
ANALYSIS OF CREDIT ACQUISITION AMONG RICE-BASED SMALL SCALE FARMERS IN EBONYI STATE, NIGERIA

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ABSTRACT

This study analyzed the factors affecting credit acquisition among rice-based Small and Medium Enterprises (SMEs) in Ebonyi State, Nigeria. The specific objectives were to; examine the socio-economic characteristic of Rice Based SMEs in the study area; determine the source and volume of credit acquired by Rice-Based SMEs; and analyze the factors affecting credit acquisition among Rice-Based SMEs. Descriptive and inferential statistical analysis were used accordingly. Objectives one and two were analyzed using descriptive statistics such as percentage, frequency, pie chart; while objective three was analyzed using ordinary least square regression. A greater population of the respondents were male, with 53% of the population indicating that they were married. Less than half (45%) of the population had 6-10 years of experience, with a household size of 1-3 persons. The R² value of 0.734 implied that 73.4% changes in the amount of credit acquired by the rice based SMEs was accounted for by changes in the independent variables included in the model while the remaining 26.6% was accounted for by error. The result further showed that education, farm size and repayment period of the credit positively influenced the acquisition of credit by the Rice-Based SMEs, all at 1% level of significance; while household size, credit source and interest rate negatively influenced credit acquisition at 5, 10 and 5% levels of significance respectively. It was recommended that; Agricultural lending institutions should be strengthened while appropriate measures should be insured and sufficient fund be provided with minimal and bearable formalities, for the encouragement, motivation and improvement in Rice production. Government and other stakeholders' efforts should be directed towards policies and programmes that will further enhance those factors that increase farmers' decision to use agricultural credit. Financial institutions or credit sources should be strategically positioned to be easily accessible to farmers while reducing the cumbersome of processing credit among farmers who are less educated and have little or no collateral.

Keywords: *Credit acquisition, Rice-Based SME's*

INTRODUCTION

Rice is one of the unique and stable food crop that can be grown virtually in every part of the country as it requires a wide range of temperature between 20°C and 38°C (Ajah, Igiri and Ekpenyong 2017). The daily demand for rice in Nigeria is increasing on a faster rate than in other African countries since the mid 1970's (FAO, 2001 in Ajah *et al* 2017), hence, rice is an essential commodity (food) in Nigeria. One of the major challenges of Agriculture as well as

Small and Medium Enterprises (SMEs) in Nigeria, is on how to raise adequate funds to enable them operate more effectively and efficiently and contribute to food availability and poverty reduction (Memba, 2011; Ololade and Olagunju, 2013). Financing is necessary to help the Rice-based SMEs start up and expand their operations, package new investment, and invest in new staff or production facilities. Some Rice-based SMEs often run into problems, because they find it much harder to obtain financing from banks, capital markets or other suppliers of credit. The pivotal role played by the SMEs in the national economies of countries around the world (Karadag, 2016; Muller, Gagliardi, Caliandro, Bohn & Klitou; 2014), has made it necessary to ensure that the study of the financial capacities and accessibilities of these enterprises is being put to consideration.

Apart from contributing to employment level, SMEs are also leading in provision of consumer and industrial goods (Rahim, Musliar, Nixia, & Letty, 2018). In Nigeria, SMEs are estimated to contribute 10% of the employment level in Nigeria well below that of the UK 54%; USA 50.3%; Bangladesh 80%; India 80%; Belgium 66.6%; South Africa 60%; Malaysia 57.7%, Ireland 66.5% and China 58.8% (Iloh and Chioke, 2015). Rice-Based SMEs could be considered as key drivers in improving food security and economic growth, while acting as sources of supply for sustainable performance and growth in the coming future (Bhuiyan *et al.*, 2016).

Rice is produced through various stages ranging from the provision of production facilities on farm activities and post-harvest to market to final consumers. All these activities create business opportunities especially farmers and SMEs as the main actors. Saleh and Ndubisi (2006) noted that some of the challenges facing the Rice-Based SMEs are low access to finance, lack of management, technology, labour skills, market limitation and competition, and low turnover profit. These points to the fact that the Rice-Based SMEs are also facing similar challenges like other SMEs. Without proper finance, these SMEs can neither expand to meet the demands of the local market, nor compete globally nor even acquire technology or meet their fixed and working capital requirements (Wanjohi and Mugure, 2008), therefore access to finance is highly pertinent.

This study analyzed the factors affecting credit acquisition among rice-based SMEs in Ebonyi state, Nigeria. The specific objectives were as follows;

- i. examine the socio-economic characteristic of rice Based SMEs in the study area
- ii. determine the source and volume of credit acquired by Rice based SMEs
- iii. analyze the factors affecting credit acquisition among Rice-based SMEs

METHODOLOGY

The Study Area

The study area is Ebonyi State, which is located in South-East Nigeria. The state lies in the humid tropical agro-ecological zone of Nigeria within Longitudes 70 30'E and 80 30'E and Latitudes 50 40'N and 6045'N (Okereke, 2012). It has a land area of 5,935 km² with a projected population of 2,253,140 persons in 2016 using a growth rate of 3.5% (National Population Commission, 2016). The State is delineated into three agricultural zones; namely Ebonyi North (Abakaliki Area), Ebonyi Central (Ikwo Area) and Ebonyi South (Afikpo Area). There are thirteen Local Government Areas (LGAs) in the state. Ebonyi is primarily an agriculture producing region. It has a luxuriant vegetation of tropical rainforest, a leading producer of rice, yams, potatoes, maize, beans, and cassava. Ebonyi also has several solid mineral resources (crude oil and natural gas) and huge salt deposit at the Okposi and Uburu Salt Lakes.

Population and Sampling Procedure

A multi-stage sampling procedure was adopted in the selection of respondents, composed of rice-based SMEs. The rice-based SMEs were purposively sampled for this study. In the first stage, four Local Government Areas (LGAs) namely; Ikwo (Ebonyi Central), Izzi (Ebonyi North), Afikpo South and Ohaozara (Ebonyi South) were purposively selected based on the dominance of rice farming in the LGA's and their representation of the three agricultural zones. From each selected LGAs, three communities were purposively selected for the same reason to give a total of twelve communities. The numbers of registered rice farmers' in the communities were obtained from Ebonyi state Agricultural Development Programme. The registered rice farmers in the communities formed the population of the study, which is 765 rice farmers.

A proportionate sampling technique was used to select farmers from the population to give a sample size of 180 respondents. Descriptive and inferential statistical analyses were used accordingly. Objectives 1 and 2 were analyzed using descriptive statistics such as percentage, frequency; pie chart, while objective 3 was analyzed using ordinary least square regression.

RESULTS AND DISCUSSIONS

Socioeconomic characteristics of the respondents

The result shows that the respondents' age was fairly distributed. However, respondents within the ages 50 and 59 showed the highest proportion (32%). This was followed by ages 40-49 (21%) and 60-69 (20%) indicating that the majority of the respondents were still young, vibrant, enterprising and in their active stage. This is further verified by their mean age of 46 years. These entrepreneurs are expected to be risk-takers; highly innovative, motivated and efficient.

The gender distribution of the respondents in the study area suggests that majority (56%) of the respondents in the study area are males; thus males dominated the rice business in the study area. This implies that rice farming is usually done by men considering the tedious nature of the business.

The result shows that a large proportion of the respondents (53%) were married while 13% were divorced. Marriage plays a vital role in the involvement of entrepreneurs in business. Since they are interested in meeting the food and welfare needs of the various families, they take the work very serious. This further entails that a relationship exists between marital status and involvement in rice business; for example, the spouses of the operators may be as well involved in the business thus offering necessary assistance to the owner for enhanced performance. Such assistance involves the provision of useful advice and labour supply to the processing activities since the business is usually family-owned.

The processors' experience distribution was highest (45%) between 6-10 years and followed by 1-5 years. This result implies that the rice farmers were relatively experienced. Experience plays an important role in improving the efficiency of entrepreneurs through allocation and utilization of resources since they can understand the intricacies of the business better. Experience reduces loss and shocks and as such, experienced processors are better positioned to adopt and implement improved technologies than their inexperienced counterparts. A mean experience of 18 years implies that the respondents are well experienced and could take well-informed and planned decisions.

Table 1: Frequency distribution of the processors

Age	Frequency	Percentage
20-29	25	14
30-39	23	13
40-49	38	21
50-59	58	32
60-69	36	20
Total	180	100
Mean age	46 years	
Sex		
Female	80	44
Male	100	56
Total	180	100
Marital status		
Single	29	16
Married	95	53
Widowed	33	18
Divorced	23	13
Total	180	100
Farming experience		
1-5	40	22
6-10	80	45
11-15	20	11
16-20	22	12
21-25	18	10
Total	180	100
Mean	18years	
Household size		
1-3	68	38
4-6	70	39
7-9	42	23
Total	180	100
Mean	5	
Level of education		
No formal education	22	12
Primary school	26	14
Secondary school	2	41
Tertiary education	36	20
Post tertiary education	24	13
Total	180	100
Cooperative membership		
Yes	126	70
No	54	30
Total	180	100

Source: Field survey, 2019

The result shows that the entrepreneurs with household sizes 4-6 ranked the highest (39%) and closely followed by 1-3 (38%). The lowest was size 7-9 with 23%. This means that the respondents had a moderate family size of about 5 persons per household on the average. The household size and structure of a family is a major determinant of a lot of important indices such as per capita income, consumption, and welfare and food security. It affects rice farming efficiency through the supply of labour at no cost especially where a majority of the household members are not dependents (aged and children). It is therefore expected that these farmers be

efficient due to the possible reduced cost on hired labour substituted by family labour. The result shows that a very large proportion (41%) of the respondents had secondary school education while about 12% had no form of education. On the average, about 74% of the respondents would be said to be literate if going by the minimum attendance of secondary education. They could read and write and as well would be open to modern innovations, adjust favorably to harsh demand and supply forces while making normal profits.

The result shows that a very large part of the rice entrepreneurs (70%) were cooperative members while 30% of them were not. Membership of cooperative society is a strong requirement by commercial financial institutions to advance loans to the members. Government and NGOs program aimed at supporting farmers also advocate group formations (in terms of cooperatives). Cooperatives also benefit their members in so many ways such as giving of credits at very low interest rates, selling of farm inputs at reduced costs as well as providing vital information on current and trendy practices. Thus, membership of cooperatives is very beneficial for improved profitability.

Source and Volume of Credit Acquired by Rice Based SMEs

The result showed that the respondents patronized a number of credit sources. However, 78% of the rice entrepreneurs which became the highest received credit from friends and families. The least patronized is microfinance banks (25%). Different sources of capital were identified in the study with different levels of patronage of each source. Cooperatives had the highest level of credit releases, signifying that cooperative societies in the study area were viable and active and could advance loans to their members which would have led to the level of patronage. Bank loans received the lowest level of patronage. This could be due to the high cost of credit advancement (interest rate) charged by the banks which discourages farmers from patronizing their loans. On the amount acquired from these sources, about 98,000 were received from cooperative members which is the highest while the lowest was 40,000 from age group. The findings of this study therefore imply that while a very large proportion went for credit from friends and families (due to the zero interest rate), others went to microfinance banks and received more credit.

Table 2: Frequency distribution of respondents by source and volume of credit

	F/R	PML	C/T	AG	DB	MFC	CS
Freq.	140 (78)	100 (55)	78 (43)	98 (54)	50 (28)	45 (25)	110 (61)
Mean	45,000	52,000	70,000	40,000	48,000	65,000	98,000

Source: Field survey, 2019* (FR = Friend/relatives, PML = Private money lenders; C/T = Credit/thrifts; AG = Age grade; DB = Development bank; MFC = Microfinance bank; CS = Cooperative society)

Factors Affecting the Credit Acquisition of Rice-Based SMEs

To examine the factors affecting the acquisition of credit by rice based SMEs in the study area, the multiple regression model was used. The exponential form was selected having satisfied the conditions of high R², statistically significant F-ratio, and highest number of significant variables as they conform to *a priori* expectations. The R² value of 0.734 implied that 73.4% changes in the amount of credit acquired by the rice based SMEs was accounted for by changes in the independent variables included in the model while the remaining 26.6% was accounted for by error.

Table 3: OLS estimates of factors affecting credit acquisition among Rice-based SMEs

Variables	Linear	Exponential (+)	Semi-log	Double-log
Constant	-160.000 (-0.394)	9.720 (17.080)***	-0.876 (-0.969)	3.166 (5.124)***
Education	-70.685 (-2.091)**	0.142 (2.990)***	-0.480 (-2.609)**	0.046 (0.362)
Farm size	-72.780 (-1.740)*	0.295 (5.033)***	-0.495 (-4.541)***	0.285 (3.816)***
Household size	15.985 (0.550)	-0.101 (-2.480)**	0.078 (0.377)	-0.572 (-4.069)***
Farming experience	3.421 (0.101)	0.026 (0.546)	-0.096 (-0.721)	-0.362 (-3.984)***
Labour	0.001 (0.952)	0.191 (1.021)	-0.104 (-1.185)	-0.015 (-0.257)
Credit source	96.364 (0.803)	-0.291 (-1.728)*	-0.048 (-0.440)	-0.484 (-6.503)***
Repayment period	48.825 (6.767)***	0.053 (5.207)***	0.332 (2.290)**	0.108 (1.089)
Collateral	296.000 (1.281)	-0.177 (-0.547)	0.441 (2.005)**	-0.088 (-0.588)
Interest rate	0.000 (0.593)	-5.890 (-2.274)**	0.408 (9.217)***	0.942 (31.156)***
Income	-0.002 (-1.116)	0.000 (2.468)**	-0.172 (-2.771)**	0.105 (2.478)**
F-ratio	9.900	52.040	16.880	333.93
Adj. R ²	0.309	0.720	0.470	0.949
R ²	0.344	0.734	0.500	0.952

Source: Field data, 2019. ***, ** and * are significant at 1%, 5% and 10% respectively.

The result further showed that education, farm size and repayment period of the credit positively influenced the acquisition of credit by the rice based SMEs, all at 1% level of significance while household size, credit source and interest rate negatively influenced credit acquisition at 5, 10 and 5% levels of significance respectively.

CONCLUSION AND RECOMMENDATIONS

The credit system in the study area is still yet to be fully maximized for optimum production and growth in the rice sub-sector. This follows from the findings where majority of the rice-based SMEs used capital from friends and relations with minimal patronage from formal credit institutions despite receiving more funds from microfinance banks. Both growth of the firms and credit acquisition were predicted by farm size, education, age of the farmers, farming experience and repayment period. With respect to this it is recommended that;

1. Agricultural lending institutions should be strengthened while appropriate measures should be insured and sufficient fund to be provided with minimal and bearable formalities, for the encouragement, motivation and improvement in rise production.
2. Government and other stakeholders' efforts should be directed towards policies and programmes that will further enhance those factors that increase farmers' decision to use agricultural credit.
3. Financial institutions or credit sources should be strategically positioned to be easily accessible to farmers while reducing the cumbersome processing for credit among farmers who are less educated, with little or no collateral.

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