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EFFECTS OF LIQUIDITY STATUS AND PERFORMANCE ON FARMING AND NON-FARMING ENTERPRISES OF HOUSEHOLDS IN ABIA STATE, NIGERIA

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Abstract

This research work was carried out to identify and analyze the liquidity status and performance of farming and non-farming enterprises of rural households in Abia State. A multi-stage sampling technique was adopted to select 100 household enterprises comprising of farming, non-farming and a combination of the both. Simple descriptive statistics, profitability ratios and multiple regression models were employed in the data analysis. The profitability and liquidity results showed that farming and non-farming enterprise households respectively made a Return on Equity such that 14.2% and 16.5% returns were obtained from equity investments. The result on Return on Assets shows that 3.1% and 7.1% returns were made on assets by farming and non-farming enterprises respectively implying that assets were efficiently used by non-faming enterprises. The current ratio stood at 1.562 and 1.722 for farming and non-farming enterprises. Similarly, the quick ratio was 1.091 and 1.100. The enterprises were able to cover short-term liabilities. The savings, income and investment variables were majorly influenced by the operators' individual characteristics such as age, education, level of experience while macroeconomic variables like disposable income also exerted significant influence. It was therefore recommended that government pursues relevant monetary policies that will reduce interest rates paid on long-term debts as well as tame high inflationary pressures prevalent in the country. Firms must be take serious care in ensuring that the limit to which they can incur debts so as to avoid running into deficits and bankruptcy. As a rule, the enterprises must allow debts provided their solvency is not jeopardized. Government should pursue policies that will make these enterprises optimize available liquidity in the domestic economy as well as increase their return on equity.

***Key words*:** liquidity status, performance, farming and non-farming, households

INTRODUCTION

In the past two decades, economic crisis and reforms have affected both rural and urban population. The African household consists of both extended and nuclear families with individual population and consumption units embedded in it [5]. Farming and non-farming enterprises are common in rural Africa. Around 42 percent of rural households in a recent survey in Africa operated non-farming enterprises [9] and between 40 and 50 percent of rural household income in Africa are estimated to be from rural farming and non-farming enterprises [11]; [6]. Farming and non-farming enterprises provide a survival strategy used by rural households in developing countries [2], [3]. The authors noted that rural households are occupationally flexible, spatially mobile and increasingly dependent on non-agricultural income generating activities.

Agriculture led growth played an important role in reducing poverty and transforming the economies of rural communities of rural households in Abia State [8]. Rural households can diversify occupation in different ways. However, non-farm employments are common diversification strategies for rural households [7] and [3]. It has been observed that non-farming enterprises represent an important element in the livelihood of the poor [1]. In addition to livelihood sustenance, the non-farming enterprise stimulates inter-sectoral linkage, reduces rural-urban migration, promotes equitable distribution of income, broadens economic participation and enables the poor

to smoothen inter-year seasonal fluctuation of agricultural labour demand and income [4]. Participation in non-farming enterprises has been popular among inhabitants of south-eastern Nigeria as such jobs have contributed additional income to farm families.

The performance and liquidity status of farming enterprises is one that is considered to have attracted a lot of attention and these enterprises have the capacity to reduce poverty, disease and hunger through wealth creation and employment generation.

Thus, in this work, liquidity ratios were used as a tool of analysis or assessment of financial performance of the farming and non-farming enterprises of rural households in Abia State.

Literature review

In the literature on the liquidity status and performance of farming and non-farming enterprise of rural households, and Africa, most attention has been on measures of firms' sales and employment growth [10]. These enterprises have undoubtedly become an important component of livelihood strategies and diversification among households [1]. The rural economy largely depends on agriculture and it is the principal occupation of the rural people. The government has identified agriculture and rural development as the topmost priority sector for rapid poverty reduction. The performance in terms of productivity of non-farm enterprises in rural households may be associated with and determined by the productivity of the spatially proximate farm and non-farm enterprises. In the remainder of this paper, a more rigorous investigation of the factors that influence rural farming and non-farming enterprises, as well as the liquidity status and performance of these enterprises are studied and discussed.

Liquidity is the ability of business to meet its financial obligations as they come due. The more cash and near-cash assets that a firm has, in comparison to its debts and business obligations, the more liquid, and thus, the more solvent it is said to be [12]. Firm performance in developing countries and specifically Africa has been measured based on the firm's sale and employment growth [10]. Relatively fewer studies have dealt with productivity as a measure of performance. Productivity is however one of the most important measure of performance as it reflects how efficiently the firm turns inputs into outputs [13]; [14].

Household is defined as a small group of people who share the same living accommodation, who pull some, or all of the income and wealth and who consume certain types of goods and services collectively, mainly housing and food .In any work on household resource management, there should be understanding of a particular rural or urban culture especially in the way they share income and expenditure activities [14]. This can be found in the degree of establishment of economic entity based on interest. A household may be both consumption and production unit.

Agriculture is an important economic sector of the African countries. It has been variously described as 'the main stay' or 'the backbone' of the economy, contributing significantly to the gross domestic product (GDP) and export earnings and employing the vast majority of the working populations.

Several studies have shown that farmers particularly the families usually engage in different non-farm or off-farm income generating activities too ostensibly to obviate the seasonality of primary agricultural production and create a continuous stream of income to cater for the starring exigencies of life. Secondary or non-farm income generating activities refers to those incomes earned by the farmer from non-farm income generating activities at different times of the year. Multiple motives prompt households and individuals to diversify assets, incomes, and activities. The types of off-farm income generating or non-farm activities vary across geo-political locations and countries.

MATERIALS AND METHODS

This study was carried out in Abia State, Nigeria. This research work was carried out to identify and analyze the liquidity status and performance of farming and non-farming enterprises of rural households in Abia State. A multi-stage sampling technique was

adopted to select 100 household enterprises comprising of farming, non-farming and a combination of the both. Simple descriptive statistics, profitability ratios and multiple regression models were employed in the data analysis.
In specifying the model,

$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + e_i$…….....(1)

where,
Y=Farm income of the respondents (Naira),
X_1= Age of the respondents (years),
X_2= Household size (number),
X_3= Education level (number of years spent in school),
X_4= Farm size (hectare),
X_5= Farming experience (years),
X_6= Membership of farm association (Yes = 1, No =0),
X_7= Amount of credit accessed (naira),
e_i= Error term,
b_0=Intercept (or constant),
$b_1,b_2….b_{10}$= ith coefficient corresponding to $X_1,X_2..X_{10}$.

RESULTS AND DISCUSSIONS

Socio-economic Characteristics of Respondents

Age distribution of respondents.

The result indicates that respondent within the age bracket of 20-29, 30-39, 40-49, 50-59 and 60-69 years constitutes 20%, 42%, 26%, 10% and 2% respectively of total population.

Table 1. Age distribution

Age (years)	Frequency	Percentage (%)
25-34	20	20
35-44	46	46
45-54	24	24
55-64	6	6
65-74	4	4
Total	100	100
Mean	42 years	

Source: Field Survey, 2016.

The mean age is 42 years, indicating that the farmers were moderately young, energetic and innovative. The risk bearing abilities and innovativeness of farmers, his mental capacity to cope with daily challenges and demand of farm production activities and his ability to do manual work decrease with advancing age.

Distribution of respondents by gender

Table 2.Distribution of respondents by gender

Sex	Frequency	Percentage (%)
Female	32	32
Male	68	68
Total	100	100

Source: Field Survey, 2016.

From the result, it can be observed that majority (56%) of the samples respondents in the study area were males, while the rest (44%) were females. This result implies that agro-industry activities are dominated by males in the study area.

Distribution of respondents by marital status

Table 3. Distribution of Respondents based on marital status

Marital status	Frequency	Percentage (%)
Married	72	72
Single	22	22
Widowed	6	6
Total	100	100

Source: Field Survey, 2016.

From the distribution of the respondents according to their marital status, it can be observed that 10% of the respondents were widowed, 54% where married and 36% where single. This implies that a greater percentage of the population had family members. Farmers are better positioned to practice serious agro-industry business when they are more stable.

Distribution of respondents by household size

Table 4. Distribution of Respondents based by household size

Household size	Frequency	Percentage (%)
1-3	10	10
4-6	68	68
7-9	22	22
Total	100	100
Mean	5 persons	

Source: Field Survey, 2016.

The result shows that 66% and 34% of respondent had a household size of 1-5 and 6-

10 persons respectively. The mean is 5 persons. This is desirable, consistence and of great importance in farm production as farm household may rely more on their members than hired workers for labour on their farms.

Distribution of respondents by education level

Table 5. Distribution of Respondents based by education level

Education	Frequency	Percentage (%)
No formal education	4	4
Primary Education	4	4
Secondary education	54	54
Tertiary Education	26	26
Post tertiary education	12	12
Total	100	100

Source: Field Survey, 2016.

Majority (88%) of the respondents have formal education while the remaining (12%) have no formal education. Improved education level brings about positive changes in the knowledge, attitude and skills through research and extension. The implication is that these respondents are better positioned to take advantage of new technique and innovation that could improve agricultural productivity and boost food security.

Distribution of respondent based by Farming Experience

Table 6. Distribution of Respondents based by farming experience

Experience (years)	Frequency	Percentage (%)
1-10	68	10
11-20	22	32
21-30	8	40
31-40	2	18
Total	100	100
Mean		

Source: Field Survey, 2016.

Distribution of the respondents according to their farming experience shows that 10%, 32%, 40% and 18% of the respondents had farming experience between 1-5, 6-10, 11-15 and 16-20 years respectively. It is shown that on average, the farming household head has spent about 7 years in farming. The result has some positive implications on increased productivity because the number of years a farmer has spent in farming business may give an indication of the practical knowledge he has acquired on how he can overcome certain inherent farm production problems.

Performance of farming enterprises

For the farming enterprises, seedlings contributed about 31.8% of the Total Cost, followed by rent (25.45%), while the least was water (0.51%).

For the non-farming enterprises, average cost of items purchased contributed about 55.92% of the Total Cost, followed by other fixed inputs (27.13%), while the least was equipment (16.95%). For the combination of both, seedlings contributed about 34.46% of the Total Cost of the farming enterprises, followed by rent (14.56%), while the least was water (0.35%).

Whereas, average cost of items purchased contributed about 59.26% of the Total Cost of non-farming enterprises, followed by other fixed inputs (24.69%), while the least was equipment (16.05%).However, the combination of both was the most profitable of all with the highest net return of ₦410,600.

Profitability status of the farming and non-farming enterprises

The result shows that farming enterprise households made a ROE of 0.142 while non-farming enterprise households had a higher ROE of 0.165. This implies that the enterprises performed well relative to their equity. However, 14.2% and 16.5% returns were obtained from equity investments. The result on Return on assets shows that 3.1% and 7.1% returns were made on assets by farming and non-farming enterprises respectively. This implies that assets were efficiently used by non-faming enterprises. The gross margin ratio looks at gross profit (net sales – cost of goods sold) for the net sales that a company generates and the result shows that 23% and 26% gross profits were generated for the farming and non-farming enterprises respectively showing that the enterprises are profitable though non-farming enterprises were more profitable. From this assertion, it can be seen that 11% and 12%

profits were generated in proportion to the total returns made by the enterprises although non-farming enterprises made a slightly higher profits.

Table 7. Performance of household enterprises

		Farming (₦)	**(%)**	**Non farming (₦)**	**(%)**	**Combined**	**(%)**
A	**Variable inputs**						
i	Seedlings	156,250	31.86			73,950	34.46
ii	Fertilizer, pesticides, herbicides	28,750	5.86			15,075	7.02
iii	Casual labour	22,475	4.58			10,375	4.83
iv	Annual production stock	62,500	12.74			28,950	13.49
v	Feeding	29,250	5.96			14,930	6.96
vi	Vaccines/ drugs	8,750	1.78			4,475	2.09
vii	Water	2,500	0.51			750	0.35
	Total Variable Cost (TVC)	310,475				148,505	
B	**Fixed inputs**						
i	Rent	125,500	25.49			31,250	14.56
ii	Taxes	12,500	2.55			7,000	3.26
iii	Insurance	6,250	1.27			2,750	1.28
iv	Interest	5,000	1.02			3,125	1.46
v	Depreciation on equipment	31,250	6.37			21,995	10.25
	Total Fixed Cost (TFC	180,000				66,120	
	Total Cost (TC)	490,475				214,625	
	Total Revenue (TR)	690,700				356,475	
	Net Revenue (TR-TC)	200,225				141,850	
	NONFARMING						
	Equipment (trading, carpentry, etc.)			125,000	16.95	81,250	16.05
	Other fixed inputs			200,125	27.13	125,000	24.69
	Variable Cost						
	Average Cost of Items Purchased			412,500	55.92	300,000	59.26
	Total Cost			737,625		506,250	
	Total Return on Sales/ Total Income			1,062,500		775,000	
	Net Return (TR-TC)			325,000		268,750 TNR=410,600	

Table 8.Profitability status of the farming and non-farming enterprises

Financial ratios	**Farming enterprises**	**Non-farming enterprises**
a.Profitability ratios		
i.Return on equity	0.142	0.165
ii.Return on assets	0.031	0.071
iii.Gross margin ratio	0.231	0.265
iv.Profit margin ratio	0.110	0.122
b.Liquidity ratios		
i.Current ratio	1.562	1.722
ii.Quick ratio	1.091	1.100
c.Solvency ratios		
i.Debt to asset ratio	0.552	0.442
ii.Long term debt to asset ratio	0.233	0.198
iii.Asset to equity ratio	1.431	1.651

The current ratio stood at 1.562 and 1.722 for farming and non-farming enterprises. Similarly, the quick ratio was 1.091 and 1.100. Given that the current ratio acceptable ranges differ across firm types, these results show adequate liquidity. The current ratio is a measure of the company's short-term financial strength. Acceptable current ratios ranges differ from industry to industry, but ratios above 1 indicate ability to cover short-term liabilities. An increase in the non-farming enterprises quick ratio indicates higher inventories above farming enterprises.

The solvency ratios showed that farming enterprises had less debt than non-farming enterprises. This is understandable because of the size and volume of goods exchanges, borrowing behaviour and exchange rate.

The result shows that the F-ratios were all significant at 1% indicating a good regression line while 57.7%, 76.2% and 70% changes in the income of farming, non-farming and a combination of farming and non-farming household enterprises respectively were accounted by changes in the explanatory variables included in the model while the remaining 42.3%, 23.8% and 30% were accounted for by disturbances (error) in the model.

Table 9. Factors affecting the income of the various household enterprises

Variables	Farming enterprises			Non Farming enterprises			Farming and NFE		
	Coeff.	S.E	T	Coeff.	S.E	T	Coeff.	S.E	T
Intercept	.534	.112	4.768***	.872	.321	2.717***	.243	.102	2.382***
Age	-.342	.100	-3.420**	-.210	.089	2.360*	.104	.099	1.051
Education	-.553	.210	-2.633**	.352	.101	3.485**	.200	.200	1.000
Household size	6.87	2.00	3.43**	-1.83	0.40	-4.58***	3.871	1.00	3.871***
Farm size	2.78	1.09	2.550**	2.22	1.89	1.175	.078	0.435	0.179
Experience	1.09	0.42	2.58**	3.14	2.00	1.57**	.314	.087	3.609***
Coop. membership	3.63	1.28	2.83**	1.09	0.29	3.760***	.063	.016	3.938***
Credit	2.44	1.31	1.86*	.098	2.71	.036	.664	.544	1.221
Adj. R^2			.534			.663			.632
R^2			.577			.762			.700
F-ratio			5.431***			7.243***			12.421***

Source: Field survey, 2016
***, ** and * are significant at 1%, 5% and 10% respectively.

The results shows that age and education of the respondents were negative for farming enterprises, negative for NFE, and not significant for both FNFE. Household size was negative while experience and co-operative membership were positive for all enterprises. Credit was positive for FE and insignificant for others.

Table 10.Factors affecting the investment of the various household enterprises

Variables	Farming enterprises			Non Farming enterprises			Farming and NFE		
	Coeff.	S.E	T	Coeff.	S.E	T	Coeff.	S.E	T
Intercept	-6.52	1.600	-4.075***	1.264	.334	3.784***	-1.255	.521	2.351*
Age	-7.14	3.122	-2.286*	.325	.121	2.685**	-1.981	.657	-3.015**
Education	1.047	0.532	1.968*	.600	.500	1.200	.645	.437	1.476
Household size	-1.030	0.453	-2.273*	-.611	.400	-1.528*	4.231	.252	16.790***
Farm size	.735	.213	3.451**	.900	.660	1.364	.625	.546	1.145
Experience	.435	.101	4.306***	.201	.097	2.073*	.112	.040	2.800**
Coop. membership	.435	.342	1.127	.122	.190	.642	.198	.331	.058
Credit	2.22	1.89	1.175	.104	.099	1.051	2.001	1.581	1.266
Adj. R^2	3.14	2.00	1.57*	.209	.070	2.986**	.534	.211	2.531**
R^2			.435			.533			.600
F-ratio			.425			.625			.652
			6.421***			5.221***			8.162***

Source: Field survey, 2016
***, ** and * are significant at 1%, 5% and 10% respectively.

The result shows that the F-ratios were all significant at 1% indicating a good regression line while 42.5%, 62.5% and 65.2% changes in the investment in farming, non-farming and a combination of farming and non-farming household enterprises respectively were accounted by changes in the explanatory variables included in the model while the remaining 57.5%, 37.5% and 34.8% were accounted for by disturbances (error) in the model. The result shows that age was negatively related to farming and a combination of farming and non-farming enterprise holders at 10% and 5% each and positively related to non-farm activities at 5%. Education was negatively related to the investment of farming enterprise holders at 10%. Household size was negative for all the enterprises at 5%, 5% and 1% significant levels respectively. While farm size was positively related to farmers' investment at 5%, experience was positively related to the three enterprises' investment at 1%, 5% and 10% significant levels respectively. Savings had a positive relationship with the enterprises' investment at 10%, 5% and 5% levels respectively.

The result shows that the F-ratios were all significant at 1% indicating a good regression line while 68.8%, 71.2% and 77.2% changes in the savings from farming, non-farming and a combina tion of farming and non-farming household enterprises respectively were accounted by changes in the explanatory

variables included in the model while the remaining 31.2%, 28.8% and 32.8% were accounted for by disturbances (error) in the model.

Table 11. Factors affecting the financial savings of the various household enterprises

Variables	Farming enterprises			Non Farming enterprises			Farming and NFE		
	Coeff.	S.E	T	Coeff.	S.E	T	Coeff.	S.E	T
Intercept	1.352	.640	2.113*	.632	.663	15.80***	-2.635	.964	-2.733**
Age	2.034	.942	2.159*	2.662	.311	8.559***	.334	.163	2.049*
Education	2.991	.622	4.809***	2.301	.534	4.309***	.743	.645	1.152
Household size	.144	.131	1.099	.399	.286	1.400	.578	.545	1.061
Farm size	-.813	.109	7.459***	-1.223	.443	2.761**	-.241	.091	-2.648**
Experience	-.771	.500	1.542	-.554	.492	1.126	-.345	.239	-1.443
Coop. membership	.942	.349	2.699**	.998	.331	3.015**	.442	.249	1.775*
Credit	.690	.332	2.070*	.901	.473	1.900*	.390	.082	4.756***
Adj. R^2			.652			.699			.709
R^2			.688			.712			.772
F-ratio			7.114***			8.172***			8.899***

Source: Field survey, 2016
***, ** and * are significant at 1%, 5% and 10% respectively.

The result shows that income, age, cooperative membership and credit use increased the volume of savings across the various enterprises while household size negatively influenced savings for all the enterprises.

CONCLUSIONS

The study showed a positive value for all profitability, liquidity and solvency ratios across the various enterprises studied.
However, non-farming enterprises were most profitable and better positioned in terms of solvency. The ability of the enterprises to cover their short-term loan was a highly commended effort given the continuous financial challenge faced by the Nigerian economy. The savings, income and investment variables were majorly influenced by the operators' individual characteristics such as age, education, level of experience while macroeconomic variables like disposable income also exerted significant influence.

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