



## Assessment of Farm Financial Literacy Levels among Poultry Farmers in Anambra State, Nigeria

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### ABSTRACT

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*The study examined the farm financial literacy levels of poultry farmers in Idemili South Local Government Area of Anambra State in Nigeria. It specifically described the socio-economic characteristics of poultry farmers, assessed the level of financial literacy among poultry farmers, and analyzed the factors influencing the level of financial literacy among the poultry farmers. Data were collected with the aid of structured questionnaire and oral interview method from a total of 80 respondents. Data analyses were done using descriptive statistics and regression analysis. From the analysis the study showed that 48.8% of the respondents were males and 51.2% were females, all in the age ranges of 20 to 77 with a mean age of 43 years. The proportion married was 71.2% and 45% had secondary education. Only 43.4% of the farmers were involved in farm financial planning, while 46.1% had adequate financial knowledge in farm management. The regression results showed that the socio-economic factors influencing the level of financial literacy among poultry were gender, age, education and frequency of bank visits. The study therefore recommends that the financial institutions should increase the level of awareness on their financial products through television, social media and radio stations. Financial literacy should be included in both primary and secondary education curricular; and should be part of agricultural extension teaching programmes to be used in reaching out to the rural farmers.*

## 1.0 Introduction

Financial literacy is the knowledge acquired through formal education or by practice, to manage personal financial needs (Garman and Fogue, 2006). It refers to having the knowledge and skills to manage financial resources effectively for a lifetime of financial wellbeing (President's Advisory Council on Financial Literacy, PACFL 2008). Financial literacy is also defined as the knowledge on management of farm financial activities through planning, acquisition and allocation of farm finance.

The provision of adequate, appropriate and timely financial services for the mass of excluded Nigerians occupies a central position in the country's efforts to promote and achieve rapid economic development. The result of various studies and workshops organized on financial inclusion strategies indicated that financial literacy is a pre-condition for the attainment of the goals of financial inclusion (Central Bank of Nigeria, CBN, 2012).

According to the Enhancing Financial Innovation and

Access EFINA (2018) survey, only 48.6 percent of Nigerian adults had access to formal financial services. This is attributed to lack of financial knowledge. Previous studies agree that lack of financial knowledge is increasing in many developing countries (Organization for Economic Co-operation and Development (OECD) and International Network on Financial Education (INFE)[2011]). Farmers are financially at risk by struggling to budget and manage money or plan for the unexpected.

Traditional economic theory postulates that forward-thinking people maximize expected lifetime utility that uses economic information to accumulate wealth effectively throughout their lives. (Behrman et al, 2010) In addition, the conventional economic approach to saving and consumption decisions states that a fully rational and knowledgeable person will consume less than their income in times of high income, and save to support consumption when income falls. (Annamaria and Olivia, 2014). However, survey evidence reveals



that less than half of US workers only have estimated how much money they might need for retirement, and many older adults face significant retirement savings deficits (Scholz, Seshadri and Khitatrakun, 2006). It has been suggested that numerous economic explanations for these phenomena are financial illiteracy.

Knowledgeable consumers who make informed decisions are essential for an effective and efficient market. In the classical economy, informed consumers provide the checks and balances that keep unscrupulous sellers out of the market. For example, consumers who know the full range of mortgage interest rates and terms in the marketplace, who understand how their credit risk profile and personal situation adjust to those rates and terms, and therefore who can determine which mortgage is best for them makes it difficult for unfair or deceptive lenders to establish themselves in the market. (Hilgert, Hogarth and Sondra, 2003)

People consider themselves financially literate if they are competent and can demonstrate that they have used the financial knowledge they have learned. Literacy is obtained through practical experience and the active integration of knowledge. As people become increasingly financially sophisticated and it is conjectured that this may also mean that an individual may be more competent.

While there are many educated and literate Nigerians, majority do not have the skills to manage banking transactions and take advantage of financial products and services to improve their well-being. One of the major reasons for this gloomy financial access situation is the lack of knowledge of the service providers, services provided, conditions and the benefits derivable from accessing the services. Staff of most financial services providers lack sound financial education and this affects the way services are delivered to farmers. In addition, regulators of financial service providers often do not display adequate knowledge and understanding of the peculiarities of the excluded groups and as such do not fully capture them in their policies. Therefore, adequate financial knowledge is the only solution that will bridge the gap of financial exclusiveness.

It is therefore pertinent to develop a study that will investigate financial literacy levels among farmers in Nigeria. This study will help to point out necessary steps that should be taken through policy formulation to bridge the gap in financial literacy. Hence, the need for the study. Specifically, the objectives of the study are to describe

the socio-economic characteristics of poultry farmers in Idemili South Local Government Area, Anambra State; assess the level of farm financial literacy among poultry farmers in the study area; analyze the factors influencing the level of financial literacy among poultry farmers in the study area.

## 2. Research Methods

The study was carried out in Idemili South Local Government Area, Anambra State, located in South-Eastern Nigeria. It is an Igbo speaking region living measuring 139,000 square kilometres on its rolling hills. It consists of seven communities with a population of 206,816 people (National population census 2006). The main economic activities of the rural people of Anambra State are small scale farming. Trading and other micro-entrepreneurship are also playing a crucial role in their economic life.

Two stage sampling technique was used to select respondents, the first stage was random selection of four communities out of the seven communities that make up Idemili South. These communities were: Ojoto, Nnobi, Oba and Awka-Etiti. The second stage was the use of purposive sampling technique to select 20 poultry farmers each from the four communities, making it a total of 80 farmers for the study. Primary data were collected by the use of structured questionnaire and oral interview. Data were analyzed with the use of descriptive statistics and regression analysis. Regression analysis was used to test for significant relationship between socio-economic characteristics and the level of financial literacy among poultry farmers. The implicit form of the linear regression model is given as:

$$Y = F(\text{GEN}, \text{AGE}, \text{MARST}, \text{EDU}, \text{INC}, \text{BANKVST}, \text{DIST}, \text{BANKACT}, \text{EXP}, \text{HHS})$$

Where,

Y = Financial literacy score: Derived based on pooling scores of financial literacy variables (Financial planning, financial knowledge, financial behaviour and awareness of financial products) of each farmer, adapted from OECD International Network for Financial Education (2011)

GEN= Gender (Dummy; male =1, female =0), AGE= Age (years), MARST = marital status (Dummy; married=1, single=0), EDU = Educational status (years), INC= Farm income per month (Naira), BANKVST= Frequency of bank visit (numbers), DIST = Distance to formal source of finance (kilometre), BANKACT= Number of bank account owned (Numbers), EXP= No of years in the farming business, HHS= Household size (Number), e = error term

The relationship between the dependent and each of the independent variables was examined using the four

functional forms: linear, semi-log, exponential, and double-log.

Linear function:  $Y = \beta_0 + \beta_1 \text{GEN} + \beta_2 \text{AGE} + \beta_3 \text{MARST} + \beta_4 \text{EDU} + \beta_5 \text{INC} + \beta_6 \text{BANKVST} + \beta_7 \text{DIST} + \beta_8 \text{BANKACT} + \beta_9 \text{EXP} + \beta_{10} \text{HHS} + e$

Exponential function:  $Y = \beta_0 + \beta_1 \log \text{GEN} + \beta_2 \log \text{AGE} + \beta_3 \log \text{MARST} + \beta_4 \log \text{EDU} + \beta_5 \log \text{INC} + \beta_6 \log \text{BANKVST} + \beta_7 \log \text{DIST} + \beta_8 \log \text{BANKACT} + \beta_9 \log \text{EXP} + \beta_{10} \log \text{HHS} + e$

Semi-log function:  $\log Y = \beta_0 + \beta_1 \text{GEN} + \beta_2 \text{AGE} + \beta_3 \text{MARST} + \beta_4 \text{EDU} + \beta_5 \text{INC} + \beta_6 \text{BANKVST} + \beta_7 \text{DIST} + \beta_8 \text{BANKACT} + \beta_9 \text{EXP} + \beta_{10} \text{HHS} + e$

Double Log function:  $\log Y = \beta_0 + \beta_1 \log \text{GEN} + \beta_2 \log \text{AGE} + \beta_3 \log \text{MARST} + \beta_4 \log \text{EDU} + \beta_5 \log \text{INC} + \beta_6 \log \text{BANKVST} + \beta_7 \log \text{DIST} + \beta_8 \log \text{BANKACT} + \beta_9 \log \text{EXP} + \beta_{10} \log \text{HHS} + e$

$\beta_0$  = intercept

$\beta_1, \beta_2, \dots, \beta_{10}$  = estimated coefficients

The criteria that was used in selecting the functional equation that was used for the best fit for regression are; Highest R2 value, highest number of significant variables highest F-value and conformity to a priori expectations of the estimated coefficients.

### 3.0 Results and Discussion

Analysis from the results showed that 39 percent of the respondents were males, while 41 percent of the respondents were females, which indicates that there were more female poultry farmers than male. The study also revealed that 45.0 percent of the respondents were in the age bracket of 20-39, 40.0 percent were in the age bracket of 40-59, also their mean age was 43 years. Married individuals were the highest among the respondents with 71.2 percent and 28.8 percent were single. This could mean that there were more married poultry farmers than single poultry farmers in the study area. The educational statistics indicates that 12.5 percent had no formal education, 26.3 percent had attained the primary school education, 45.0 percent of the respondents had secondary school education and it was the highest level of education attained, 16.5 percent of the respondent had university or tertiary education. This implies that the majority of the respondents are literate.

Analysis from Table 1 also showed that the income level indicates that 68.9 percent had monthly income within the range of 5,000-29,000, 25.1 percent had income within the range of 30,000-55,000 and 6.4 percent of the respondent had income within the range of 56,000 and above. The mean income of the respondents was N29,037. This indicates that the farmers' income in the study area is relatively low. The statistics of the bank visit showed that 5.0 percent

**Table 1 :Distribution of poultry farmers' Socio Economic Characteristics in the study area**

Variable	Frequency	Percentage
<b>Gender</b>		
Male	39	48.8
Female	41	51.2
<b>Age</b>		
20-39	36	45.0
40-59	32	40.0
60 and above	12	15.0
<b>Marital status</b>		
Single	23	28.8
Married	57	71.2
<b>Educational status</b>		
No formal education	10	12.5
Primary level	21	26.2
Secondary level	36	45.0
Tertiary level	7	8.8
Vocational/technical	6	7.5
<b>Farm income (monthly)</b>		
5,000-29,000	55	68.7
30,000-55,000	20	25.0
56,000 and above	5	6.3
<b>Bank visit</b>		
None at all	15	18.8
Weekly	4	5.0
Monthly	46	57.5
Yearly	15	18.7
<b>Bank distance</b>		
0-1.0km	6	7.5
1.1-2.0km	23	28.7
2.1-3.0km	34	42.5
3.1-4.0km	16	20.0
4.1-5.0km	1	1.3
<b>Number of bank account owned</b>		
Zero	17	21.3
One	34	42.5
Two	22	27.5
Three	7	8.7
<b>Number of years in poultry farming</b>		
1-5	53	66.3
6-10	23	28.7
11-15	2	2.5
16 and above	2	2.5

**Household size**

1-5	37	46.3
6-10	40	50.0
11-15	2	2.4
16 and above	1	1.3

Source: Field survey (2015).

*Farm Financial Literacy Levels of Poultry Farmers  
Financial planning*

Result in Table 2 showed that in planning, 53.8 percent of the respondents were responsible for day to day decision about money in the farm, and 50 percent of respondents engaged in budgeting for their expenditures, this implies that farmers are moderately engaging in farm budgeting. In checking of whether their income was able to cover their living cost for one year without borrowing, it was discovered that 26.3 percent of the respondents indicated so. this implies that majority of the farmers do not plan for the future. The overall mean in financial planning is 43.4 percent, this indicates that the financial literacy levels in terms of farm financial planning is relatively low. This conforms with the findings of Ravikumar, et al (2013) who reported that Madurai farmers have low awareness on financial planning in India.

*Financial behaviour*

Result in Table 2 showed that in financial behaviour, 71.3 percent of the respondents had savings or current account in financial institutions, and 56.3 percent had saved money in any financial institution in the past one year. This shows that although a reasonable number of poultry farmers in the study area have account in banks, only a little above average had saved money for the past one year, which indicates that their saving behaviour is low. About 57.5 percent considered whether they can afford a thing before buying it. Also in Table 2, about 55.0 percent finds it more satisfying to save than to spend, also 61.3 percent can pay their farm bills on time, and 52.5 percent can risk their money when saving or making an investment. In their behaviour with the workers or labourers, 62.5% keep a close personal watch on their farm financial affairs. Also, 60.0% set long term goals and strive to achieve them, while 58.8% look for other investment opportunity to invest. Then 36.3% had never borrowed money in the past one year. The overall mean in financial behaviour is 57.2%, this indicates that the financial literacy levels in terms of farm financial behaviour is little above average

*Financial knowledge in farm management*

Analysis in Table 2 showed that 42.5 percent of the respondents were able to explain the uses of farm

budget. In the aspect of distributing money or allocating money, 52.5 percent of the respondents were able to get the proportion in which money is to be shared among various farm inputs, while 60.0 percent knows when to pay interest when given loan. In calculating interest rate 38.8 percent can calculate interest rate, while 58.8 percent knows investments that have high risk, and 43.8 percent understands when there is inflation. In risk reduction aspect, 46.3 percent know how to reduce risk. This does not agree with the work of Navdeep, Mohit and Simrandeep (2014), which indicated that most farmers were literate in terms of inflation in India.

**Table 2: Level of Financial Literacy among Poultry Farmers in the Study Area.**

Variable	Frequency	Percentage
<b>Financial Planning</b>		
The farmer is responsible for planning for day to day about money decision in the farm	43	53.8
Prepares farm budget	40	50.0
Checks if his income will cover his living cost	21	26.3
<b>Mean</b>	<b>34.7</b>	<b>43.4</b>
<b>Financial Behaviour</b>		
Farmers that have savings or current account in financial institution	57	71.3
Farmers that have saved money in the past 12 months	45	56.3
Affordability consideration before buying something	46	57.5
I save more than I spend	44	55.0
Payment of farm bill on time	49	61.3
Risk of money in investment	42	52.5
Close personal watch on farm financial investment	50	62.5
Setting of long term goal	48	60.0
Looking of investment opportunity to invest	47	58.8
Has not borrowed money in the past one year	29	36.3
<b>Mean</b>	<b>45.7</b>	<b>57.2</b>
<b>Financial knowledge in farm management</b>		
The uses of farm budget	34	42.5
How to allocate money to various inputs	42	52.5
When to pay interest on loan	48	60.0
How to calculate interest rate	31	38.8
Investment with high return will be at high risk	39	48.8
Meaning of inflation	35	43.8
How to reduce risk in investment	37	46.3
Type of investment short term loan can be used for	23	28.8
Type of investment long term loan can be used for	43	53.8
<b>Mean</b>	<b>34.6</b>	<b>46.1</b>
<b>Awareness Of Financial Product ranging from 1-17 products</b>		
Farmers that identified Below 5	34	44.0
Farmers that identified from 5-10	35	45.5
Farmers that identified from 11 and above	11	10.5
<b>Mean</b>	<b>26.7</b>	<b>33.3</b>

Source: Field Survey, (2015)

In the allocation of short and long term loans, 28.8 percent of the respondents were able to dictate the investment for short term loan, while 53.8 percent of



them were able to dictate the investment for long term loan. This shows that a reasonable number of them were not able to make the right farm business decision that will give them high return if loan is given to them. The level of financial literacy in terms of financial knowledge is low, this can be seen in the overall mean which was 46.1 percent

#### Awareness of Financial Products and services

The respondents were asked to state whether they have heard of any of these types of financial products ranging from one to seventeen. It was discovered that 44.0 percent of the respondents were aware of below 5 of listed financial products. Also, 45.0 percent of them were aware of 5-10 of the financial products, while 10.5 percent of the respondents were aware of 11-17 of the listed financial product. This indicates that the awareness of the farmers about financial products is very low.

#### Determinants of Level Of Financial Literacy Among Poultry Farmers

Results of regression analysis for the socio-economic characteristics for all the four functional forms are presented in table 4.3. Linear form was chosen as the lead equation based on the highest value of R<sup>2</sup> more significant coefficients, highest F- value and conformity to theoretical expectations of the regression coefficients. The coefficient of multiple determination (R<sup>2</sup>) value of 0.690 indicates that about 69 percent of the variation in the dependent variation was explained by the independent variable included in the regression while the remaining 29 percent was due to other factors not specified in the model; F-ratio with 22.818 values in the regression result is significant at 1 percent. It implies that all the variables have significant or joint effect on the dependent variables.

Gender (X<sub>1</sub>) was significant at 5 percent and has positive coefficient. This implies that being male increases the chances of being financially literate. These findings suggest those males are more likely to be financially literate. This result agrees with the findings of Karchenko(2011) who reported that gender is a major factor influencing financial literacy, stating that males performed better than females. The coefficient of age (X<sub>2</sub>) is negative and statistically significant at 5 percent. This implies that younger farmers tend to be associated with high level of financial literacy. This finding disagrees with the work of Ravikumaretal. (2013) who reported that age was positively influenced by the financial literacy of farmers in India.

Level of Education(X<sub>4</sub>) is significant at 1 percent and it has positive coefficient, this implies that the more

literate a farmer is the more chances of being financially literate too. Education is the bedrock of knowledge and as a farmer's level of education increases, there will be an increased awareness of importance of using different financial products and services, planning the farm budget and making some important financial decisions. Frequency of bank visit

**Table 3: Regression results on socio-economic factors that influence financial literacy levels**

Variables	Linear	semi log	Exponential	double log
Intercept	13.928 (1.258)	-121.276 (-1.879)*	-1.432 (-1.680)	2.432 (2.617)**
Gender(X <sub>1</sub> )	0.513 (2.986)**	1.126 (0.409)	0.053 (0.654)	0.042 (0.380)
Age (X <sub>2</sub> )	-0.030 (-2.178)**	-3.270 (-1.796)*	-0.005 (-1.973**)	-0.089 (-2.102)**
Marital status (X <sub>3</sub> )	-1.046 (-1.074)	4.378 (1.609)	0.213 (1.968)**	0.371 (1.700)*
Level of edu (X <sub>4</sub> )	0.585 (3.678)** *	1.097 (2.371)**	0.069 (1.108)	0.144 (1.206)
Farm income(X <sub>5</sub> )	0.302 (0.438)	0.533 (0.334)	0.003 (0.126)	0.034 (0.064)
Distance(X <sub>6</sub> )	-7.850 (-0.163)	-3.787 (-1.094)	-0.311 (-0.236)	-0.148 (-0.061)
No bank account owned (X <sub>7</sub> )	0.022 (0.480)	0.331 (0.177)	0.015 (-230)	-0.559 (-0.433)
Freq of bank visit(X <sub>8</sub> )	0.845 (3.419)** *	3.408 (2.109)**	0.036 (1.519)	0.222 (2.402)**
Household size(X <sub>9</sub> )	5.628 (0.445)	11.774 (1.056)	1.498 (1.436)	0.346 (1.595)
Farming experience(X <sub>10</sub> )	-0.897 (-1.267)	-0.679 (-1.034)	-0.781 (-0.978)	-0.976 (-1.154)
R <sup>2</sup>	0.690	0.626	0.674	0.590
F-value	22.818***	14.888***	18.863***	19.368***

\*\*\* Significant at 1% level, \*\* Significant at 5%level,\*Significant at 10% level, Values in parenthesis are the t- values

Source: Field Survey, (2015)

(X<sub>8</sub>) has positive coefficient and is significant at 1 percent which suggests that client farmers who were visiting the bank more often tend to be highly literate financially. This is in conformity with the findings of Ravikumaretal.(2013) who stated that frequency of bank visit positively influenced financial literacy of



farmers. Marital status, farm income, distance to financial institution, number of account owned, household size and farming experience were not significant.

#### 4.0 Conclusion

From the study, it was found that most of the farmers were not involved in farm financial planning. They also had no adequate financial knowledge in farm management. Most of the farmers also lacked awareness in the use and existence of most financial products and services provided by the financial institutions. This study therefore recommends that financial institutions should increase the level of awareness on their financial products through television and radio stations, social media and bank application development. Financial literacy should also be part of agricultural extension teaching programmes that shall be used to reach out to the rural farmers. Findings from the study also revealed that education is a major factor that influenced the financial literacy of farmers. It is therefore pertinent for financial literacy to be included in primary, secondary and tertiary education curricular.

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