly. The higher degree of trust in rotating savings might have accounted for the higher magnitude of the impact of rotating savings than in periodic savings because of the larger sums of money the members will be willing to save under the rotating savings scheme. The result also conforms to the view of [11] that one of the constraints of informal financial institutions was the risk of default and total abscondment by the collector of money with the proceeds of collection without any means of insurance coverage. The result also shows that the use of money lending by the respondents is Minimal. This is in line with the findings of [9, 10] reported that the use of money lending was not common because of excessive high interest rates and exploitation through under valuation of collaterals which were the factors that had restricted the institutions from providing credit to farmers for agricultural purposes in Tanzania..

5. Conclusion

This study was an attempt to assess the impact of informal agricultural financing on agricultural production in the rural economy of Yobe State, Nigeria. Three units of the informal financial institution, namely, periodic contribution, moneylender, and rotating savings were the focus of the study. The study concludes all the three informal financial institutions impacted on agriculture production in the study area. Periodic savings and savings both impacted positively, while money lending impacted negatively.

Based on the findings this study, it was recommended that:

A. micro finance services should work with informal financial institutions to serve the interest of the rural farmers

B. there is an urgent need for fund mobilization in agricultural production in the rural area

C. farmers' level of education be increased through extension education to enhance grass root financial performance.

D. Infrastructural development in the rural areas will boost accessibility and economic activities in the rural areas to boost economic activities as more money will enter the hands of the rural farmers which will improve their propensity to save and enhance the informal financial institutions' performance in the study area.

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