An Analysis Of The Economy Of Pineapple Marketing Among Rubber- Based Farmers

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Abstract: The study investigated the economy of pineapple fruit marketing in Edo State. A structural questionnaire was used to solicit information from sixty (60) randomly selected pineapple fruits marketers from the study area. The data were analyzed using descriptive statistics. The findings revealed that 93% of the respondents were below 60 years with an average of 42 years, 82% educated and 87% had less than 20 years experience fruit marketing. The study further revealed that the respondents had a total ₦ 130,000 as marketing cost per annum and generated a total revenue of ₦ 2,260,000 per annum. The Gross Margin per respondent was ₦ 35,500.00, while the marketing efficiency ratio (MER) and the profitability ratio (PR) were 1.06 and 9.83 respectively. This implies that pineapple fruit marketing in the study area was profitable and efficient. Based on the major constraints (insufficient credit and fruits spoilage) facing the respondents in the pineapple fruit marketing business, the study recommended that they should organize themselves into registered cooperative societies for self financial support and to be able to have easy access to financial institutions and government and other credit agencies. The marketers should endeavor to provide adequate storage and processing facilities as well as power supply alternative sources to avoid deterioration of the pineapple fruits in order to increase their returns on capital invested.

Key Words: Intercrop, Gross Margin, Marketing Efficiency, Pineapple.

Introduction

Agriculture, contrary to popular belief is still the main stay of Nigerian economy, contributing about 35 percent to the GDP. It offers employment to almost 70 – 75 percent of the working population of the country. It provides the main source of the food and raw materials for both domestic use and exports (Osinowo, 2012). A major economic problem in Nigeria is the provision of food. This is as a result of population growth, poverty spread and predominant use of the traditional fallow system with shortened periods leading to declining agriculture productivity. (Adinya, 2010). United Nations Development UNDP, (1999) revealed that the development of agriculture in Nigeria is not meeting the demand of its teeming population despite the country's endowment with abundant and diversified range of natural, human and capital resources and oil revenue.

Rubber is a tree latex producing plant with about 5 – 7 years gestation period. This posses some challenges to the rubber farmers who invest some huge amount of money and have to wait for this long period to start reaping from their investment. This prompted scientists to develop the rubber – arable crops intercropping. Pineapple (*Ananus cosmosus*) is one of the suitable fruit crops that can be intercropped with rubber. Pineapple is also among the major agricultural produce with a lot of nutritional benefit produced in Nigeria (Bartholowen, *et al*, 2011).

Pineapple is the third most important tropical fruit in the world after banana and citrus (Mark, 2010).

Nigeria ranked 6th among the list for world pineapple production with nearly 800,000 tonnes produced annually (Oladapo, *et al,* 2007; Manufacturing Today, 2011). Pineapple has a lot of nutritional value; its content makes it a good raw material in confectionaries for making sweet fruit drinks and pineapple juice immunes' one against fever parasite. Pineapple as an economic crop encourages potential for foreign exchange earnings. It can increase national income through expansion of local industries and higher income for farmer involved in its production and marketing. However, in order to facilitate agricultural development process, appraisal of marketing margin pricing efficiency of foodstuff is considered very pertinent and, it is expected that favorable efficiency will stimulate more of the products concerned to be produced (Adekanye, 1988). Over the years, food storages coupled with high price in Nigeria have indicated that domestic output has not been able to provide most Nigerians food at affordable price (Scaborough, V and j. Kydd,1992).

The link between the producers and the consumers of any goods is the market. Marketing therefore plays a central role in development processes. However, the marketing system of Nigeria's food and staple failed to address price stability from time to time due to information asymmetry study on agricultural marketing have been

conducted on fruits particularly pineapple (Spore Magazine, 2008; Adesope *et al*, 2009). The study therefore wishes to evaluate pineapple marketing intercropped with rubber in Ikpoba-Okha Local Government Area of Edo State.

Methodology

The Study Area: The study area was carried out in Ikpoba Okha Local Government Area (L.G.A) of Edo State. The Local Government shares boundary with Uhumwoda, Ego and Orhionwon Local Government area. It has an Area of 862 Km^2 and a population density of 371,106 (NPC, 2006). The maximum temperature range between 28^0 and 32^0C and minimum 11^0 and 23^0C. The study area cover different markets, namely Ogbeson Market, Ekosa Market, Uhile Market, Obayantor Market, Umelu Market and Idogbo Market all in Benin City. All these markets engage in buying and selling of different agricultural produce such as yam, garri, Okra, Pineapple, pepper, maize, coconut, Tomatoes, Rice e.t.c. The 6 identified market where the meeting points for both wholesalers and retailers pineapple fruit.

Sampling Procedure and Sample Size: A purposive random sampling technique was used for the study. Six (6) markets were randomly selected and 10 pineapple marketers were also randomly picked from the selected markets. This brings the sample size to be 60 pineapple marketers.

Method of Data Collection: Primary data were used for study. A well – structured questionnaire supplemented with oral interview were being used to elicit information from the respondents on the socio-economic characteristics of pineapple marketers, the marketing channels, cost and returns associated with pineapple marketing and constrains to efficient marketing of the pineapple.

Method of Data Analysis: Data collected, was analyzed by using descriptive statistics such as percentage, frequency distribution tables, mean, marketing efficiency and marketing margins.

Analytical Models Used

Marketing Margin: Marketing margin was used to determine the marketing of pineapple fruit. Marketing margin is the percentage final weighted average selling price taken by each stage of the marketing chain. The margin cover the cost involved in transferring produce from one stage to the next and provide a reasonable return during the marketing.
Marketing Margin = (Selling Price - Purchase Price X 100)/ Selling Price   1

Marketing Efficiency and Performance: Proposed measurement of the market performance, efficiency ratio, profitability ratio and operational efficiency are specified as follows:
Efficiency Ratio (ER) = TR/TVC   2
Profitable Ratio (PR) = TR/TC   3
The rule of thumb states that if ER >1 and PR >1, then the market evaluation is operationally efficient and vice-versa.

Results And Discussion
Age of Respondents
Table 1 shows that approximately 93% of the respondents were below 60 years with an average of 42 years. This implies that the marketers would be able to engage in various income generating activities including pineapple fruits marketing to improve their livelihoods.

Table 1: Distribution of Respondents According to Age

Age (years)	Frequency	Percentage (%)
Less than 30	8	13.4
30-39	16	26.4
40-49	21	35.2
50-59	11	18.4
60 and above	4	6.6
Total	60	100

Mean: 41.63 years; Standard Deviation:11.87 years
Source: computed from field survey Data, 2016

Table 2 reveals that approximately 82% of the respondents had one form of education or the other with secondary education being the modal group with 50%. This implies that their educational attainment should be able to help them carry out their marketing activities efficiently.

Table 2: Distribution of Respondents According to Level of Education

Level of Education	Frequency	Percentage (%)
No formal Education	11	18.3
Primary Education	10	16.3
Secondary Education	30	50.0
Tertiary Education	3	5.0
Adult Education	6	10.0
Total	60	100.00

 Source: computed from field survey Data, 2016

Table 3 indicates that about 67% of the respondents were full time traders. This may imply that the respondents in the study area probably engaged in the marketing of various agricultural produce including pineapple.

Table 3: Distribution of Respondents According to Primary Occupation

Major Occupation	Frequency	Percentage (%)
Farming	13	21.7
Trading	40	66.7
Civil Servant	3	5.0
Student	4	6.6
Total	60	100.00

 Source: computed from field survey Data, 2016

The result in Table 4 indicates that approximately 87% of the respondents had less than 20 years marketing experience with only 13% having above 20 years. The average marketing experience was 9 years. This implies that pineapple marketers in the study area have been in the marketing business for many years, hence would possibly be able to handle risks associated with the enterprise to maximize their profit.

Table 4: Distribution of Respondents According to Marketing Experience

Family Size	Frequency	Percentage (%)
Less than 10	36	63.3
10 - 19	14	23.5
20 and above	10	13.2
Total	60	100

Source: computed from field survey Data, 2016; **Mean**: 9.38 years; **SD**: 7.16 years

Table 5 shows that 78% of the respondents generates less than N60,000.00 monthly with an average of N 37,793.00. This implies that the pineapple fruits marketers in the study area generate enough income to take care of the marketing cost, sustain the family and save small amount for future investment into the business.

Table 5: Distribution of Respondents According to Monthly Income from sales of Pineapple

Monthly Income (Naira)	Frequency	Percentage (%)
Less than 20,000.00	16	26.7
20,000.00 – 39,000.00	16	26.7
40,000.00 – 59,000.00	15	25.0
60,000.00 and above	1 3	21.6
Total	60	100.00

Mean: 37,793.00; SD: N27, 254.33
Source: computed from field survey Data, 2016

Table 6 reveals that majority 55% of the respondents sold pineapple based on their size. This may imply that is more acceptable way of selling, to the pineapple marketers in the study area.

Table 6: Distribution of Respondents Based on what Determines their Selling Price (Selling Method)

Selling Method	frequency	Percentage (%)
Pineapple Size	33	55.0
Counting	22	36.7
weighing	5	8.3
Total	**60**	**100.0**

Source: computed from field survey, 2016

The result in the Table 7 shows that approximately 47% of the respondents sells their pineapple fruits to the final consumer while about (42%) sold to the Retailers. This implies that majority of the pineapple fruit marketers in the study area are retailers.

Table 7: Distribution of Respondents According to Category of Buyer.

Category of Buyer	Frequency	Percentage (%)
Fruit Processing Industries	4	6.6
Other Wholesaler	3	5.0
Retailer	25	41.7
Final Consumer	28	46.7
Total	**60**	**100.0**

Source: Computed from field survey, 2016

Table 8 shows that all (100%) the respondents had one problem or the other specifically, 43% encountered high rate of spoilage about 32% had insufficient capital, to finance their business. This may imply that high rate of spoilage and insufficient capital were the major impediments to pineapple fruits marketing in the study area.

Table 8: Distribution of Respondents Based on Marketing Constraints

Constraints	Frequency	Percentage (%)
Insufficient Demand	19	15.0
Insufficient Capital	19	31.7
High cost of Transportation	4	6.7
High Rate of Spoilage	26	43.3
Insufficient Supply	2	3.3
Total	**60**	**100.0**

Source: Computed from field Survey, 2016

Table 9: Gross Margin Analysis

Variables	Values (₦)
TC	230,000.00
TR	2,260,000.00
TVC	130,000.00
$\pi/year$	2,030,000.00
$\pi/respondent$	33,833.333
GM/Year	2,130,000.00
GM/respondent	35,500.00
Measure of Market Performance	
Efficiency Ratio = 1.06	
Profitability Ratio = 9.83	

Source: Computed from field Survey, 2016

The result of the Gross Margin analysis indicated that a total profit of ₦2,030,000.00 was realized in the marketing of pineapple among the respondents per annum. The total revenue generated annually was ₦2,260,000 while the cost of operation was ₦ 130,000 per annum. The result also revealed that the profit and gross margin per respondents were ₦ 33, 833.33 and ₦ 35,500 respectively. The size and positive values of

marketing pineapple fruit obtained confirmed that pineapple marketers in the study area were able to generate enough income to take care of the cost and to increase their scale of business, hence is a profitable venture.

The estimated efficiency ratio for pineapple marketing operation was 1,06 which is greater than 1 (efficiency ratio>1). It implies that marketing operation is efficient in the study area. The profitability ratio also shows 9.83, was positive; implying that the pineapple marketing operation among the respondents was profitable in the study area.

Summary And Conclusion

The study was carried out to analyze the economy of pineapple fruit marketing in Edo State. Primary data was used for the study and structural questionnaire was administered on sixty (60) randomly selected pineapple fruits marketers from the study area. The data were analyzed using descriptive statistics, marketing margin and marketing performance models..

The findings revealed that 93% of the respondents were below 60 years with an average of 42 years. The finding also showed that 82% were educated and 87% had less than 20 years experience fruit marketing with average of 9 years.6. The finding further revealed that the respondents had a total ₦ 130,000 as marketing cost per annum and generated a total of ₦ 2,260,000 per annum. The Gross Margin per respondent was ₦ 35,500.00, while the marketing efficiency ratio (ER) and the profitability ratio (PR) were 1.06 and 9.83 respectively. This implies that pineapple fruit marketing in the study area profitable. Findings also showed that pineapple fruits marketing were in the hand of middle aged people who were educated with considerable strength to pursue their marketing activities efficiency.

Recommendations

Although the study revealed that there was efficiency in the pineapple fruit marketing among the respondents, to minimize the effects of their major constraints, the following recommendations are made to improve the pineapple fruit marketing venture;

(i) Pineapple fruits marketers should organize themselves into registered cooperative societies for self financial support and to be able to have access financial institutions and government credit agencies.

(ii) The marketers should try to provide adequate storage and processing facilities as well as power

supply alternative sources to avoid deterioration of the pineapple fruits thereby increasing their returns on the capital invested.

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