

## Full Length Research Paper

# Economic Analysis of Plantain Marketing in Odigbo Local Government Area of Ondo State, Nigeria

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Satisfaction of consumer is one of the major aims of agricultural production. This objective is achieved when marketers finally transfer the product to consumers after adding various utilities like form, time, place and possession utilities to the product through numerous activities they perform on them. Economic analysis of plantain marketing in Odigbo local government area of Ondo State was conducted. A total of seventy five (75) plantain marketers were purposively selected from five communities. Descriptive statistics and gross margin analysis were used to analyze the data collected. The results indicate that the majorities (84%) of plantain marketers are women, (64%) combine plantain marketing with marketing of other agricultural products and (85.3%) are wholesalers with marketing experience of above 6years (81.3%). Majority (73.3%) of them has post primary education, married (86.7%), with age range between 26-45years (73.3%) and highest (56%) household size of 1-4. The results on gross margin analysis revealed that total revenue (TR), total variable cost (TVC) and gross margin (GM) were ₦6,962.4, ₦4,254.5 and ₦2,707.9 respectively. This showed that plantain marketing is a profitable venture. The problems hindering plantain marketing are erratic supply of plantain fruits, storage facilities and poor road network. It is recommended that the road linking the rural communities should be made more motorable to enhance easy movement of goods from farms to the market.

**Keywords:** Economic, Plantain, Marketers, Agriculture, production, Nigeria.

## INTRODUCTION

Plantain (*Musa paradisiaca*) can contribute a lot to the economy of Nigeria if adequate attention is given to it. It is an economic crop which has a relatively high value product in common with most horticultural crops. Plantain has always been an important staple food for both rural and urban populace. It supplies up to 25% carbohydrate for approximately 70million people in the humid region of Sub-Saharan Africa (Ferris, 1997 and Swennen, 1990).

Nigeria is the largest producer of plantain in West Africa

with annual production of about 2.4million metric tons mostly obtained from the Southern States (Ogazi, 1996). The growing of plantain is left in the hands of subsistence farmers who account for about 80% of Nigeria's agricultural output. The crop is grown in the backyard or home stead's and recently in plantations for the commercial market.

Acceptable to Nigerians, plantain is a versatile food in the kitchen as well as a raw material for many popular delicacies and snacks. This reason plus the growing population of Nigeria leads to an enormous increase in demand for the crop in the consumers market. Among plantain products are plantain flower, chips, beer and ethanol. The ripe one are sliced and fried in oil as "dodo".

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Over-ripe ones are both compacted and fried in oil as “dodo Ikire” or mixed with plantain flour to make “ekuru”, a delicious local dish.

Plantain serves as a source of income for small holders who produce it at the compound farms, mixed farms and small-scale sole plantain farms (Bayeri, 1996). In some parts of Nigeria, selling of roasted plantain, “boli” and fried whole fruits, “ogene” are both thriving businesses that provide job opportunities for thousands of young girls and women. Although, this kind of employment is somewhat part-time in nature, as a result of seasonality in supply.

Moreover, plantain is relished by livestock. The peels constitute valuable fodder for goats and sheep. When the peels and stalk holding the fruits are burnt, the resultant ash could be used alone or mixed with other ingredients to produce local soap popularly called black soap. Even the dry leaves are not left out as they are used in substantial quantities in the packaging and preservation of Kolanuts.

Nutritionally, plantain as a good source of carbohydrates is also rich in potassium and vitamins. Gastro-intestinal disorders like diarrhea can be treated with plantain (Ogazi, 1996). The fresh juice from plantain trunk, fruit stalk and leaves is a healing and soothing remedy to burns, it can also be used as an anti-bleeding on wounds (Ogbonna, 1999). The unripe fruits when roasted and eaten regularly aid sexual performance. All these attributes of the product offer it a high demand in the market.

### **Concept of Agricultural Marketing**

In subsistence economy, agricultural marketing may be of no significance since farmers only produce food for their household to eat leaving very little or nothing to sell. But as agriculture is moving into commercial production, agricultural marketing becomes very important (Adegeye and Dittoh, 1985). Marketing of agricultural products begins at the farm level when the farmer plans his production to meet specific demands and market prospects. Agricultural marketing includes all activities that are involved in transforming, storing and transporting agricultural products from the producers to the consumers, either foreign or domestic. It also involves the supply of raw materials to processing industries and marketing of processed products including assessment of demand and policies related to agricultural marketing.

Agricultural marketing brings the grower and consumer together with the aim of facilitating performance of agricultural exchange activities. Along the line of ensuring effective performance of exchange functions, agricultural marketing play the role of increasing food production, provision of rural infrastructures and stimulation of research into techniques of food preservation and processing. In addition, it contributes to the gross domestic products (GDP). In Nigeria, approximately 35% Of the GDP comes from agricultural pursuits (Uzomah, 2000).

An efficient food marketing system will make important contribution to economic development in Nigeria not only because it will increase the amount available for consumption but also because it will induce related sector to develop. Inefficiency in food marketing system will affect both production and consumption (Adekanye, 1988).

### **Agencies Involved in Plantain Marketing and Their Functions**

Marketing agencies carry out marketing functions or offer marketing services (Abott and Makehan, 1990), Adegeye and Dittoh (1985), also posited that plantain marketing agencies may be individuals acting independently or they may be in partnership, large firms, cooperatives or government corporations. Any one of these economic units may also act in several capacities at the same time.

Marketing functions are the activities performed by a marketing system in relation to the characteristics of the commodity like seasonality of production, bulkiness; perish ability, small quantities of production on small farms and non-consumable nature of some commodities in raw form. These marketing functions can be grouped under exchange, physical and facilitating functions.

Exchange Functions: - This involves activities that are concerned with transfer of ownership in the marketing system. Exchange function takes place throughout the process of commodity supply and sellers offering goods at the price they think they can attain (Crawler and Hensen, 1979).

Physical Functions: - These functions include grading, sorting, packaging, processing, transporting and storage. A perishable product will require more careful physical handling both during transportation and storage to prevent spoilage, hence special kinds of storage facilities and transporting vehicles may be used. Vehicles used for plantain transportation in Nigeria include trucks, the top of buses, motorcycles and bicycles (Ferris, 1997). According to Janik (1979), bruising and decay must be considered when carrying out these functions because of their adverse pathological and physiological effects (including increased respiration and discoloration). In the bid to check deterioration, processing into other forms is employed. This is because the greater the damage done to the products, the lesser their market value and consequently the lower the profit margin.

Facilitating Functions: - These refer to functions such as standardization, financing, risk bearing and market information. These functions facilitate smooth performance of marketing activities and hold down the costs of exchange and physical functions.

### **Objectives of The Study**

The general objective of this study is to analyze the

operational efficiency of plantain marketing in Odigbo local government area of Ondo State. The specific objectives are to:

- (i) Examine the socio-economic characteristics of plantain marketers in the study area.
- (ii) Identify plantain marketing channels.
- (iii) Estimate cost and returns of plantain marketing.
- (iv) Identify problems hindering plantain marketing in the study area.

## **METHODOLOGY**

### **Area of Study**

This study was carried out in Odigbo Local Government Area of Ondo State. The local government area has a land mass of about 870square kilometers and has about 150 towns and villages. The local government area fall within the rain forest region with abundant rainfall and sunshine, thus favouring agricultural practice. Many people in this area engage in farming as their sole occupation. The people are also engaged in commercial and administrative occupations, especially in the area headquarters and major towns.

### **Sampling Technique**

A two stage sampling technique was used in selecting the respondents. The first stage was a purpose sampling of five towns/communities from the local government area based on the presence of large number of plantain marketers in each of them. They include Ore (headquarters), Odigbo, Omifon, Asewele and Lasia. The second stage was the random selection of fifteen marketers from each of the five (5) markets making a total of seventy five (75) respondents for the study.

### **Method of Data Collection**

Seventy five copies of schedule interview were used to obtain data for this study. Scheduled interview was used so as to forestall misinterpretation of question by the lowly educated respondents as well as to collect additional information. Two trained enumerators who had knowledge about the local market were engaged to assist in the data collection.

### **Data Analysis**

The data collected was analyzed using descriptive statistical techniques which consist of tables, frequency

and percentages. Gross margin analysis was also used to determine the profitability of plantain marketing in the study area. The total revenue (TR) less the total variable cost (TVC) gives the gross margin (GM) of the marketers. I.e.  $GM = TR - TVC$

## **RESULTS AND DISCUSSION**

The result from Table 1 reveals that 84% of the respondents were female. This finding exactly tallies with the result of Aregbesola (2001) and also support the report of Mayokun and Fisayo (2010) in which he estimated that 80% of all trades in food stuff in Nigeria is carried out by rural women. The result also reveals that respondent whose age range between 26-35years have the highest percentage (48%) followed by age range of 36-45years (25.3%). This is an indication that people whose age range between 26-45years are more involved in plantain marketing in the study area. This may imply that people of this age range are likely to be more energetic and willing to take risks involved in plantain marketing.

The result further reveals that 86.7% of the respondents are married with their husband/wives still alive. This implies that plantain marketing is a reliable source of income for the upkeep of the family. According to level of education attained by the respondents, the result reveals that a greater percentage (64%) have post primary education. This finding contrasts with Aregbesola (2001), in which he estimated that most respondents had no formal education. The implication of this could be that plantain marketing is taking care of unemployment as more educated people are getting involved in the business. The household size of the respondents shows that the highest range was between 1-4 persons (56%) and the least was 8persons and above (6.7%). The result shows that the trend of having large family size which serves as a source of labour is fast disappearing and this is assumed to be due to adverse economic situation in the country.

The result from table 2 reveals that 64% of the respondents combine other agricultural products with plantain marketing. This is a clear case of diversification of enterprise probably as a result of irregularity in plantain supply. Marketing experience of above 10years (41.3%) has the highest percentage closely followed by 6-10years of experience (40%). This implies that plantain marketing is stable, sustainable and dependable since people stayed for long period of years in the business. Plantain marketing channels shows that 85.3% of respondents are wholesalers. This could be an indication that plantain enjoys high demand. Most of the respondents (88%) get their plantain supply directly from the farmers. This could mean that the marketers are sensitive to profit maximization .The result also reveals that 93.3% of respondents do not get their supply regularly throughout the year. The implication of this is that most of the

**Table 1.** Demographic Characteristics of the Respondents

Variables	Frequency	Percentage
<b>Gender</b>		
Male	12	16.0
Female	63	84.0
<b>Age (years)</b>		
≤ 25	6	8.0
26–35	36	48.0
36–45	19	25.3
46–55	12	16.0
> 55	2	2.7
<b>Marital Status</b>		
Single	6	8.0
Married	65	86.7
Divorced	1	1.3
Widowed	3	4.0
<b>Level of Education</b>		
No Formal Education	2	2.7
Primary	18	24.0
Secondary	48	64.0
Tertiary	7	9.3
<b>Household Size</b>		
1 – 4	42	56.0
5 – 8	28	37.3
> 8	5	6.7

Source: Field Survey 2012

**Table 2.** Plantain Enterprise

Variables	Frequency	Percentage
<b>Major Occupation</b>		
Selling Plantain only	21	28.0
Selling Plantain with other Agric. Products	48	64.0
Farming	6	8.0
<b>Plantain Marketing Experience</b>		
1 – 5	14	18.7
6–10	30	40.0
> 10	31	41.3
<b>Plantain Marketing Channels</b>		
Wholesaler	64	85.3
Retailer	9	12.0
Farm gate collector	2	2.7
<b>Source of Plantain Supply</b>		
Directly from farmers	66	88.0
From wholesalers	7	9.3
From Retailers	2	2.7
<b>Supply rate of Plantain</b>		
Regular	5	6.7
Irregular	70	93.3

**Table2.** Continue

Point of Sale		
Home market	17	22.7
Urban market	46	61.3
Home and Urban market	12	16.0
Sources of Finance		
Private money lender	2	2.7
Esusu/Ajo	7	9.3
Bank	1	1.3
Friends and Relatives	3	4.0
Personal savings	60	80.0
Cooperatives societies	2	2.7
Forms in which Plantain is Sold		
Ripe	1	1.3
Unripe	63	84.0
Both	11	14.7
Plantain Processing		
Yes	6	8.0
No	69	92.0
Membership of Plantain Marketers Association		
Yes	70	93.3
No	5	6.7

Source: Field Survey, 2012

**Table 3.** Average variable Cost per dozen of plantain bunches

	Amount in naira (₦)
Cost of purchase	3,874.50
Transport cost	320.00
Other cost	60.00
Total	4,254.50

Source: Field Survey, 2012

**Table 4.** Average total revenue per dozen of plantain bunches

Quantity	Selling Price per Bunch (₦)	Total Revenue (₦)
Q	P	Q × P
12	580.20	6,962.40

Source: Field Survey, 2012.

marketers will tend toward marketing of other agricultural products during the period of scarcity.

Majority of the respondents (61.3%) sell plantain purchased in urban markets. This implies that plantain is highly demanded in the urban centers. The sources of finance of the respondents shows that 80% get their investment capital from personal savings probably because plantain marketing requires less take-off capital. Also, this might implies inaccessibility to credit facility from banks or

as a result of high interest rate charged by private money lenders. Most of the respondents (84%) sell their plantain fruits unripe. This is to forestall spoilage before it gets to the final consumer since plantain has short storage life. Plantain fruit has an average market life of 1-10days (Ferris, 1997). Majority of the respondents (92%) do not process their supplies. This might be as a result of plantain fruit acceptability in raw form. Also 93.3%of the respondents belong to plantain marketers associations.

None of these associations act as a cooperative society. This might imply that the respondents have no full knowledge about the benefits of a cooperative society.

#### Profitability of Plantain Marketing

Table 3 shows that the average variable cost per dozen of plantain bunches is ₦4,254.50 and table 4 also shows that the average total revenue per dozen of plantain bunches is ₦6,962.40. The Gross Margin is ₦2,707.90. It can be deduce from the above result that plantain marketing is a profitable venture. This is in conformity with the finding of Oluwatomiwa (2008), that plantain marketing is a profitable venture.

### CONCLUSION

Plantain marketing in the study area can be said to be inefficient as a result of erratic supply of plantain fruits, lack of storage facilities, lack of adequate fund, lack of standard measure and poor road network. However, the business is still profitable.

### RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

- (i) Roads linking the rural communities where plantain is being produced should be made more motor-able to enhance prompt movement of goods from the farms to the market.
- (ii) Loan should be given to plantain marketers by credit institutions to facilitate effective plantain marketing.
- (iii) Plantain marketers should be influenced to form cooperative societies so that some of their problems can be solved by themselves.
- (iv) Special vehicle that will reduce quantitative and qualitative losses should be made available to marketers by the government. This will help to reduce post harvest losses, deterioration in quality and transportation problems facing marketers in the study area.
- (v) Programmes that will improve plantain marketing should be organized for the marketers by relevant government or non-government agencies. The programme should involve marketing strategies, proper recording and fund generation.

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