MARKETING EFFICIENCY OF BANANA IN YENAGOA METROPOLIS, BAYELSA STATE, NIGERIA

Nimiye C. Morgan[1*], Prince E. Kainga[1], Robert F. Usman[2]

and Ebinipre F. Baraseibai[1]

[1]Department of Agricultural Economics, Extension and Rural Development, Faculty of Agriculture, Niger Delta University, Wilberforce Island Bayelsa state.

[2]Department of Agricultural Technology, Kogi State Polytechnic, Lokoja, Kogi State, Nigeria

[*]Corresponding Authors' Email: Nimiyemorgan@yahoo.com; Morgannimiye@ndu.edu.ng

ABSTRACT: *The study examines the marketing efficiency of bananas in Yenagoa Metropolis of Bayelsa State, Nigeria. The objectives were to describe the socio-economic characteristics of banana marketers; determine the marketing margin and efficiency of banana marketers; identify marketing channels of bananas; and identify the constraints associated with banana marketers in the study area. Ninety (90) questionnaires were retrieved and used for the analysis out of the one hundred and four (104) questionnaires distributed to the banana marketers selected through a multistage random sampling technique from eight (8) markets in Yenagoa Metropolis of Bayelsa State using a structured questionnaire. Descriptive Statistics and marketing margin and efficiency formulas were used to analyse the data. The result showed that banana marketers were predominantly female. Budgetary analysis showed marketing efficiency greater than one which indicated profitability of the market. The Likert type showed the constraints, which significantly affect banana marketing as high perishability (3.88), high cost of transportation (2.98), inadequate market information (2.85) and heavy imposition of tax/levies (2.63). The study, therefore, recommends that Marketers should be encouraged to have market informants that will inform them of the increase or decrease in the prices of bananas in different markets in the study area.*

KEYWORDS: Profitability, banana, marketing margin, marketing efficiency, marketing channels.

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INTRODUCTION

Banana (*Musa sapientum L.*) is one of the most important and oldest food crops of humankind with evidence of cultivation dating to 4000 BCE in New Guinea (Denham, Harberle, Lentfer, 2004). Millions of people in the humid and sub-humid regions of Africa rely heavily on bananas (Musa spp., AAA or ABB groups) and plantain (Musa spp., AAB group) as their main food crops and fuel sources. (John and Marchal, 1995). Nigeria is one of the largest banana and plantain-producing countries in the world (Kainga and Seiyebo, 2012). Bananas are nutritious and in some Nigerian homes, they constitute a part of their daily meal. It can be seen around Nigeria and most African markets, roadside markets and stores. In as much as it is perishable, bananas can be used to make banana pudding etc. Many types, sizes and different varieties exist. Their colour usually ranges from green to yellow, but some varieties are red.

In Nigeria and other countries, plantains and bananas are among the main staple foods. Plantains give the body multiple nutrients, while bananas are a great source of energy, minerals, dietary fibre, and vitamins A, B, and C which are necessary for healthy growth (Honfo, Tenkouano and Coulibaly, 2011). It also constitutes various antioxidants and phytonutrients. In addition to their nutritional value, bananas are marketed, which creates jobs and revenue for both rural and urban residents in Nigeria and other nations. Considering the significance of bananas, marketing them is essential to addressing both domestic and global consumer demand and generating more profits for both marketers and farmers. One of the key factors influencing economic development is agricultural marketing, which has a motivating and directing effect on production activities and the distribution of agricultural commodities. (Mussema, 2006). In this context, marketing encompasses all operations that occur from the farm gate until the product reaches the end users and starts after the crop is harvested on the farm. These tasks involve distributing the product after it has been sorted, cleaned, stored, processed, and packaged. Usually, these tasks are not done by farmers; instead, they are done by middlemen (marketers), who handle all aspects of marketing and earn a living from it. For agriculture, which is characterised by perishable goods due to a lack of storage facilities, efficient marketing performance is crucial. There will be unpredictable agricultural prices and a high level of spoiling if the market system is flawed or if the marketers did not carry out their duties adequately. This demonstrates the significance of the roles played in Bayelsa State by the agricultural marketers.

The EPAR (2013) and Oladipo, Mommoh, Yussuf and Awoyinka (2007) observed that the production and consumption of bananas are increasing and the link between producers and consumers is the market in which these commodities are sold. With this in mind, it becomes crucial to examine the marketing of this commodity because marketers serve as a bridge between the producers and consumers. Examining its marketing efficiency and margin as well as the related issues is therefore essential. This will support the development of policies that will enhance the marketing system and promote the welfare of its marketers, which will then benefit the producer. Marketing efficiency and margin analysis are more reliable indicators of the profit of intermediaries, the purchasing power of farmers, and the effectiveness of the marketing system (Gabre-Madhin, 2001). A study on the marketing of these commodities becomes ever more important as bananas have a short shelf life and if not sufficiently marketed the producer can suffer losses (EPAR, 2013; Eronmwon, Alufohhai and Ada-okungbowa, 2014). This study, therefore, analysed the marketing margin and efficiency of banana, and the marketing channels of banana marketing and identified the constraints faced in marketing the fruits in Yenagoa Local Government Area.

Marketing of bananas and plantains is fraught with difficulties and, as a result of inadequate information sharing among marketers, impedes the free flow of the commodity in the market (Akinyemi,

Aiyelaagbe and Akyeampong 2010). Due to a lack of marketing knowledge, farmers' produce, such as bananas, is not purchased, which causes a comparatively high amount of waste and prevents merchants from making better selections (Chukwu, 1997). The substantial disparity in prices between rural and urban areas depresses farmers, which lowers productivity and, in certain situations, results in a total halt to output (Care, 2004). In other words, to enhance food supply, a more efficient marketing system that uses market data must be developed. This will allow prices in one market to be relayed to other markets, stabilising prices. Therefore, in order to verify the flow of pricing and market data both within and between markets, market integration was monitored. The focus of the study was on analysing how profitable it is to promote bananas. The study is designed to determine the socioeconomic characteristics of banana marketers in Yenagoa Local Government Area, determine the marketing margin and efficiency of banana marketers identify marketing channels of bananas and identify the constraints associated with banana marketers in the study area.

METHODOLOGY

The study was carried out in Yenagoa Metropolis Bayelsa State, which is the state capital territory. The area constitutes of a population of 353,285 National Population Census (NPC, 2006) with an area of 1,698 km^2. Yenagoa Local Government Area is geographically located in latitudes 4°49'N and 5°23'N and also within longitudes 6°10'E and 6°33'E. The area lies within the rain forest zone of Nigeria with mean annual rainfall of 2000-4000mm and maximum average temperature of 30°C. There are two seasons that is the wet season and the dry seasons. The wet season is relatively long, lasting between seven and eight months of the year, from the months of March to October. There is usually a short break around August, otherwise termed "August break". The dry season begins in late November and extends to February or early March, a period of approximately three months.

The markets in Yenagoa Metropolis are Swali market, Tombia market, Akenfa market, Kpansia Market, Gbarain market, Zarama market, and Okaka market, which are known for their sales of foodstuffs and Igbogene market is known for the sales of banana and plantain while Agudama market, Ovom market and Opolo market are known for the sales of clothes.

Sampling techniques

A multi-stage sampling technique was used. The first stage was a purposive selection of all the markets where wholesalers and retailers of bananas are located and there are eight (8) markets, which include Swali market, Kpansia market, Opolo market, Tombia market, Akenfa market, Igbogene market, Zarama market and Gbarain market. The next stage was the selection of thirteen (13) banana marketers randomly in each of the markets making one hundred and four (104) banana marketers.

Method of Data Analysis

Descriptive statistics such as mean, frequency and percentages were used to achieve objectives (i) and (iv). Marketing margin and efficiency model were used in achieving Objective (ii) while Objective (iii) was achieved with structural design.

Marketing Margin and Efficiency Analysis

The budgetary technique which involves the cost and return analysis was used to determine the Marketing Margin (MM) and the Marketing Efficiency (ME) of the respondents. The model specification is given as:

MM =TR – TC ………………………………………………………………… (1)

ME =TR/TC ……………………………………………………...……………. (2)

Where: TR = Total Revenue (N) (Price/kg multiplied by the quantity sold);

TC = Total Cost (N) (consists of the cost of purchase in naira, the cost of storage in naira per week and the cost of transportation in naira per week);

MM = Marketing Margin (N) (which is the indicator of profitability) and

ME = Marketing efficiency (N).

Shepherd-Futrel model of accurate measurement of efficiency gives the productivity of resources invested in the marketing process in quantitative terms either by the total value of products sold divided by computing the total estimated cost incurred by the marketing agency and producers combined and expressed as a percentage. If the marketing efficiency equals (1) one, the marketing is efficient but if it is less than one (1), the market is inefficient. However, if the marketing efficiency is greater than one (1) the market is highly efficient.

Likert-type Rating Technique

A 4- 4-point type rating was used in the study to measure the level of constraints in the marketing of bananas. When responding to a Likert-type questionnaire item, respondents specify their levels of agreement or disagreement on a symmetric agrees-disagree scale for a series of item statements. The scale captures the intensity of their feelings. This was regarded as strongly agree (SA), agree (A), disagree (DA), and strongly disagree (SD), with corresponding values of 4, 3, 2, and 1 respectively. The mean score of the respondents based on the 4-point rating scale was computed as 4+3+2+1/4 = 2.50 cut-off point. Based on this, any score below 2.50 (mean score <2.50) was taken as a weak factor and may not be considered while those with mean score of above 2.50 (mean score >2.50) were taken as strong factors and thus be considered.

RESULTS AND DISCUSSION

Socio-Economic Characteristics of the Respondents

The socio-economic characteristics considered in the study are age, gender, marital status, level of education, marketer's experience, marketer's status, household size and annual income. The distributions of the marketers according to their socio-economic characteristics are presented in tables. Ninety (90) questionnaires were retrieved out of the one hundred and four (104) questionnaires that were distributed.

Table 1. Respondents according to socioeconomic characteristics

Age (In Years)	Frequency	Percentage
≤ 30	10	11.1
31-40	27	30.0
41-50	34	37.8
≥ 51	19	21.1
Total	90	100.0
Sex		
Female	90	100
Male	0	0.0
Total	90	100
Marital Status		
Single	4	4.4
Married	64	71.1
Divorced	12	13.3
Widowed	2	2.2
Total	90	100.0
Educational Level		
Primary	31	34.4
Secondary	27	30.0
Tertiary	11	12.2
Non-formal	21	23.3
Total	90	100.0
Marketing experience (years)		
0-1	7	7.8
2-6	30	33.3
7-11	34	37.8
12-16	8	8.9
17-21	5	5.6
> 22	6	6.7
Total	90	100.0
Marketer's status		
Part time	4	4.4
Full time	86	95.6
Total	100	100.0
Marketing type		
Wholesale	20	22.2
Retail	70	77.8
Total	90	100.0
Household size		
1-4	24	26.7
5-9	43	47.8
10-14	15	16.7
15-19	8	8.9
Total	90	100
Annual income (₦)		

< 40,000	12	13.3
41,000-60,000	43	47.8
61,000-80,000	22	24.4
81,000-100,000	10	11.1
101,000-120,000	3	3.3
Total	90	100

Source: *Field survey, 2023*

The result in Table 1 revealed that the average age of the banana marketers in the study area is 46 years. The majority of the respondents were in the age range of 41-50 (37.8%) which in turn suggests a high level of vitality of respondents for the business. This indicates that the majority of respondents are still actively engaged in their businesses at a young age. At that point, they are probably going to be more gregarious and open to taking marketing-related risks in an effort to increase their earnings. This result agreed with Obetta (2015) who reported a modal age range of 30 to 50 years among plantain and banana marketers in Enugu, State. Furthermore, it aligns with the research of Onoja and Achike (2011), who suggested that age and other socioeconomic factors had a favourable link with farmers' technical efficiency in Rivers State.

As indicated in Table 1, the result of the study revealed that females only in the study area do banana marketing. This implies that gender sensitivity of banana marketing inclines towards women; only women are involved in banana marketing. This result is consistent with Akalumbe (1998), who was quoted by Oladejo and Sanusi (2008), who stated that women handle bananas after harvest, whereas men are primarily involved in production. Table 1 shows that the majority (71.1%) of the banana marketers in Yenagoa Metropolis were married. This shows that a higher percentage of banana marketers were married and they shoulder many family responsibilities Ani (2015) opined that marriage has a direct relationship with family stability; therefore, the high percentage of married respondents suggested that the banana marketers were stable and able to make good business decisions. Moreover, this suggests that a larger percentage of respondents may have access to additional material, ethical, and physical support from their wives, which could increase their capital base. However, the result revealed that 76.6% of banana marketers in Yenagoa Metropolis were literate, as only a small portion (23.3%) of them had no formal education. Kim and Wade (2015) assert that education is essential to the growth and management of any business. An individual's level of literacy positively correlates with their skill level and effectiveness in management. This is an advantage which according to FAO (2006) could translate to higher business acumen in terms of level of profit. Through education, people can acquire skills and knowledge that are important in obtaining and utilizing information about marketing performance in banana marketing. A further analysis of the socio-economic characteristics shows that only 7.8% were new entrants and that the majority (92.3%) of banana marketers have years of experience. This implies that marketers in the study area have been in this enterprise long enough to improve their skills in maximizing profit. Chukwuji (2006) highlighted that a manager's expertise and experience are critical to the profitability and stability of any firm. The majority of banana marketers (95.6%) were full-time marketers while 4.4% were part-time. There are marketers that are more full-time in the study area this could be due to the profitability of the enterprise in the study area. Table 1 shows that 78.8% of banana marketers in the study area are retailers with just 22.2% as wholesalers. This indicates that most of the marketing of bananas is done in the retail sector, where bananas are sold directly to consumers. This can be advantageous from a profit margin perspective, as retailers typically sell products at higher prices than wholesalers do. On household size majority (47.8%) of the marketers have a family size of 5-9 persons, 16.7% have a family size of 10-14 people, 8.9% have a family

size of 15-19 people and 26.7% have a family size of 1-4 people. The likelihood of a household's members—particularly the children—extending their assistance is positively correlated with family size and thus increases the likelihood of business expansion. Household size shows that (13.3%) of banana marketers earn less than ₦40,000 while (47.8%) earn ₦41,000-₦60,000 then (38.8%) earn between ₦61,000-₦120,000. This may be because most banana marketers in the study area do not sell only bananas but also sell other fruits as a combination with bananas.

Marketing Margin and Efficiency of Banana Marketing

Table 2 presents the results of the overall marketing margin and marketing efficiency of the banana marketers under analysis. Marketing efficiency is 1.02, which shows that the market is perfectly or highly efficient.

The marketing margin was used as the indicator for profitability and the average marketing margin (profitability indicator) for the banana marketers per week was ₦613 and per month could be ₦2400.

Marketing Channel

	Variables	Value in Naira
a	Total cost	1,851,000
b	Total revenue	1,882,900
c	Marketing margin (b – a)	31,900
d	Marketing efficiency (b/a)	1.02

Marketing channel refers to the various means by which banana moves from the producers to the consumers. Four marketing channels for bananas were identified in the study area. A Marketing Channel comparison for bananas was made based on the multiple responses of the banana marketers in the study area. The channels identified were presented as follows

Table 2 Marketing Margin and Efficiency of Banana Marketers

Channel 1: Producers   wholesalers   consumers 5.6%
Channel 2: Producers   wholesalers   Retailers   consumers = 74.4%
Channel 3: Producers   retailers   consumers 18.9%
Channel 4: Producers   consumer = 1.1%
Channel 2 measured 74.4% and it is the major channel for marketing bananas while Channel 4 was found as the least important channel (1.1%) for the marketing of bananas. Figure 1 shows that the major participants in banana marketing were the producers, wholesalers, retailers, and consumers.

Figure 1; marketing channels of bananas in Yenagoa Local Government Area

Source *field survey, 2023*

Constraints Associated with Banana Marketing

The constraint associated with banana marketing in the study area are shown in table 3. The result showed that banana marketing was faced with many critical problems. The mean score is 2.50 so any problem with mean score of 2.50 is considered a significant challenge faced by

the marketers. The result showed that high perishability (spoilage), Price Fluctuation, rapid deterioration in quality, high cost of transportation, inadequate market information and heavy imposition of tax/levies where the major challenges that confronted the marketers in the study area. High perishability was reported to be the most severe problem faced by banana marketers in the study area.

Conversely, inadequate capital was not reported as a major problem, this result could be attributed to the fact that majority of the banana marketers do not sell only banana but attach other fruits to it.

Table 3 Constraints Associated with Banana Marketing

Constraints	SD	D	A	SA	MEAN	DECISION
High perishability	0 (0.0)	0 (0.0)	10(11.1)	80 (88.9)	3.88	Agree
Price Fluctuation	1(1.1)	15(16.7)	74 (82.2)	0 (0.0)	3.80	Agree
Rapid deterioration in quality	0 (0.0)	0 (0.0)	46 (51.1)	44 (48.9)	3.48	Agree
High cost of transport	10(11.1)	3 (3.3)	55 (61.1)	22 (24.4)	2.98	Agree
Inadequate market information	5 (5.6)	26 (28.9)	36 (40.0)	23 (25.6)	2.85	Agree
Heavy Imposition of tax/levies	12 (13.3)	34 (37.8)	19 (21.1)	25 (27.8)	2.63	Agree
Pest and disease	24 (26.7)	26 (28.9)	33 (36.7)	7 (7.8)	2.25	Disagree
Inadequate capital	29 (32.2)	31 (34.4)	21 (23.3)	9 (10.0)	2.11	Disagree

Source *field survey, 2023*

Mean score = 2.50

Parentheses = Percentage

< 2.50 = Disagree

> 2.50 = Agree

CONCLUSION AND RECOMMENDATIONS

This study investigated the profitability of banana marketing in Yenagoa Metropolis, Bayelsa State. Three important findings emerged; first, females dominated banana marketing in the study area. Second, the marketers were mostly educated people, which is a positive sign for getting and understanding information through different channels about improving the enterprise and increasing profitability. Thirdly, banana marketing was profitable in the study area. The following recommendations were made based on the findings:

i.   Market informants who can alert marketers to changes in banana pricing across various marketplaces should be encouraged to work with them.

ii. In order to lower the cost of produce that reaches the final customer, marketing channels could be enhanced to limit the effect of middlemen. Considering that the ultimate cost increases with the number of interventions made between the producer and the consumer.

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