Constraints Affecting Farm Accounting Practices Among Rural Farmers in Akwa Ibom State, Nigeria

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Abstract

The paper examines constraints affecting farm accounting practices among rural farmers in Akwa Ibom State. A multi stage sampling method was applied to obtain 381 respondents for the study. Rural farmers were drawn from six Akwa Ibom State Agricultural Development Programme field Structure Zones. Interview schedule and administration of questionnaire were used to obtain data for the study. Data were analyzed using descriptive statistics such as percentages, and means. The results of the study showed that majority (57.2%) of the respondents rarely utilized farm accounting practices. The study further showed that rural farmers mostly utilized debtors and creditors. It also revealed that majority (54.4%) of respondents had low level of knowledge on farm accounting which was the major constraint faced by rural farmers. The study concluded that farmers were majorly constrained by lack of proper training on farm accounting. The study therefore recommended that an enabling environment where farm accounting training with qualified extension personnel should be provided by government, also formation of cooperatives which will help pull their resources to farm at large scale to ease the burden of preparing accounts for scattered far plots which has been identified as the major constraint in farm accounting.

Keywords: Farm Accounting, constraints, Behaviour, Rural Farmers

INTRODUCTION

Agriculture is pivotal to the economy of many developing countries, including Nigeria, where it serves as a major source of employment and food security. In Akwa Ibom State, a predominantly rural area in southern Nigeria, agriculture constitutes a primary livelihood for a substantial segment of the population (Etuk, et al, 2024). However, many rural farmers in this region face significant challenges in financial management, impacting their productivity and sustainability.

Extension education tends to promote Farmers' positive attitudes, good decisions, and actions related to agricultural activities such as farm accounting, response to market conditions, and risk management (Nastis, et al, 2019 and Etuk and Umoh 2014). Effective farm accounting practices

are crucial for tracking income and expenses, making informed decisions, and accessing credit facilities (Brigham & Houston, 2021). Farm accounting involves the systematic recording, reporting, and analysis of financial transactions related to farming activities (Etuk and Akpan, 2023). It empowers farmers to comprehend their financial status, assess the profitability of their operations, and strategize for the future. Sound accounting practices enable efficient resource management, mitigate financial risks, and enhance access to financial services such as loans (FAO, 2023). Effective farm accounting practices are crucial for tracking income and expenses, making informed decisions, and accessing credit facilities (Brigham & Houston, 2021). However, many rural farmers in Akwa Ibom State rely on informal and often unreliable methods of record-keeping, such as memory or simple notebooks, which can lead to financial mismanagement and hinder economic progress.

Several factors contribute to inadequate farm accounting practices among rural farmers in Akwa Ibom State. Low literacy rates and limited formal education hinder farmers' ability to maintain accurate financial records (Adedapo and Adekunmi, 2019). Moreover, there is a lack of awareness and training regarding the importance of farm accounting and effective methods for its implementation. Cultural factors and resistance to change further complicate efforts, as traditional farming practices are deeply rooted in local communities (Odoemelam and Ajuka, 2015). Additionally, insufficient access to accounting tools, resources, and professional advice exacerbates the situation (Sharma and Dubey, 2019).

Addressing these issues demands a comprehensive strategy that incorporates various approaches. Educational programmes and training initiatives are crucial for improving farmers' understanding of farm accounting principles and benefits. Strengthening agricultural extension services to provide ongoing support and guidance can facilitate the adoption of effective accounting practices. Furthermore, integrating mobile technology and digital applications tailored for farm accounting presents a promising solution to simplify record-keeping and financial management (Kamal and Bablu, 2023). Support from governmental and non-governmental organizations is essential in providing necessary resources and fostering an enabling environment for the adoption of improved accounting practices.

Despite the importance of farm accounting for effective financial management and sustainable agricultural practices, many rural farmers in Akwa Ibom State continue to face significant challenges in implementing proper accounting methods. The reliance on informal and often inaccurate record-keeping practices which hampers their ability to make informed decisions, secure financial support, and achieve economic stability. Ibok, et. al, (2024) opined that low literacy levels, lack of training, cultural resistance, and limited access to accounting tools are some of the major obstacles that prevent farmers from adopting effective farm accounting practices. Inadequacies in farm accounting practices not only negatively affect individual farmers but also have broader implications for the agricultural sector and the overall economy of Akwa Ibom State. Over 70% of rural farmers in Akwa Ibom State, Nigeria rely on informal and traditional methods tracking finance, resulting in inefficient resource allocation and reduced profitability (Etuk, 2024). Furthermore, rural farmers in this area lack understanding of accounting principles leading to poor decision-making.

Without accurate financial records, farmers are unable to evaluate their financial performance, plan for the future, or access credit facilities, which are crucial for expanding their operations and improving productivity. This situation perpetuates a cycle of poverty and limits the potential for wealth creation and economic development in rural communities (Akpabio, et al 2020).

In order to address these challenges, it is imperative to examine the constraint affecting farm accounting practices of rural farmers in Akwa Ibom State. Understanding the factors that influence farm accounting practices, policymakers and stakeholders can develop targeted interventions to enhance the financial management capabilities of rural farmers. This, in turn, will contribute to increased productivity, sustainability, and economic growth in the agricultural sector of Akwa Ibom State (Etuk, 2021). Therefore, the specific objectives of this study were to:

- i. examine respondents' knowledge Levels of farm accounting practices in Akwa Ibom State
- ii. determine the current farm accounting practice levels of rural farmers in the study area
- iii. describe the challenges faced by rural farmers in adopting effective farm accounting practices in the study area

Farm Accounting

Farm accounting involves the systematic recording, reporting, and analysis of financial transactions related to agricultural activities. It enables farmers to track income, expenses, assets, and liabilities, providing a clear financial picture of their operations. Farm accounting helps farmers make informed financial decisions, manage resources efficiently, and plan for future growth and sustainability.

Frequency and Use of Farm Accounting

Etuk and Akpan (2023) and Etuk et al (2024) found that rural farmers have limited access to formal system accounting system and training, leading to their reliance on informal methods such as mental accounting or makeshift records. Farmers that practiced farm accounting, often use manual methods for accounting, such as handwritten ledgers and journals. Studies by Tham-Agyekum, et. al, (2010) reported that a significant percentage of farmers maintained their financial records manually, while a smaller proportion used computerized systems or a combination of both. Research by Adegeye and Dittoh (1985) found that while financial data were collected regularly, farmers typically reviewed them weekly or monthly, indicating limited use in daily decision-making.

Types of Farm Accounting practices

Farm accounting encompasses various types of records, which can be classified into four main categories: resource inventories, production records, financial records, and supplementary records. Adegeye and Dittoh (1985) outlined that resource inventories include the assets and liabilities of the farm, while production records detail operational metrics, such as livestock performance and

crop yields. Financial records capture all monetary transactions, including sales revenue, expenses for feed, labor, and maintenance, and capital investments. Supplementary records include additional documentation such as farm maps and legal agreements. A study by Johl and Kapur (2001) observed that a significant majority of farmers kept detailed financial records, reflecting the importance of financial management in farm operations.

Implications of Farm Accounting

Accurate farm accounting is critical for the economic sustainability of farm operations. According to Simpa. (2019), successful farmers typically maintain detailed financial records. Chapman (2003) noted that farmers with well-kept financial records are more likely to secure loans, as these records provide lenders with evidence of the farm's financial health. Research by Samson and Obademi (2018) found that farmers who maintained financial records were able to obtain credit more easily compared to those who did not. Johl and Kapur (2001) emphasized that financial records are essential for informing agricultural policies and research, providing the data needed to develop effective plan and price policies. Rolls (2001) indicated that maintaining financial records is often a prerequisite for receiving government subsidies and support.

Factors Affecting Farm Accounting

Several factors influence the practice of farm accounting. Studies by Adegeye and Dittoh (1985) and Simpa (2019) found that farm accounting practices are not significantly affected by the farmer's age, gender, farm size, education level, or years of experience. However, Samson and Obademi (2018) identified a significant relationship between farm accounting and factors such as farmer status, receipt of credit, and net income. Larger farm owners and full-time farmers were more likely to engage in detailed farm accounting, and those who did typically had higher incomes and better access to credit.

Constraints of Farm Accounting

Despite its importance, farm accounting faces several constraints. Poggio (2006) noted that farmers often perceive accounting tasks as tedious. Minae, et al (2003) highlighted high illiteracy and low numeracy levels in many African farming communities as significant barriers. Johl and Kapur (2001) pointed out that the diverse and complex nature of farm operations can make accounting time-consuming and challenging. Additionally, the subsistence nature of farming provides little incentive for meticulous financial record-keeping. Other constraints include a lack of trained accounting specialists to assist farmers, fear of increased taxation based on reported income, and insufficient awareness about the benefits of farm accounting (Singh, 2001; Johl and Kapur, 2001).

Farm Accounting Behaviour of Rural Farmers

Farm accounting behavior refers to the practices and attitudes of farmers towards maintaining and using financial records and accounts in their agricultural operations. In rural areas, particularly in developing countries, farm accounting behavior is influenced by various socio-economic and institutional factors. Most rural farmers predominantly use manual methods such as handwritten ledgers and journals to maintain their financial records, due to limited access to and familiarity with digital tools and software (Tham-Agyekum, et. al, 2010). While many farmers collect financial data regularly, the frequency of reviewing and updating these records varies. Some farmers review their records daily, but a significant number tend to do so weekly or monthly, which can affect timely decision-making (Adegeye & Dittoh, 1985). The common types of records include production records (e.g., crop yields, livestock performance), financial records (e.g., income, expenses), and resource inventories (e.g., assets, liabilities). Production and financial records are particularly crucial for understanding the farm's profitability and sustainability (Johl & Kapur, 2001).

Proper accounting helps farmers in tracking income and expenses, thereby managing their resources more effectively. This is essential for making informed decisions about investments, cost management, and assessing the profitability of various farm activities. Farmers with well-maintained financial records are more likely to access loans and credit facilities, as lenders require evidence of a farm's financial health (Chapman, 2003). Accurate records can significantly improve a farmer's chances of securing financial assistance. Additionally, accurate farm records provide essential data for agricultural policies and support programs. Governments and development agencies often rely on this data to design and implement effective support measures, such as subsidies and training programs.

However, several challenges impede effective farm accounting behavior among rural farmers. High levels of illiteracy and low numeracy skills pose significant challenges to effective record keeping, limiting their ability to maintain accurate and detailed financial records (Minae, et al, 2003). Farmers often have limited time to dedicate to accounting due to the demands of their agricultural activities, leading to inconsistent record keeping (Johl & Kapur, 2001). Moreover, many rural farmers are not fully aware of the benefits of farm accounting, and there is a shortage of trained professionals who can provide the necessary guidance and support for effective record keeping (Singh, 2001).

Improving the farm accounting behavior of rural farmers requires addressing these challenges through targeted interventions, such as literacy and numeracy programs, time-saving accounting tools, and increased awareness of the benefits of farm accounting. Enhanced support from government and development agencies in the form of training and resources can also play a crucial role in promoting better accounting practices among rural farmers.

Theoretical review

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior, developed by Icek Ajzen in 1991, posits that individuals' behavior is primarily determined by their intentions, which are influenced by three key factors: attitudes towards the behavior, subjective norms, and perceived behavioral control. Attitudes refer to an individual's positive or negative evaluation of performing a specific behavior. Subjective norms involve perceptions of social pressures and expectations regarding whether one should engage in the behavior. Perceived behavioral control relates to the perceived ease or difficulty of performing the behavior, influenced by internal factors such as skills and external factors such as resources (Ajzen, 1991).

Application to Farm Accounting Practices:

In the context of farm accounting practices among rural farmers, TPB helps in understanding their intentions and actions towards maintaining financial records. Attitudes towards farm accounting can be shaped by perceptions of its usefulness in managing farm finances and making informed decisions. Subjective norms may arise from influences within the farming community or advice from agricultural extension services on the importance of record-keeping. Perceived behavioral control reflects farmers' confidence in their ability to maintain accurate records despite challenges such as limited education or access to technology (Ajzen, 1991).

Resource-Based View (RBV)

This study draws on the Resource-Based View (RBV), initially proposed by Birger Wernerfelt in 1984 and later refined by Jay B. Barney in 1991. The RBV emphasizes that sustained competitive advantage and superior performance result from effectively managing valuable, rare, inimitable, and non-substitutable resources and capabilities within an organization. It centers on how firms develop and leverage internal resources to gain a competitive edge in their respective industries (Barney, 2001).

Application to Farm Accounting Practices:

Applying RBV to farm accounting practices, the resources and capabilities available to rural farmers—such as education, financial literacy, access to technology, and institutional support—play a critical role in determining their ability to maintain effective financial records. Farmers with higher levels of education and financial literacy are better equipped to understand the importance of accounting and to implement sound accounting practices. Access to technology, such as accounting software or digital record-keeping tools, enhances their ability to manage and analyze farm financial data efficiently. Institutional support, including training programs and policy frameworks promoting financial transparency, can further strengthen farmers' capacity in farm accounting (Barney, 1991).

RESEARCH METHODOLOGY

This study is Akwa Ibom State. Akwa Ibom State is situated in the coastal South-Southern part of Nigeria lying between latitudes 40^{0} 32^{1} and 5^{0} 33^{1} North and Longitudes 7^{0} 25^{1} and 8^{0} 25^{1} East (Etuk, and Umoh 2014 and Akpan and Edemekong, 2013) .Akwa Ibom State is bounded on the North by Abia State on the East by Cross River State, on the West by Rivers and the Abia State, on the South by the Atlantic Ocean and the Southern end of Cross Rivers State

The population of this study consisted of Rural Farmers in Akwa Ibom State. Multi-Stage Sampling was applied for Study. In the first Stage, stratified random sampling was used and Akwa Ibom State Agricultural Development Programme (AKADEP) field Structure. Akwa Ibom Stage was grouped into six AKADEP Zones namely Abak, Eket, Etinan, Ikot Ekpene, Oron and Uyo Zones. In the second stage, Simple random selection of 20% of AKADEP blocks in each of the Zones. The use of 20% was to reduce the sampling error to the barest minimum. Hence in Abak Zone, two blocks were selected, one block way selected in Etinan Zone, two blocks were selected in Ikot Ekpene Zone, one block was selected in Oron Zone and two blocks were selected in Uyo Zone, third, making a total of Nine blocks were selected for this study. In the third Stage, application of simple random selection of 20% to selected cells in each of the selected block. Therefore, two cells were selected from Abak Zone, two from Eket Zone, two from Etinan Zone, four from Ikot Ekpene Zone, two from Oron Zone and four from Uyo Zone. In the fourth stage, this involved proportional sampling method (ie) proportional selection of respondents (farmers) form each of the selected cells in the study as indicated in table 1 proportional sampling method was used to determine the sample size in each selected cells based on the variation in the population of farmer across the selected cells in order to achieve this, the Yamane formula was employed as follows:

$$n = \frac{N}{1+N} (e)^{2}$$
Where n = the infinite population
$$N = \text{Sample Size}$$

$$E = \text{Level of significance (0.05)}$$

$$1 = \text{Unit (constant)}$$

Based on the application of the Yaro Yamane formula for sample size determination and the population of farmers registered with pill farmers Association of Nigeria (AFAN), Akwa Ibom State Branch in 2017 as cited by Obot (2021) Giving that the populations of farmer are

$$n \frac{778826}{1+7826(0.055)^2} (0.05) = n \frac{7826}{1+7826} (0.05) = \text{Therefore, n} = 381$$

Firth stage: Having sampled the cells as well as determined the sample of size for the stud, in the stage. The sampling of respondents in each selected cell. For questionnaires administration and interview were carried out. Simple random sampling was employed for the selected of 381 respondents for the study as indicated in Table 1. Data for the study were collected from primary

sources. Interview schedule and questionnaire administration were used to elicit information from the respondents. The questionnaire was derived from specific objective of the study.

Table 1: Sampling frame and farmers' sample size selection in akadep cell

AKADEP	AKADEP	Cells (20%)	Population	Sampled	
Zone	Blocks (20%)	AFAN(2021)		Population	
20110	2070)		By Obot (2021)	1 opulation	
Abak	Ikot Ekang	Ikot Obong Utu	2) 000 (2021)		
	Utu Etim Ekpo	Ikot Esop	561	27	
	1	1	711	35	
Eket	Mkpat Enin	Ikot Osung			
	1	Otuk	687	33	
Etinan	Etinan				
		Ekpene Obom	621	30	
		Mbioto 2	812	40	
Ikot Ekpene	Obot Akara	Abak ukpom	596	29	
_	Ini	Nto Etto	674	33	
		Obotme	689	34	
		EkoiAtan Ubom	561	27	
Oron	Okobo	Etieke Offi	497	24	
Uyo	Ikpa	Ikot Obong	796	39	
	Itu	Ikot Abiyak	621	30	
6	9	12	7826	381	

Source: Authors Compilation 2023
Table 1b Measurement of Variables

N/S Specific Objective	Variables and date	Unit of measurement		
Knowledge of farm accounting	question which pulled	Highly knowledgeable(HLC) -2Avergely knowledgeable (AK) -1 not knowledge – 0 with critical point of 1.00		
2. Level of farm accounting utilization`	farm accounting record	Highly utilization (4) Utilize (3) Low utilize (2) Very low in utilize (1) With critical point of 2.50		
3. Constraint to farm accounting	List of constraint were projected with critical point of 1.5	High constraint (3) Constraint (2) Mere constraint (1) Not a constraint (0)		

DISCUSSION OF FINDINGS

Respondents' Knowledge Level of farm accounting

Table 2 presents results of distribution of respondents' knowledge level of farm accounting based on knowledge level index of Very Poor, Poor, Fair, Good and Very Good. As shown in Table 2, the knowledge level of majority of the respondents was poor (with knowledge level index ranging from 1.00 - 1.99). This was closely followed by 31.8% of respondents who indicated a fair knowledge with index ranging from 2.00 - 2.99. moreover, 12.9% and 11.2% of the respondents expressed very poor and good knowledge level respectively with knowledge level index ranging from 0.00 - 0.09 and 3.00 and 3.99 respectively. Generally, Table 3 reveals that there was a fair level of knowledge on farm accounting records by the rural farmers in the study.

Table 2: Distribution of Respondents' Knowledge Level of farm accounting practices

Knowledge Level	Knowledge Level	Frequency	Percentage
	Range		
Very Poor	0.00 - 0.09	49	12.9
Poor	1.00 - 1.99	158	41.5
Fair	2.00 - 2.99	121	31.8
Good	3.00 - 3.99	43	11.2
Very Good	4.00 - 5.00	10	2.6

Utilization levels of Farm Accounting Practices among Rural Farmers in Akwa Ibom State

Table 3 presents the utilization index of farm accounting practices among rural farmers in Akwa Ibom State. From the result, more than half of the respondents (57.2%) rarely utilized farm accounting practices. This was followed by 24.1% who never utilized farm accounting practices and 13.4% who often utilized farm account practices. Only 5.2% of the respondents always utilized farm account records in the study. This result exposes that, on a general note, majority of the respondents rarely utilized farm accounting practices. Similar result was obtained in the study of James (2019). This could be attributed to the low literacy level amongst rural farmers which hinders their understanding of the importance of and the procedures for preparation/practicing of farm accounting. This finding is further supported by the study of Minna-Eyovwunu et al (2019) that small scale farmers which have formal education at different levels utilized various types of farm recording practices necessary for the efficient and successful operation of farm businesses.

Table 3: Utilization Index of Farm Accounting Practices among Rural Farmers in Akwa Ibom State

	Range	Frequency	Percentage (%)
Never utilized	0.00 - 0.09	92	24.1
Rarely utilized	1.00 - 1.99	218	57.2
Often utilized	2.00 - 2.99	51	13.4
Always utilized	2.00 - 4.00	20	5.2

Constraints to Farm Accounting Practices

Table 4 presents the constraints faced by the respondents in utilizing farm accounting practices in the study area. Farm accounting practices is a vital part of faring and should be utilized accurately and up-to-date to reflect all ongoing activities in the farm. A 4-point Likert scale was employed to get responses on constraints to farm accounting record keeping in the study. The scores were as follows: Very Severe (4), Severe (3), Not Severe (2) and Not a Constraint (1). The benchmark mean score was 2.5. This implies that constraint variables with mean scores above 2.5 were considered major constraints to farm accounting practices in the study while variables with mean scores below 2.5 were considered as minor constraints to farm accounting in the study.

As shown in Table 4, twelve (12) constraint variables were presented to the respondents to remark on. From this number, eight (8) variables expressed significant or major constraints to farm accounting practices in the study while seven (7) expressed minor constraints to farm accounting. Among the major constraints indicated in the study, the one with the highest mean score was inadequate extension education ($\bar{X} = 3.15$). The implication of this result is that rural farmers lack adequate extension education on farm accounting. This finding corroborates the findings of Manteaw et al, (2021), Undutimi (2013) and Adedapo and Adekunmi (2019) that lack of formal training/education on farm accounting was one of the major constraint faced by most farmers in farm accounting practices in Nigeria.

Another major constraint to farm accounting practices in the study (as shown in Table 4) was scattered farm plots ($\bar{X} = 2.88$). This implies that rural farmers have fragmented farm holdings in different locations which makes it cumbersome to prepare farm account for each of them. The third major constraint to farm account record keeping in the study was lack of interest ($\bar{X} = 2.82$). This simply implies that the respondents, generally, do not have the needed motivation to keep farm accounts. This finding is in tandem with the study of Uche (2012) that lack of interest is one of the limitations to appropriate record keeping by farmers. However, this finding contradicts the findings of James (2019) where lack of interest was one of the least constraints to farm record keeping.

Amongst the variables which were the least identified constraints to farm accounting practices in the study area were: cost of keeping accounting records ($\bar{X} = 2.36$), traditional methods of farming ($\bar{X} = 2.13$) and time constraints ($\bar{X} = 2.05$). From this result, it can be observed that time constraint was the least. This implies that the respondents had enough time on their hands but did not utilize the time for farm accounting practices. This finding agrees with the finding of Manteaw et al (2021) that lack of tie was not a significant constraint to farm account record keeping.

Table 4 Constraints to Farm Accounting Practices

Constraint Variables	Not a	Not	Severe	Very	Mean	Rank
	Constraint	Severe		Severe		
Illiteracy	86 (22.5)	109 (28.6)	140 (36.7)	46 (12.1)	2.38	9 th
Cost of keeping accounting	87 (22.8)	106 (27.8)	151 (39.6)	37(9.7)	2.36	10 th
records	24 (5.2)	0.4.(22.0)	100 (100)	00 (00 5)	2.00	and
Scattered farm plots	24 (6.2)	84 (22.0)	183 (48.0)	90 (23.6)	2.88	2 nd
Traditional methods of farming	84 (22.0)	180 (47.2)	100 (26.2)	17 (4.4)	2.13	11 th
Small farm size	57 (14.9)	68 (17.8)	172 (45.1)	84 (22.0)	2.56	8^{th}
Tax evasion	17 (4.4)	118 (30.9)	217 (56.9)	29 (7.6)	2.67	7^{th}
Lack of interest	48 (12.5)	68 (17.8)	169 (44.3)	96 (25.1)	2.74	5 th
Complication in farm accounting record	38 (9.9)	81 (21.2)	201 (52.7)	61 (16.0)	2.74	5 th
Non-consideration of farming as	32 (8.3)	101 (26.5)	189 (49.6)	59 (15.4)	2.72	6 th
business for profit making						
Inadequate extension education	63 (16.5)	16 (4.1)	101 (26.5)	201 (52.7)	3.15	1^{st}
Low skill level	41 (10.7)	78 (20.4)	192 (50.3)	70 (18.3)	2.76	4^{th}
Time constraint	96 (25.1)	201 (52.7)	51 (13.3)	33 (8.6)	2.05	12^{th}

CONCLUSION & RECOMMENDATIONS

Farm accounting is one of the necessary practices for a successful farming business. However, the rural farmers in the study mostly utilized farm accounting practices regarding debtors' records and creditors records. Majority of the farmers had low knowledge level on farm accounting practices and rarely utilized farm accounting practices. The major constraints to farm accounting in the study were inadequate extension education on farm accounting, scattered farm plots and lack of interest. Based on the findings of the study, the following recommendations were made:

- Farmers should be encouraged to join cooperatives which will enable them to pull their resources together to farm at a large scale. This will reduce the burden of preparing farm accounts for scattered farm plots, which has been identified as a constraint to farm accounting in the study.
- Farm accounting trainings which are tailored to suit the need and literacy level of rural farmers should be prepared and taught to rural farmers in a manner and language that they can easily understand and incorporate in their farm businesses by extension agents.

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