

PERFORMANCE EVALUATION OF PLANTAIN AND BANANAS MARKETING IN ONDO STATE, NIGERIA

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ABSTRACT

The study evaluates the performance of plantain and banana marketing in Ondo State, Nigeria, with a focus on distribution channels, market performance, and challenges. The research employed a well-structured questionnaire for the collected cross-sectional data. A multistage sampling technique was used to randomly select 120 respondents while analytical tools such as descriptive statistics, regression analysis, marketing margin, and return on investment (ROI) techniques were employed. Findings revealed that 84.2% of the respondents were female, with 45.8% aged between 36-45 years, 70% married, and 42.5% had secondary education. The study highlighted the pivotal role of market channels involving farmers, wholesalers, retailers, and consumers in ensuring marketing efficiency. The marketing margin for bananas and plantains was 0.67 and 0.74, respectively. An ROI of 3.06 for bananas and 3.91 for plantains was observed, indicating significant profitability. Banana marketers averaged an annual profit of N215,500, while plantain marketers earned N270,000. The regression results showed that age, experience, cost of purchase and labour are the main determinants of plantain performance while experience and education are for banana marketing in the area. Key constraints included limited credit access and high transportation costs. To enhance the sector, the study recommends collaboration among government agencies, research institutions, and the private sector to improve credit availability and support for marketers.

Keywords: Banana, plantain, marketing, market margin, Return on Investment, Nigeria.

1. INTRODUCTION

Ondo State is a significant producer of plantain and bananas in Nigeria, contributing substantially to the country's agricultural output. These crops are essential for the livelihood of smallholder farmers, serving as a source of income, food security, and employment. According to the National Bureau of Statistics (NBS, 2020), Ondo State accounts for a considerable portion of Nigeria's plantain and banana production. However, despite this prominence, the marketing of these crops faces numerous challenges that limit profitability for farmers and traders across the value chain. Addressing these challenges requires a detailed understanding of the dynamics within the marketing system and its associated constraints.

Nigeria is recognized as the largest producer of plantain and the third-largest producer of bananas in Africa (FAO, 2021). Plantain and banana cultivation holds immense economic significance for smallholder farmers, providing them with cash income and food for household

consumption. The crops also contribute to employment generation along the value chain, including activities such as production, harvesting, transportation, storage, and marketing. Studies by Aderinoye et al. (2020) emphasize the role of plantain and banana as essential cash crops for poverty alleviation and rural development in Nigeria. In Ondo State, the production of these crops is influenced by various factors, including favourable climatic conditions, fertile soils, and access to agricultural inputs. Government initiatives, particularly through the Ondo State Ministry of Agriculture and Rural Development (2021), have focused on improving the productivity of plantain and banana farmers. These initiatives include the distribution of improved seeds, farmer training programs, and extension services that encourage the adoption of modern farming practices. For example, farmers have increasingly adopted the use of certified seeds, organic fertilizers, and efficient irrigation systems. These sustainable practices have not only enhanced yields but also expanded the total production acreage in the state (ODAP, 2020). Despite these efforts to boost production, the marketing of plantain and bananas remains a critical issue that requires attention. Marketing is a pivotal component of the agricultural value chain, as it connects producers to consumers and determines the profitability of farming activities. An effective marketing system ensures that the benefits of production efforts translate into economic prosperity for all stakeholders involved, including farmers, traders, and consumers. The importance of marketing is underscored in the Ondo State Ministry of Agriculture and Rural Development report (2021), which highlights that efficient distribution channels and improved market access can help farmers reach a wider consumer base, thereby increasing sales and revenue. However, several challenges undermine the effectiveness of the marketing system in Ondo State. Post-harvest losses, for instance, are a major concern. These losses occur at various stages of the value chain, including harvesting, transportation, storage, and distribution. The high perishability of plantains and bananas exacerbates the issue, as delays in their movement through the supply chain led to quality degradation and economic losses. Studies by Oluwagbemi et al. (2018) indicate that post-harvest losses in Nigeria's agricultural sector are significant and require targeted interventions to mitigate.

Another critical issue is the inefficiency of distribution channels. Inadequate transportation infrastructure, lack of proper storage facilities, and fragmented distribution networks contribute to delays and product deterioration. These challenges increase marketing costs, extend transit times, and compromise the quality of produce reaching consumers. Adeoye and Adejobi (2020) stress the importance of developing efficient storage and distribution systems to reduce wastage and ensure food security. Pricing fluctuations further complicate the marketing of plantain and bananas. Seasonal variations and supply-demand dynamics result in price instability, which affects both producers and consumers. For farmers, periods of oversupply can lead to reduced profitability, while consumers face increased financial burdens during times of scarcity. FAO (2021) underscores the need for pricing mechanisms that balance the interests of all stakeholders and promote market stability. In addition to these challenges, limited financial resources hinder the adoption of modern farming techniques, storage infrastructure, and improved distribution methods. Access to credit is a particular bottleneck, as many smallholder farmers and traders lack the financial capacity to invest in technologies that could enhance their operations. Research by Adeoye and Adejobi (2020) highlights the impact of financial constraints on the growth potential of the agricultural sector in Nigeria. The absence of credit facilities limits the ability of farmers and marketers to address critical issues such as post-harvest losses, inefficient distribution, and price instability.

Despite these challenges, the economic significance of plantain and banana marketing in Ondo State cannot be overstated. As noted by the Ondo State Agricultural Development Program (2022), the sector plays a crucial role in employment generation, poverty alleviation, and overall economic growth. Beyond individual farmers, the ripple effects of effective marketing practices extend to other stakeholders within the value chain, creating opportunities for transporters, wholesalers, retailers, and service providers. A robust marketing system is therefore essential for maximizing the economic benefits of plantain and banana cultivation. Recognizing the interconnected nature of these challenges, this study seeks to comprehensively assess the performance of plantain and banana marketing in Ondo State. A holistic approach is necessary to understand the factors influencing the marketing system and to identify solutions that can address existing constraints. Specifically, the study aims to:

1. Describe the socio-economic characteristics of plantain and banana marketers in the area;
2. Examine the marketing margins and efficiency of plantain and banana enterprises;
3. Analyze the factors that influence the profitability of plantain and banana marketing;
4. Identify the marketing channels involved in the distribution of plantain and bananas; and
5. Highlight the challenges faced by marketers and propose actionable solutions.

Through a detailed evaluation of these objectives, the study aims to provide insights into the factors shaping the marketing performance of plantain and bananas in Ondo State. The findings will inform policy recommendations and interventions aimed at improving the efficiency and sustainability of the marketing system.

2. RESEARCH METHODOLOGY

The research was carried out in Akure North Local Government Area of Ondo State, Nigeria. Ondo State consists of eighteen Local Government Areas and has a population of approximately 2,255,713 as per the 2006 census. Geographically, the state is bordered to the west by Osun and Ogun States, to the north by Ekiti and Kogi States, to the east by Edo and Delta States, and the south by the Atlantic Ocean. The state experiences a tropical climate with a rainy season from April to October and a dry season marked by dry winds from November to March. This climatic pattern supports the predominance of farming as a major occupation among the state's residents, alongside trading, commerce, and small-scale manufacturing.

Primary data for this research were collected through a structured survey targeting traders engaged in banana and plantain marketing within Ondo State. A total of 120 structured questionnaires were administered, gathering information on production costs, marketing expenses, revenue, and the challenges faced in the marketing process. The study was conducted in Akure, a region known for its significant banana and plantain production.

The collected data were analyzed using descriptive statistics, regression analysis, and farm budgeting methods. Descriptive statistics summarized the socio-economic characteristics and challenges encountered by farmers and traders. Regression analysis identified the factors influencing the profitability of banana and plantain marketing, providing deeper insights into the dynamics of the market system in the study area.

Gross margin analysis was used primarily to estimate the profitability of plantain and banana marketing in the study area. This was calculated as total revenue less total variable cost.

$$GM = TR - TVC$$

Profitability is also represented as total revenue less total cost $\pi = GM - TFC$

Where, GM = Gross Margin,

The cost and returns analysis

Total cost (TC) = Variable cost (VC) + fixed cost (FC)

Total Revenue (TR) = Price per bunch x number of bunches sold

Return on Investment (ROI) = Total Revenue / Total Cost

Gross Margin = Total Revenue – Variable Cost

Net Return = Gross Margin – Fixed Cost

i.e Total Revenue – Total Cost

TR = Total Revenue,

TVC = Total Variable Cost

TFC = Total Fixed Cost and π = Profit

Proper computation, understanding, and interpretation of marketing margin value about prevailing circumstances can reveal a lot about performance in the marketing channels.

Marketing margin = $(R - TC) / R \times 100$

R- Revenue

TC- Total cost

Implication: > 50% implies that the marketers perform less service in moving products from the point of production to the point of consumption.

Multiple regression was used to analyze factors affecting the profitability of plantain and banana marketing in the study area. The implicit functional form is given as:

$Y = f(X_1, X_2, X_3, X_4, X_5, \dots, U)$

Explicit: $Y = B_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \mu$

Where Y= Profit on plantain and banana marketing (naira)

X_1 = Age (years)

X_2 = Marital status

X_3 = Level of education(years)

X_4 = Year of experience (years)

X_5 = Cost of purchase (naira)

X_6 = cost of transportation(naira)

X_7 = cost of labour(naira)

μ = error term

The following functional forms were estimated for the production function and the one that best satisfies the theoretical, statistical, and econometric criteria for a production function was selected as lead equation. The functional forms that were estimated were: Linear, semi-log, double log, and exponential.

Explicitly, the models were expressed as follows:

Linear function:

$Y_i = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + U_i$

Semi-Log:

$Y_i = b_0 + b_{1\log} X_1 + b_{2\log} X_2 + b_{3\log} X_3 + b_{4\log} X_4 + b_{5\log} X_5 + b_{6\log} X_6 + b_{7\log} X_7 + U_i$

Exponentials:

$\log Y_i = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + U_i$

Double log

$\log Y_i = b_0 + b_{1\log} X_1 + b_{2\log} X_2 + b_{3\log} X_3 + b_{4\log} X_4 + b_{5\log} X_5 + b_{6\log} X_6 + b_{7\log} X_7 + U_i$

3. RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

Table 1 below shows that 45.8% of the respondents were between 36-45 years of age followed by 33.3% who were between 26-35 of age, 19.2% of the respondents were 46 years of age and above while 1.7% of respondents were between 15-25 years of age. Research by Adenegan *et al.* (2020) and Ogunmefun *et al.* (2019) highlights the ages 36-45 years are the major individuals who engage in plantain and banana marketing. The study shows that the respondent who was female had the highest responses 84.2% and the male is 15.8%. this conforms to Matsane (2020) who indicated that in the study area, there was female dominance in banana and plantain marketing. Also, the findings showed that 70.0% of the respondents were married, followed by 18.3% single, while 11.7% of the respondents were widows. Married individuals engaged in plantain and banana marketing often benefit from the pooling of resources and collaborative decision-making with their spouses, potentially leading to enhanced market participation and resilience to market fluctuations. The education level of the respondents showed that 6.7% had an HND or B.Sc. degree, while the majority (42.5%) had secondary education. Research conducted by Adenegan *et al.* (2021) sheds light on this aspect, revealing that individuals with secondary school education tend to exhibit more adeptness in navigating the intricacies of agricultural marketing. The study also showed that 31.7% of respondents had a household size of 1-3 members, while 65.8% had a household size of 4-6 members. A large household size may provide a labour advantage, as suggested by Afolami (2013), Table 2 below shows that 1-3 years have 11.7%, 4-6 years have 33.3%, 7-10 years have 45.8% while 11 years and above have 9.2% years of experience. Studies by Adenegan *et al.* (2020) highlighted that 7-10 years have the highest levels of experience among marketers in the sector. Experienced marketers often possess in-depth knowledge of market dynamics, customer preferences, and supply chain management, allowing them to navigate challenges more effectively and capitalize on emerging opportunities.

Table 1: Socio-economic Characteristics of the Respondents

Variable	Frequency	Percentage	Mean
Gender			
Male	19	15.8	
Female	101	84.2	
Marital Status			
Single	22	18.3	
Married	84	70.0	
Widowed	14	11.7	
Age			
15-25	2	1.7	

26-35	40	33.3
36-45	55	45.8
46 years and above	23	19.2
Educational Status		
No formal	21	17.5
Primary	37	30.8
Secondary	51	42.5
HND/B.SC	8	6.7
Postgraduate	3	2.5
Household Size		
1-3	38	31.7
4-6	79	65.8
7 and above	3	2.5
Experience (years)		
1-3	14	11.7
4-6	40	33.3
7-10	55	45.8
11 years and above	11	9.2
Total	120	100.0

Market Channels of Bananas and Plantain in the Area

The market channels for plantain and bananas distribution in the area play a pivotal role in shaping the efficiency of the marketing system as reported in Table 2. As elucidated in the study, these channels involve various key players such as farmers, wholesalers, retailers, and consumers. The research emphasized the importance of these distribution channels in the agricultural sector and aligns with the findings of Adeoye (2020), who stressed the significance of efficient storage and distribution systems in reducing wastage and ensuring food security in Nigeria. The study shed light on the complexities within these market channels, highlighting

inefficiencies that contribute to post-harvest losses and impact the overall supply chain. Improving the coordination and effectiveness of these distribution channels emerges as a key recommendation to optimize the marketing process and enhance the economic viability of plantain and banana marketing in the region. In table 2 below shows how the banana and plantain market channels were adopted by the respondents in the study area.

Table 2: Distribution by the Marketing Channels of the Bananas and Plantain

I Market channels of bananas adopted in the study area		Frequency	Percent	Rank
A	Producer----Rural Assemble---- Wholesaler----- Retailer-----consumer	26	21.7	1 st
	Producer----Rural Assemble---- Wholesaler----- consumer	16	13.3	5 th
	Producer----Wholesaler-----Retailer-----consumer	24	20.0	3 rd
	Producer----Rural Assemble---- Retailer-----consumer	25	20.8	2 nd
	Producer----export to other states-----Retailer----- consumer	9	7.5	6 st
	Producer----consumer	20	16.7	4 th
	Total	120	100.0	
Market channels of plantain adopted in the study area		Frequency	Percent	
	Producer----Rural Assemble---- Wholesaler-----Retailer--- --consumer	25	20.8	1 st
	Producer----Rural Assemble---- Wholesaler-----consumer	18	15.0	4 th
	Producer----Wholesaler-----Retailer-----consumer	24	20.0	2 nd
	Producer----Rural Assemble---- Retailer-----consumer	24	20.0	2 nd
	Producer----export to other states-----Retailer----- consumer	11	9.2	6 th
	Producer----consumer	18	15.0	4 th
	Total	120	100.0	

Costs and Returns Analysis of Plantain and Bananas in the Area

Table 3 revealed that a Marketing Margin exceeding 50% for plantains and bananas signifies a lower level of service provided by marketers in facilitating the movement of products from

producers to consumers. A substantial gross margin indicates that a company is deriving significant profits from its fundamental business activities, considering the direct costs associated with manufacturing goods or providing services. This could imply effective cost management, streamlined production processes, or a robust pricing strategy. The return on investment (ROI) of 3.91 for the plantain market enterprise suggests that every ₦1 invested in the plantain market will yield an additional income of ₦3.91. This clearly indicated that the plantain market enterprise is profitable in the study area while a return on investment of ₦3.06 was recorded for the bananas market enterprise which implied that for every ₦1 invested, ₦3.06 was realized in the bananas market enterprise. This indicated that plantain marketing is more profitable than banana marketing in the study area. The costs and returns analysis revealed that on average each plantain marketer in the study area realized a profit of ₦372,000 per year while on average each banana marketer in the study area recorded a profit of ₦215,500 per year. Therefore, overall costs and returns analysis (Table 4) revealed that on average each marketer in the study area recorded a total profit of ₦587,000 per year.

Table 3: Costs and Return Analysis of Plantain and Banana

ITEM	BANANA	PLANTAIN
FIXED COST		
Storage facility	52,000	65,000
Wheel barrow	13,000	14,000
Basket	2000	3000
Total Fixed Cost	67,000	82,000
VARIABLE COST		
Transportation	30,000	35,000
Labour	3500	6000
Market levies	1000	1500
Loading/off loading	3000	4000
Total Variable Cost	37,500	46,500
Total cost (TC) TFC+TVC	104,500	128,000
Total Revenue= Qty*price	320,000	500,000
Gross Margin=TR-TVC	282,000	453,500
Marketing margin=TR-TC/TR	0.67	0.74

Net Farm Income NFI=(TR-TC)	215,500	372,000
Return on investment=TR/TC	3.06	3.91

Table 4: Summary of Costs and Return Analysis of Plantain and Banana

ITEM	VALUE (₦)
FIXED COST	
Total Fixed Cost	149,000
Total Variable Cost	84,000
Total cost (TC) TFC+TVC	233,000
Total Revenue= Qty*price	820,000
Gross Margin=TR-TVC	736,000
Marketing margin= TR-TC/TR	0.71
Net Farm Income NFI=(TR-TC)	587,000
Return on investment=TR/TC	3.52

**Factors that Affect the Profitability of Banana and Plantain Marketing in the Study Area
Bananas Estimates:**

The regression analysis was conducted to evaluate the relationship between selected socio-economic and cost-related variables and the profitability of banana marketing (Table 5). The model yielded an R-value of 0.236, indicating a weak correlation. The R-Square value of 0.556 suggests that 55.6% of the variance in the dependent variable can be explained by the predictors included in the model. However, the Adjusted R-Square of 0.243 reflects a lower explanatory power when adjusting for the number of predictors, highlighting the potential non-significance of some variables. In the model, only the marketing experience variable was statistically significant at a 1% level. This variable had a coefficient of 0.270 and a highly significant t-value of 11.25. The positive relationship indicates that as marketers' years of experience increase, the profitability also tends to increase. This result suggests increasing returns to experience, potentially due to modern practices or adopting new techniques, and more efficient methods. Marketers with longer experience may rely on the history of farming, helping them to adapt to modern market demands and innovations. The result corroborates the findings by Oladoyin et al. (2023).

However, the other variables, including age (X₁), marital status (X₂), educational level (X₃), cost of purchase (X₅), cost of transportation (X₆), and cost of labor (X₇), did not exhibit significant

effects on the dependent variable. These variables, though included in the model, had weak coefficients and low t-values, indicating minimal or inconsistent influence on the outcome.

Therefore, the results highlight the importance of focusing on experience in marketing strategies for banana traders. Policymakers and stakeholders should consider implementing capacity-building programs and workshops to help experienced marketers adapt to evolving market conditions and modern practices. Again, the lack of significance for other variables such as educational level and costs suggests that profitability in this sector may be influenced more by external factors not captured in the current model, such as market access, consumer demand, or infrastructural challenges. Future research should consider these aspects to provide a more comprehensive understanding of profitability drivers.

Table 5: Results of the Factors Affecting the Profitability of Banana Marketing in the Study Area

Model		Coefficients ^a	Std. Error	T
1	(Constant)	1.408	.120	11.73
	Age (X ₁)	.035	.031	1.13
	Marital Status (X ₂)	.043	.025	1.72
	Educational level (X ₃)	.103	.073	1.41
	Year of Experience (X ₄)	-.270	.024	-11.25
	Cost of Purchase (X ₅)	.118	.207	0.570
	Cost of Transportation (X ₆)	.210	.198	1.06
	Cost of Labour (X ₇)	.084	.110	0.76
	R	.236 ^a		
	R Square	.556		
	Adjusted R Square	.243		

a. Dependent Variable: Profit

Plantain Estimates

The regression analysis was performed to identify the factors influencing the profitability of plantain marketing in the study area (Table 6). The R-Square value of 0.745 indicates that 74.5% of the variance in profitability can be explained by the independent variables.

Age (X₁): The coefficient for age was 0.015, with a t-value of 15.0, indicating a strong and statistically significant positive relationship. This result suggests that as marketers age, their

profitability tends to increase, potentially due to the accumulation of knowledge, networks, and skills over time.

Years of Experience (X₄): Years of experience had a coefficient of 0.070 and a significant t-value of 3.33. This finding shows that more experienced marketers are likely to achieve higher profitability, possibly due to a better understanding of market dynamics and effective business strategies.

Cost of Purchase (X₅): With a coefficient of 0.707 and a t-value of 6.15, the cost of purchase was positively associated with profitability. This suggests that higher investment in purchasing plantain can result in greater profitability, likely due to economies of scale or access to higher-quality produce.

Cost of Labor (X₇): Labour costs had a coefficient of 0.940 and a t-value of 9.307, indicating a significant positive relationship with profitability. This reflects the importance of labour in ensuring efficient operations, such as harvesting, sorting, and transporting plantain.

The variables marital status (X₂), educational level (X₃), and cost of transportation (X₆) did not show significant relationships with profitability. These predictors, with low t-values (0.87, 0.18, and -0.004 respectively), had negligible or inconsistent effects on the dependent variable.

Therefore, the results highlight the critical roles of age, years of experience, cost of purchase, and labour costs in driving profitability for plantain marketers. Older and more experienced marketers are likely to leverage their accumulated expertise and networks to enhance business performance. The finding is similar to the results reported by Olubunmi-Ajayi et al. (2023), and Adegoye et al. (2023) in their studies. Additionally, higher costs of purchase and labour suggest that substantial investments in these areas can yield greater returns, likely due to improved efficiency and product quality. On the other hand, the lack of significance for marital status, educational level, and transportation costs suggests that these factors do not directly influence profitability in this context. However, transportation inefficiencies may have indirect effects, such as increasing post-harvest losses or delays, which were not captured in this analysis.

Table 6: Results Showing the Factors Affecting the Profitability of Plantain Marketing in the Study Area.

Model		Coefficients ^a	Std. Error	T
1	(Constant)	1.008	.100	10.08
	Age (X ₁)	.015	.001	15.0
	Marital Status (X ₂)	.013	.015	0.87
	Educational level (X ₃)	.003	.017	0.18
	Year of Experience (X ₄)	.070	.021	3.33
	Cost of Purchase (X ₅)	.707	.115	6.15

	Cost of Transportation (X_6)	-.839	.215	-0.004
	Cost of Labour (X_7)	.940	.101	9.307
	R	.235 ^a		
	R Square	.745		
	Adjusted R Square	.231		

a. Dependent Variable: Profit

Constraints Militating Against Plantain and Banana Marketing in the Study Area

The analysis in Table 7 highlights the primary constraints impacting plantain and banana marketing in the study area. The constraints were ranked based on their severity, using mean scores derived from respondents' ratings. The lack of organized markets emerged as the most significant constraint (Mean = 2.00, Ranked 1st) affecting plantain and banana marketing. Approximately 75% of respondents rated this issue as either "Very Serious" (26.7%) or "Serious" (48.3%). The absence of structured markets leads to inefficiencies, such as poor pricing mechanisms, limited market access, and increased difficulty for farmers and traders to connect with buyers. Establishing organized markets could improve market stability, transparency, and profitability for stakeholders.

Limited access to credit was the second most critical challenge, with 74.2% of respondents categorizing it as "Very Serious" (31.7%) or "Serious" (42.5%). The inability to secure adequate financing prevents farmers and marketers from investing in modern agricultural practices, efficient storage, and transportation facilities. This constraint underscores the importance of providing financial support through microfinance schemes, cooperatives, or government initiatives to enhance business performance. Transportation costs (Mean = 1.83, Ranked 3rd) were rated as a significant challenge by 76.6% of respondents, who deemed it either "Very Serious" (40.8%) or "Serious" (35.8%). Poor road infrastructure, fluctuating fuel prices, and limited access to affordable transport options increase operational costs for marketers. These challenges exacerbate post-harvest losses and reduce the profitability of plantain and banana marketing. Addressing these issues through infrastructure development and subsidies could alleviate this constraint.

Inadequate quality facilities, such as storage and handling infrastructure, were highlighted as a significant limitation (Mean = 1.82, Ranked 4th), with 80.8% of respondents marking it as "Very Serious" (38.3%) or "Serious" (42.5%). The lack of proper facilities results in significant spoilage and wastage, particularly for perishable crops like plantain and bananas. Investments in cold storage, packaging centres, and processing facilities are critical to reducing losses and improving product quality. Spoilage of inputs (Mean = 1.48, Ranked 5th), such as fertilizers and seeds, was identified as a constraint by 86.6% of respondents, though it ranked lower in severity compared to other issues. The high rate of spoilage can be attributed to inadequate storage and poor handling practices. While less prioritized than the other constraints, improving input management systems remains essential for long-term sustainability. These findings are similar to several studies in the region such as Adebayo and Olaniyi (2019, 2020a, 2020b), Adenegan et al. (2021), and Adeniji et al. (2021).

Table 7: Constraints militating Plantain and Banana Marketing in the Study Area

S/N	Item	Very Serious		Serious		Mild		Not at all		Mean	Rank
		F	%	F	%	F	%	F	%		
1	Lack of organise Market	32	26.7	58	48.3	28	23.3	2	1.7	2.00	1 st
2	Limited Access to Credit	38	31.7	51	42.5	28	23.3	3	2.5	1.97	2 nd
3	High cost of transportation	48	40.8	43	35.8	28	23.3	----	----	1.83	3 rd
4	Inadequate quality Facilities	46	38.3	51	42.5	22	18.3	1	0.8	1.82	4 th
5	Inadequate input spoilage	79	65.8	25	20.8	16	13.3	16	13.3	1.48	5 th

4. CONCLUSION AND RECOMMENDATIONS

This study has provided information on the factors influencing the profitability of plantain and banana marketing in Ondo State, Nigeria. The findings pinpoint the significant roles of age, years of experience, cost of purchase, and labour costs in shaping profitability, particularly in plantain marketing. Older marketers and those with greater experience tend to achieve higher profitability, reflecting their ability to leverage accumulated knowledge, networks, and strategic practices. Similarly, investments in purchasing quality produce and employing adequate labour significantly enhance profitability by improving operational efficiency and product quality. Despite these strengths, the study also highlights the main challenges that hinder the optimal functioning of the plantain and bananas marketing system. Key constraints include the lack of organized markets, limited access to credit, high transportation costs, and inadequate quality facilities for storage and handling. These issues exacerbate inefficiencies, leading to reduced profitability and economic opportunities for marketers. Based on these findings, several measures are recommended. First, establishing organized markets with standardized pricing mechanisms and structured distribution systems would improve market stability and accessibility. Such markets can facilitate better connections between producers and consumers, ensuring fair pricing and reduced transaction costs.

Second, improving access to credit is essential for empowering marketers to invest in quality inputs, infrastructure, and labour. Government agencies, financial institutions, and development partners should collaborate to create microfinance schemes or cooperative lending programs tailored to the needs of plantain and banana marketers. Third, infrastructure development is critical to reducing transportation costs and post-harvest losses. Investments in road networks, storage facilities, and cold chain systems can significantly enhance the efficiency of the marketing process, ensuring that perishable goods reach markets in optimal condition. Finally, training programs and capacity-building initiatives should be implemented to help marketers,

especially those with extensive experience, adopt modern practices and innovative techniques. These programs can enable them to adapt to evolving market demands, thereby sustaining profitability over time.

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