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Full-Length Research Paper

Financing differentials among small scale agribusinesses in Abia State, Nigeria

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ABSTRACT: This research was carried out in Abia State, Nigeria. The study specifically described small scale agribusiness production and firm characteristics; identified their sources of finance; identified determinants of differentials in financing of small scale agribusinesses; and identified problems militating against financing of small scale agribusinesses. A structured questionnaire was used to collect data from 120 small-scale agribusiness firms chosen using simple random sampling technique. Descriptive statistics and discriminant function model were used to analyze the data. The main sources of finance for small-scale agribusinesses were equity financing in the form of ploughed back profit/retained earnings (70.8%) and owners' savings (65.8%). Discriminant analysis revealed that firm size, output level, asset value, and equity amount were significant determinants of firm financing differentials. The model revealed that firm size, asset value, loan amount obtained, equity amount and output level all contributed significantly to the total discriminant score, accounting for 63.86%, 14.12%, 10.17%, 9.82%, and 2.03%, respectively. High-interest rates (68.3%), insufficient collateral (64.2%), and low patronage of locally produced goods were major barriers to financing small-scale agribusinesses (60.8%). We recommended that the Central Bank of Nigeria, the Ministry of Finance, and other relevant government agencies in charge of managing Nigeria's economic process step up efforts to create a favorable macroeconomic environment for small-scale agribusiness financing.

Keywords: Agribusiness, discriminant analysis, finance, small scale enterprise

INTRODUCTION

Despite the fact that oil and petroleum industries dominate the Nigerian economy, the agriculture industry is significant, accounting for approximately 31% of the country's GDP (Central Intelligence Agency, 2010). More than 60% of Nigerians work in agriculture (Aleke *et al.,* 2011), making agri-business a critical component of the Nigerian economy. Agribusiness encompasses all aspects of agricultural production, processing, distribution, and consumption, from farm input suppliers to farmers themselves. Farming inputs supply companies, producing farm firms, food processing agribusiness firms, and food marketing and distribution agribusiness organizations are the four major groups of agribusiness enterprises in Nigeria (Dannson *et al.*, 2004). Farm input producers and suppliers, farmers, wood producers, furniture manufacturers, food processors, food packers, food transporters, and food marketing companies are all examples of agribusiness operators (Nwachukwu *et al.,* 2011). If pushed to its logical conclusion, more than 75 percent of all business operations in Nigeria could be classified as agribusiness (Onyido, 2006). Agribusiness is as old as farming itself as

a practical application, but as a concept of study under modern management, it is relatively new, growing and becoming more popular with each passing year.

The uniqueness of agribusiness is that it is tasked with the provision and handling of goods and services related to the nation's food and fiber needs. The vast majority of agribusiness concerns in Nigeria are primarily in the private sector. According to Nigerian Institute of Social and Economic Research (1999), 41% of agro-industries are sole proprietorships, while 25% are private limited liability companies. Approximately 21% are owned by the government, 5% are partnerships, and 8% are limited liability companies. Small-scale agribusinesses are critical to Nigeria's economic development. Available statistics indicate that they account for a staggering number of Nigeria business enterprises and contribute significantly to foreign exchange earnings. Agribusiness accounts for more than 30 percent of Nigeria's GDP and 25 percent of national merchandise exports, and it is the largest manufacturing sector, accounting for 46 percent of total retail spending (Nwibo and Alimba, 2013). The significance of small scale businesses to Nigeria's economic development is increasingly being recognized by both local and international donors (Nto *et al.,* 2015).

While the importance of small scale agribusinesses cannot be overstated, categorizing agribusinesses as small scale is subjective and depends on various value parameters (Iloh, 2014). Small scale agribusiness enterprises can be classified according to their size, sector, organization, technology, and location. Size however is the most practical basis for classification in terms of policy and planning. One or more of the following criteria are commonly used: employment, turnover, assets, and paid up capital (Small and Medium Enterprises Development Agency of Nigeria, 2007). In Nigeria, the National Council of Industry, which is under Federal Ministry of Industries, periodically revises the classification of Small Scale Enterprises (SSEs), to which small scale agribusinesses belong. Other organizations, such as the Central Bank of Nigeria, use classifications that differ from those used by the Federal Ministry of Industries. There is, however, more agreement when it comes to defining SSEs in terms of asset value than on any other basis. Because the impact on turnover and the number of people employed is greater than the impact on asset value in the event of an economic downturn (Aruwa, 2004). According to the Federal Ministry of Commerce and the Central Bank of Nigeria, small scale enterprises are those that have a capital investment of more than ₦150, 000 but less than ₦5 million and employ less than fifty people. Small scale agribusinesses therefore are enterprises/businesses that manufacture and distribute farm supplies, engage in production, storage, processing, and distribution of farm products and items made from them, and have a total capital base of between ₦150, 000 and ₦5 million and staff strength of less than 50.

An essential component for the development of small scale agribusinesses is access to adequate finance. Adequate financing of small scale business is a critical tool for promoting and leveraging the development of small scale enterprises in Nigeria (Gbandi and Amissah, 2014). According to Nto *et al.* (2015), the decision of whether to use internal or external financing options is critical in the development of small scale enterprises in Nigeria. The use of the appropriate financial option by a small scale agribusiness would increase production and productivity, resulting to higher incomes and higher standard of living.

In general, small scale agribusinesses are funded through equity, debt, or a combination of the two (Aruwa, 2004; Iloh, 2014). Owners' savings and profits ploughed back are included in equity financing (also known as internal funds). Debt financing is typically obtained from either the informal or formal financial sectors (Aruwa, 2004; Olutunla and Obamuyi, 2008; Nto *et al.,* 2015). Borrowing from friends, relatives, money lenders, informal groups, and cooperative societies are examples of informal sources of finance. Informal financial units have had a developmental impact in rural areas and are primarily known for extending loan facilities (micro credit) to small businesses without requiring physical collaterals other than social security or guarantors (Osondu *et al.,* 2015). In the formal sector, commercial banks, development banks, and micro finance banks are the most popular sources of formal credit for SSEs, including small scale agribusinesses (Ismaila, 2012). These institutions use a variety of financial instruments to obtain surplus funds from those who forego current consumption for the future and make them available to the deficit spending unit (borrowers) for investment purposes (Ismaila, 2012).

Many small scale agribusinesses are constrained by limited resources and the inability to access funds from external sources of finance (debt), forcing them to rely on internal sources such as personal savings and ploughed back profit (Nto *et al.,* 2015). For example, available data show that loans from external sources such as commercial banks to small and medium scale enterprises decreased as a percentage of total credits from 48.79 percent in 1992 to 0.15 percent in 2010 (Nto *et al.,* 2015). The reasons for this are that small scale businesses have low business credibility, poor management and accounting structure, inability to present tangible collateral (which is a major requirement by formal financial institutions), and the sector's inherent high risk of business failure (Akinsulire, 2006). According to Nto et al. (2010), despite government incentives such as the establishment of the Bank of Industry (BOI), the small and medium equity investment scheme (SMEIS), and the

Nigerian Export and Import Bank (NEXIM), small scale enterprises have not made a significant contribution to the growth and development of the Nigerian economy in general and Abia State in particular. One major reason for this is that the financial assistance provided to small businesses is insufficient to have the desired impact on the economy (Illoh, 2014).

The importance of small businesses in the economic development process has been well documented (Oluba, 2009; Akingunola, 2011; Aremu and Adeyemi, 2011; Alese and Alimi, 2014). Oluoba (2009) and Akingunola (2011), in particular, investigated the impact of small and medium-sized enterprises (SMEs) financing options on the overall growth of the Nigerian economy. Both studies found a significant positive relationship between SMEs financing and economic growth in Nigeria through level of investment. Furthermore, Aremu and Adeyemi (2011) and Alese and Alimi (2014) found that SMEs financing had a significant positive effect on job creation and economic growth in Nigeria. All of these studies, however, were macroeconomic in nature and did not focus on financing options for individual small-scale agribusiness firms.

Given the importance of finance and the difficulties that small scale agribusinesses face in obtaining it, particularly from external sources, it is necessary to examine financing disparities among small scale agribusinesses. However, according to studies such as Akinsulire (2006), Olabode *et al.* (2013), Zabri (2012), and Nto *et al.* (2015), there is a paucity and dearth of research on the mode of financing small scale enterprises in Nigeria, particularly small scale agribusinesses. Similar research on the financing options for small businesses has been conducted in Nigeria. Gbandi and Amissah (2014) conducted a theoretical literature review on financing options for small and medium enterprises (SMEs) in Nigeria. While the study provided some useful guidelines, it did not empirically determine the major firm or manager characteristics that will improve fund procurement among small scale agribusinesses in Nigeria. Nto *et al*. (2015) also investigated the financial options of small and medium-sized businesses in Abia State. The study did not concentrate on small-scale agribusinesses. As a result, a study is required to bridge these gaps by using parametric econometric tool to analyze financing differentials among small scale agribusinesses in Abia State, Nigeria. Therefore, the study sought to: describe production and firm characteristics of small scale agribusinesses in Abia State; identify sources of finance available to small scale agribusinesses in the study area; identify determinants of differentials in financing of small scale agribusinesses in the State; and identify problems militating against financing of small scale agribusinesses in the State.

RESEARCH METHODOLOGY

This study was carried out in Abia state, Nigeria. Abia state has both rural and urban locations and is often regarded as the SMEs capital of Nigeria because of the numerous number of small and medium scale enterprises situated within it. Abia state has a land area of 7,677.20 square kilometers, with a population of 2,833,999 persons (National Population Commission, 2006). The state has three agricultural zones, namely: Aba, Ohafia and Umuahia zones and is located between latitudes $5^{0}47^{'}$ N and $6^{0}12^{'}$ North of the Equator and between longitudes $7^{0}23^{'}$ E and $8^{0}02^{'}$ East of the Greenwich Meridian (National Root Crops Research Institute, 2003). The population for the study consists of all the small scale agribusinesses in the state. The study employed simple random sampling technique in the selection of respondents. First, lists of small scale agribusiness enterprises in the state were obtained from Abia State Board of Internal Revenue tax reports. Using the list as a sampling frame, thirty (30) small scale agribusiness firms were randomly selected from Ohafia and Umuahia agricultural zone on the basis of their total capital outlay, while, sixty (60) small scale agribusiness enterprises were randomly selected from Aba agricultural zone based also on their total capital outlay. This gave 120 small scale agribusiness firms which served as sample for the study. The inequality in number of agribusiness enterprises selected from the three agricultural zones was a result of greater concentration of SMEs in Aba zone. Only small scale agribusiness firms (those whose capital outlay is worth less than ₦5m in line with Central Bank of Nigeria categorization) were selected. The selected 120 small scale agribusinesses were visited and the most senior manager/owner of each agribusiness was selected as respondent representing his/her firm. The study made use of primary data. Data were collected from the selected respondents following a field survey using structured questionnaire. Data were collected on production and firm characteristics of the small scale agribusinesses such as age of firm/number of years in operation, location of agribusiness, type of agribusiness, distance to nearest market, access to credit, value of assets, sources of finance, firm size, education level of manager, production experience of manager, skilled labour employed, unskilled labour employed, gender of manager, interest on borrowed capital, output level, amount of loan obtained, amount of equity, interest rate on loan and gross income. Also, data on sources of finance available to the agribusiness firms and problems militating against small scale agribusiness financing were collected. The objectives were analyzed using descriptive statistics and discriminant function model. The discriminant model which is multivariate in nature establishes group membership based on predictor

variables. In line with methods used in similar studies by Nto *et al.* (2014) and Mbanasor and Nto (2008), the discriminant procedure started with categorization of the small scale agribusinesses into two groups based on sources of finance (internal or external financial options). The discriminant analytical model was used to classify the small scale agribusinesses in Abia State with the same set of independent variables into two mutually exclusive categories. The model is explicitly specified thus following Nto *et al.* (2014):

$$Z= a+b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 \quad (1)$$

Where:

Z= Discriminant score of the Canonical discriminant function for each group.
X_1= Firm Size (Naira)
X_2= Number of employees (Number)
X_3= Output Level (Naira)
X_4= Age of the Firm (Years)
X_5= Value of asset (Naira)
X_6= Location of Firm (1 = Urban, 0 = Rural)
X_7= Amount of loan obtained (Naira)
X_8= Amount of equity (Naira)
U = group membership.

RESULTS AND DISCUSSION

Production and firm characteristics of small scale agribusinesses

Number of years in operation

Distribution of the small scale agribusinesses based on years in operation is shown in (Table 1). The table shows that 35.8% and 25.0% of the agribusiness firms had been in operation between 1 to 5 years and 6 to 10 years respectively. The mean number of years in operation of the agribusinesses was 13 years. This could have implication on financing and business sustainability. The more the number of years an investor have been in business, the more he or she may have gained practical experience on how to handle issues of financing and productivity. Nwaru (2004) noted that improvement in productivity is sometimes based on experience which in turn enhances income level of a business.

Location of the small scale agribusinesses

Distribution of the small scale agribusinesses based on location is presented in (Table 2). The table shows that 75.0% of the agribusinesses are located in urban areas, while 25.0% of them are located in rural areas. The posture of this result is indicative of the predominant urban nature of the study area; it could also result from the relative attractiveness of agribusinesses enterprises to the urban areas where there is regular and developed market, higher availability of skilled labour, better physical infrastructure and production schemes. This result compares favourably with findings of Food and Agriculture Organization (2008); and Nto and Mbanasor (2011) that majority of small scale agribusinesses are scattered all over the country but are concentrated more in the urban areas.

However, this result runs contrary to Ijere and Mbanasor (1998) assertion that agribusinesses are found mostly in rural areas although in dispersed form due to high availability of production land and raw material.

Types of the small scale agribusinesses

Distribution of the small scale agribusinesses based on type of ownership is shown in (Table 3). The table shows that 36.7%, 25.0% and 17.5% of the small scale agribusinesses were sole proprietorship, partnership and family owned businesses. Meanwhile, agribusinesses owned as private limited liability companies and co-operatives accounted for 13.3% and 7.5% of the agribusinesses in the area. This indicates that sole owned agribusinesses dominated in the area and this has implication on availability of finance for sustainable firm operations. However, this result does not compare favourably with finding of Basil (2005) that majority of small scale agribusinesses were private limited liability companies.

Distance of the Small Scale Agribusinesses from Nearest Market

Distribution of the small scale agribusinesses based on distance to nearest market is shown in (Table 4). The table shows that 56.5% of the managers of the firms had to travel a distance of not more than 8 Km to get to the nearby market.

The table also reveals that 20.0%, 15.8% and 7.5% of the firms' managers travelled distance of between 9 to 12 Km, 13 to 16 Km and 17 to 20Km respectively to get to a nearby market. The mean distance of the small scale agribusiness to market is 9.2 Km. The proximity to market is an indication that the small scale agribusinesses can easily acquire necessary inputs and also easily sell their output.

According to Nto and Mbanasor (2011) agribusiness firms near markets have better potential tendency for high productivity and equity financing.

Table 1: Distribution of the firms based on years in agribusiness operation

Years in Operation	Frequency	Percentage	Mean
1-5	43	35.8	
6-10	30	25.0	
11-15	15	12.5	13.34
16-20	11	9.2	
21-25	5	4.2	
26-30	7	5.8	
Above 30	9	7.5	
Total	120	100.0	

Source: Field Survey, 2018.

Table 2: Distribution of the small scale agribusinesses based on location.

Location	Frequency	Percentage
Urban	90	75.0
Rural	30	25.0
Total	120	100.0

Source: Field Survey, 2018.

Table 3: Distribution of the small scale agribusinesses based on type of ownership.

Location	Frequency	Percentage
Sole proprietorship	44	36.7
Partnership	30	25.0
Co-operative	9	7.5
Family	21	17.5
Private Limited Liability Company	16	13.3
Total	120	100.0

Source: Field survey, 2018

Table 4: Distribution of the small scale agribusinesses based on distance to nearest market.

Distance	Frequency	Percentage	Mean
1-4	41	34.2	
5-8	27	22.5	
9-12	24	20.0	9.2
13-16	19	15.8	
17-20	9	7.5	
Total	120	100.0	

Source: Field survey, 2018

Access to credit of the small scale agribusinesses

Distribution of small scale agribusinesses based on access to credit is shown in (Table 5). Table 5 shows that 57.5% of the small scale agribusiness firms had no access to credit. The result is contrary with Nto and Mbanasor (2008) report that most agribusiness firms have access to credit to adequately support all the agribusiness operations. Low access to credit may constitute obstacle to financing of production operations because of lack of capital to acquire necessary inputs required to enhance output. According to Ijioma and Osondu (2015) good access to credit enables entrepreneurs venture into new areas as well as consolidate their already existing business.

Number of employees of the small scale agribusinesses

Distribution of Small Scale Agribusinesses based on Number of Employees is shown in (Table 6). The table shows that majority (79.2%) of the small scale firms

Table 5: Distribution of the small scale agribusinesses based on access to credit.

Access to Credit	Frequency	Percentage
Yes	51	42.5
No	69	57.5
Total	120	100.0

Source: Field survey, 2018

Table 6: Distribution of the small scale agribusinesses based on number of employees.

Distance	Frequency	Percentage	Mean
1-10	95	79.2	3.44
11-20	15	12.5	
21-30	7	5.8	
31-40	-	-	
41-50	3	2.5	
Total	120	100.0	

Source: Field survey, 2018

Table 7: Distribution of the small scale agribusinesses based on sources of finance.

Sources of Finance	Frequency	Percentage
Owners' savings	79	65.8
Ploughed back profit/retained earnings	85	70.8
Friends/relatives	47	39.2
Money lenders	41	34.2
Credit purchases from supplier/advances from customers	39	32.5
Co-operative societies	23	19.2
Commercial banks	13	10.8
Microfinance banks	36	30.0
Agricultural Credit Guarantee Scheme (ACGS)	13	10.8
Small and Medium Industries Equity Investment Scheme (SMIEIS)	5	4.2

** Multiple responses recorded; n = 120*
Source: Field survey, 2018

employed between 1 and 10 persons. The mean number of employees of the small scale agribusinesses is 3 persons. This result confirms the small scale nature of the businesses and suggests the need for external finance in other to increase production scope and employ more capable hands.

Sources of finance available to the small scale agribusinesses

Distribution of the Small Scale Agribusinesses based on Sources of Finance is shown in (Table 7). The table shows that equity financing in the form of ploughed back profit/retained earnings (70.8%) and owners' savings (65.8%) was the main source of finance to the small scale agribusinesses. Among the various sources of finance which fell under debt financing, Table 7 shows that 39.2%, 34.2%, 32.5% and 30.0% of the friends/relatives, money lenders, credit purchases from agribusinesses had their sources of finance from supplier/advances from customers and micro finance banks respectively, while, 19.2%, 10.8%, 10.8% and 4.2% of them obtained finance through co-operative societies, commercial banks, Agricultural Credit Guarantee Scheme (ACGS) and Small and Medium Industries Equity Investment Scheme (SMIEIS) respectively. This finding compares favourably with result obtained by Esisal (2009) in Nigeria and confirms assertions of past studies Anyanwu *et al.* (2003); and Akinyosoye (2006) on inadequate access of small scale firms in Nigeria to external financing.

Determinants of differentials in financing of small scale agribusinesses

Group statistics of the small scale agribusinesses

Discriminant analysis starts first with examination of existence of significant differences between groups on

Table 8: Group statistics of the small scale agribusinesses.

Variables	Group 1	Group 2	Group Mean Difference
Firm Size	914571.43	338896.55	575674.88
Number of employees	4.57	2.31	2.26
Output Level	81626.83	36930.81	44696.02
Age of the Firm	13.76	12.92	0.84
Value of asset	328710.85	87512.07	241198.78
Location of Firm	.912	0.324	0.588
Amount of loan obtained	139400.034	11234.32	128165.71
Amount of equity	648023.37	241477.74	406545.63

Source**:** *Calculated from field survey data, 2018*

Table 9: Statistical test of significance for the discriminate function model.

Test of function	Result
Eigen value	2.316
Canonical correlation	0.738
Wilks lambda	0.362
Chi square	76.297
Df	8
Significance level	0.000***

*** = statistically significant at 1.0% probability level
Source: *Computed from field survey data, 2018*

each of the independent variables in group 1 and 2. Using the group statistics, as presented in (Table 8), it could be inferred that significant group differences exist among small scale agribusinesses that used internal or external financing options. Based on this, there is need to proceed further analysis. As shown in (Table 8), large group mean difference exists between variables in group 1 and group 2 especially in the case of firm size, output level, value of asset, amount of loan obtained and amount of equity. This indicates that these variables may be good discriminators given the wide variance. The group statistics and mean difference among small scale agribusinesses that depend mainly on external financing (group 1) or internal financing (group 2) as presented in (Table 8) shows that group 1 members have more positive economic profile and background than those in group 2. Therefore there is need to proceed further and test overall model fit and significance.

Statistical test of significance

The result of statistical test of significance of the discriminant function model is presented in Table 9. The table indicates that the Eigen value of the model is 2.316, which is high. A low Eigen value is an indication of near linear dependencies in the data (*Nto et al.,* 2014). Hence, there is no room for problem of multi-collinearity. The high canonical correlation coefficient of 0.738 implies that high significant amount of information required for determining financing differentials was provided by the function; this also gives an insight to the index of overall model fit and measures the association between the discriminate score and set of independent variables. Table 9 shows that Wilk's Lambda which is the proportion of the total variance in the discriminant score not explained by the differences among groups is 0.362. The low value of Wilks' Lambda is desirable since it shows that only 36.2% of the variance was not explained by the discriminant model. The chi-square statistics of 76.297 was significant at 1% alpha level at 8 degree of freedom confirming goodness of fit of the model. Hence, it could be concluded that there was significant relationship between the dependent variable (financing differential) and the independent variables. This suggests that the estimated function can be used to discriminate between small scale agribusiness firms that can finance their operations from external or internal sources.

Standardized canonical discriminant function coefficients of variables on small scale agribusiness firms

Estimates of the coefficients of each of the independent variables included in the disciminant model are presented in (Table 10). The set of independent variables tried on

Table 10: Standardized canonical discriminant function coefficients of variables on small scale agribusiness firms.

Variables	Discriminant Coefficients	F-ratio
Firm Size	1.226*	1.680
Number of employees	0.150	1.066
Output Level	0.502**	0.226
Age of the Firm	-0.054	0.005
Value of asset	0.647***	3.972
Location of Firm	0.266	0.108
Amount of loan obtained	-0.877	0.008
Amount of equity	-0.267**	2.207
Group 1 Centroid	0.714	
Group 2 Centroid	-0.360	
Cut-off point	0.354	

***, **, *, statistically significant at 1.0%, 5.0% and 10.0% risk levels respectively.
***Source**: Computed from Field Survey Data, 2018*

Table 11: Contribution of individual variables to the total discriminant score.

Variable	Mean of group 1	Mean of group 2	Mean difference	Coefficient	Product	Percentage product contribution
Firm Size	914571.43	338896.55	575674.88	1.226	705777.403	63.86
Number of employees	4.57	2.31	2.26	0.150	0.339	0.00
Output Level	81626.83	36930.81	44696.02	0.502	22437.402	2.03
Age of the Firm	13.76	12.92	0.84	-0.054	0.045	0.00
Value of asset	328710.85	87512.07	241198.78	0.647	156055.611	14.12
Location of Firm	0.912	0.324	0.588	0.266	0.156	0.00
Amount of loan obtained	139400.03	11234.32	128165.71	-0.877	112401.328	10.17
Amount of equity	648023.37	241477.74	406545.63	-0.267	108547.683	9.82
Total	-	-	-	-	-	100.00

Source: Computed from field survey data, 2018

the discriminant model are firm size, number of employee, output level, age of firm, value of asset, location of firm, amount of loan obtained and amount of equity. According to Nto *et al.* (2014) the significance of each estimated coefficient lies on the magnitude of the linear weight associated with each variable. This implies that the weight of the coefficient provides insight to the importance of the predictor. Of all the independent variables, firm size and value of asset had the highest positive discriminant coefficient of 1.226 and 0.647 respectively. Other variables such as number of employees, output level and location of firm also made positive contribution in the model. The positive signs obtained in variables like firm size, value of asset, number of employees, output level and location of firm suggest that a small scale agribusiness chance of belonging to group 1 that is ability to access external funding increases as these variables increased. This is in line with *a priori* expectation as the variables assist in credit rating of an SME and thus help to enhance confidence of lenders and other business financiers when their values are deemed high. Based on value of F-ratio, significant determinants of financial options of the firms were firm size, output level, value of asset and amount of equity. The estimated centroid for group 1 was found to be 0.714 while that of group 2 was -0.360. By implication, any variable with coefficient score that is closer to 0.714 suggests positive implication on external funding and any variable with coefficient score closer to -0.360 suggests positive implication on internal funding. This result compares favourably with result obtained in Nto *et al.* (2015) among small and medium scale enterprises in Abia State.

Relative contribution of individual variables to total discriminant score

The contribution of individual variables to the discriminant score is shown in Table 11. It could be observed that the variables made varied contributions to the total discriminant score. In terms of magnitude of contribution to the total discriminant score, (Table 11) shows that firm size, value of asset, amount of loan obtained, amount of

Table 12: Classification performance of the estimated discriminate function.

Actual group	No of cases	Predicted 1	Group membership 2
Group 1			
External funding	51	44(86.27%)	7(13.73%)
Group 2			
Internal funding	69	11(15.94)	58(84.06%)

Percentage of actual grouped cases correctly classified 86.11%
Source: *Computed from field survey data, 2018*

Table 13: Distribution of the small scale agribusinesses based on constraints to financing.

Problems	Frequency	Percentage
Inadequate collateral	77	64.2
Weak demand for products due to dwindling purchasing power of Nigerians	69	57.5
Low patronage of locally produced goods	73	60.8
High tax payment	59	49.2
Cumbersome processing procedures by formal financial institutions	39	32.5
High interest rate	82	68.3
Inadequate income	62	51.7
Delay in disbursement	56	46.7
Family and societal demand	42	35.0
Poor record keeping	70	58.3

**Multiple responses recorded; n = 120*
Source: Field survey, 2018

equity, and output level made the most meaningful contribution to the total discriminant score to the tune of 63.86%, 14.12%, 10.17%, 9.82% and 2.03% respectively. The largest contribution being made by firm size (63.86%) and value of asset (14.12%) compares favourably with finding of Nto *et al.* (2015). According to Nto *et al.* (2015) the credit information of a small scale enterprise is largely explained by size of the firm and value of asset in its possession. When value of asset is high, a lender can easily confiscate it in event that the business owner fails to repay loan and interest. Mbanasor and Nto (2008) opined that banks evaluate credit worthiness potential of SME borrowers through firm size and value of assets.

Classification performance of the estimated discriminate function

Classification performance of the estimated discriminant function is shown in (Table 12). Table 12 shows how well the function performed in classifying the small scale agribusinesses based on financial option. The function was predicted using a sample of 120 small scale agribusinesses. Given that the power of the model lays in its capacity to classify correctly, then the higher the classification rate is, the better is the predictive power of the discriminant function. With respect to financing option, it was found that out of the 120 small scale agribusinesses, 44 small scale agribusiness which constitute 86.27% were classified as belonging to group 1 contrary to the initial classification which saw 51 agribusinesses to belong to group 1. Also the model found 58 small scale agribusinesses to belong to group 2 as against the initial number of 69 small scale agribusinesses, who, based on value of asset were found to belong to group 2. The proportion of small scale agribusinesses erroneously classified as belonging in group 2 formed about 15.94% of the 69 agribusinesses in group 2 subjected to classification. On the other hand the proportion of small scale agribusinesses erroneously classified as belonging to group 1 formed about (13.73%) of the 51 small scale agribusinesses with debt financing. This result compares favourably with findings of Nto *et al.* (2015) among SMEs in Abia State.

Constraints militating against financing of small scale agribusinesses

Distribution of the small scale agribusinesses based on constraints to financing is shown in (Table 13). The table shows that major constraints to financing of small scale agribusinesses in the study area were high interest rate (68.3%), inadequate collateral (64.2%) and low patronage of locally produced goods (60.8%). Dayo *et al.* (2009) opined that large loan funds from commercial

banks and microfinance banks could not be accessed by most small scale businesses because of issues of lack of collaterals and high interest rates. According to Oyinbo (2014) most Nigerians prefer to purchase and consume foreign products often at higher prices and lower quality to the detriment of locally made goods. Other problems constraining financing of more than half of the small scale agribusinesses are poor record keeping (58.3%), weak demand for products due to dwindling purchasing power of Nigerians (57.5%) and inadequate income (51.7%). The current inflationary situation in the country has decreased the real income of Nigerians leading to poor demand for goods and services; this has caused lower generation of income and savings which are ploughed back into a business.

Conclusion

Significant determinants of financing differentials among the small scale agribusiness firms were firm size, output level, value of asset and amount of equity. Firm size made the highest contribution (63.86%) to external financial option of the firms.

Recommendations

Central Bank of Nigeria and the Ministry of Finance and other relevant government agencies in charge of managing Nigeria's economic process should intensify efforts to provide a conducive macroeconomic environment for financing of small scale agribusiness firms. Individual small scale agribusiness firms should try to increase their scope of operation, firm size and value of asset. They can achieve these goals by becoming either vertically or horizontally integrated. Managers/owners of small scale agribusinesses should endeavour to keep proper records as this will also aid their access to external finance, especially credit from formal financial institutions. Policies should be made to protect small scale agribusinesses and enhance demand for their products. This in the long run will improve asset base of small scale agribusinesses, enhance their access to external finance and reposition them for better economic performance.

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