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Price Determinant of Kolanut in Selected Markets in Ibadan, Oyo State, Nigeria

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Abstract— *The study was carried out to examine the price determinants of Kolanuts in selected markets in Ibadan, Oyo State. Eighty(80) Kolanuts sellers were randomly selected from four(4) urban Local Government Areas in Ibadan where four(4) Kolanut markets center were also visited. The data collected were subjected to descriptive statistics, Gross Margin and multiple Regression analysis. The results indicated that majority (97%) of Kolanut sellers in the study area were females. It was observed that (48%) of the respondents belong to the age bracket of 41-50years while (66.3%) of the respondents had primary and secondary education. Gross margin analysis showed that seven hundred and twenty three thousand, three hundred and fifty naira (₦723, 350.00) was realized as profit margin after the total variable cost(TVC) of two hundred and three thousand, four hundred and fifty naira(₦203,450.00) have been deducted as cost obtained. The results of multiple regression shows that the R^2 (0.67) is high and that E-statistics further explained the ability of the independent variables in explaining the variations in the dependent variable. It was found out that slight changes in any of the explanatory variable will result in downward / upward movement in the market price of kolanut in the study area. It is imperative that more research should be carried out for more varieties of kolanut which could enhance more demand and marketing.*

Keywords— ***Kolanut, market, performance, price, gross margin.***

I. INTRODUCTION

Kolanut is one of the most popular plantation crops in Nigeria. It is widely cultivated in many tropical countries such as Central and South America, Ivory Coast, Brazil and Nigeria. It is mostly cultivated in South Western Nigeria in some states like Ogun, Ondo, Ekiti, Osun and Oyo States. Also, kola plays an important role in the socio -economic life of rural households and the community at large. It serves as raw materials for clothing and textile industries as well as pharmacological industries(Badaru et al, 2006. Marketing of kolanut is done by the producers who sell at the farm gate or village site to either the wholesalers in rural and urban areas or directly to the retailers who are mostly women. These women process the kolanuts from the pods before selling to the consumers (FAO, 2005). It was noted by Eusebus (2004) that kolanut farmers are located in remote areas with poor marketing information and market infrastructure. The marketing information required by these marketers include policies which influence prices, how to store kolanut, insecticides used during storage, marketing outlets, handling of kolanut, etc. These marketing information will help to reduce the risk involved in marketing of kolanut. Usually, the marketing of kolanuts has its fixed days in the South Western part of Nigeria where kolanuts is mainly produced. Big merchants from the Northern part of the country come with their vehicles, (trailers and big lorries) to buy kolanuts from the secondary buyers/middle men who buy directly from farmers (Sanusi and Ndubuaku, 2001). Specifically, it (i)examine the determinant price of Kolanut in the study area, (ii) determined the profitability of kolanut marketing and(iii) identify the constraints and possible solution to kolanut marketing in the study area.

II. METHODOLOGY

The study was carried out in some selected Local Government Areas Ibadan, Oyo State. Ibadan is the capital of Oyo State in south-western Nigeria. Oyo State is bounded in the north by Kwara State, in the east by Osun State, in the south by Ogun State and in the west partly by Ogun State and partly by the republic of Benin. Oyo State covers approximately an area of 28,454 square kilometers and is ranked 14th by size. The landscape consists of old hard rocks and dome shaped hills, which rise gently from

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about 500 meters in the southern part and reaching a height of about 1,219 meter above sea level in the northern part. Some principal rivers such as Ogun, Oba, Oyan, Otin, Ofiki, Sasa, Oni, Erinle and Osun River originate in this highland.

The climate is equatorial, notably with dry and wet seasons with relatively high humidity. The dry season lasts from November to march while the wet season starts from April and ends in October. Average daily temperature ranges between 25^0C (77.0^0F) and 35^0C(95.0^0F), almost throughout the year (Akande,2015). The study employed multistage sampling technique. The first stage involves purposive selection of four (4) local governments in Ibadan city(Ibadan North, Ibadan South East, Ibadan South West and Ibadan North West) Local Government Areas out of 11 Local Government Areas. The second stage involved purposive selection of Bodija market in Ibadan North, Ojaoba market in Ibadan South East, Dugbe market in Ibadan South West, and Sabo market in Ibadan South East from each of the four Local Government Areas chosen for the study respectively due to more dominance of the Kolanut marketers in these markets making a total of four (4) markets that was used for the study. The last stage involved random selection of forty (40) kolanut marketers from Oja-oba market, thirty (30) kolanut marketers from Bodija market, five (5) kolanut maketers from Dugbe market and five (5) kolanut marketers from Sabo market making a total of eighty(80) respondents that used for the study.

The data for the study was collected using structured questionnaire. Multiple regression was used to examined the determinants of price of Kolanut in the study area. The model specification is as follows:

$Y = f(x_1, x_2, x_3, x_4, et)$ (1) implicit form

$Y = a_o x_o + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_4 \ldots\ldots\ldots et$ (2) explicit form where

Y = Prices of Kolanut marketed in the study area (₦)

X_1= Season (dummy, 1= glut period, 2= scarce period)

X_2= Quality (dummy, graded kolanut = 2, ungraded kolanut = 1)

X_3= Size (dummy, big=3, medium=2, small=1)

X_4= Species (dummy)

The gross margin and marketing analysis as adopted by Anamayi *et al*.,(2004) was used to measured the profitability of Kolanut marketing. The market performance of any particular product is usually determined by taking method of storage, transportation, quality into consideration. Gross margin analysis is to estimate the profitability of Kolanut marketing as represented below.

GM = TR- TVC

Where GM = Gross margin in Naira

TR = Total Revenue in Naira

TVC = Total Variable Cost in Naira

III. RESULTS AND DISCUSSION

Table 1 shows the regression estimates of the factors in price determinants of kolanut in the study area. The value 0.67 of coefficient of determination (R^2) shows that the independent variables explain 67 % of the variation in the dependent variable. The model has 67% power of explanation of the relationship between the dependent and independent variables. The t-value has sign of three of the independent variables were positive, which implies that any slight change in any of these variables would results in upward movement in the market price of the commodity.

Table 2 reveals that the total variable cost was ₦203,450 and total revenue was ₦ ₦926, 800. The total revenue that accrued to individual kolanuts marketers during the survey month was calculated by multiplying their respective quantity of kolanuts sold per week in kg with the price per unit. The quantity of kolanut sold was N1,318 on average and mean selling price was ₦700.00 per one Kolanut. Gross margin measure the level of profit generated from a business after all expenses are deducted. The result from the analysis revealed that the business is profitable. At the end of every month each retailer goes home with a minimum average of ₦9, 041, 87

Table 3 shows the constraints associated with kolanut marketing and it revealed that; most (97.5%) of the respondents agreed that seasonality of the product, high cost of transportation, low demand and climatic problems are constraints associated with kolanut marketing. 90.0% of them chose price fluctuation as constraints of kolanut marketing, 86.3% of them also chose insufficient capital and deforestation as constraints of kolanut marketing; this implies that seasonality of the product, high cost of transportation, low demand and climatic problems are the most severe constraints associated with kolanut marketing while price fluctuation, insufficient capital and deforestation are severe but not too severe constraints associated with kolanut marketing.

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IV. CONCLUSSION AND RECOMMENDATION

The result from the analysis revealed that the business is profitable. At the end of every month each retailer goes home with a minimum average of ₦9, 041,87. The value 0.67 of coefficient of determination (R^2) shows that the independent variables explain 67 % of the variation in the dependent variable. There is need for research institute to put more effort or work on improved varieties with big sizes so that marketers will go into the business of kolanuts since the study shows that size is the major determinant of kolanut.

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Table 1: Multiple regression on the factors of price determinants of kolanut.

Variables	Coefficient	t-value	p-value	Decision
Species	-0.125	-.127		Not significant
Colour	0.500	0.117		Not significant
Size	0.020	0.020		Not significant
Quality	0.122	0.094		Not significant
R^2	0.67			
Adjusted R^2	0.004			
F-value	0.919			
Constant	0.607	0.581	0.563	Not significant

Source: Field Survey, 2018

Table 2: Profitability analysis of marketing kolanuts per month for 80 traders

Materials	Cost
Total revenue	926,800
Variable cost (VC)	
Cost of purchase	119,600
Cost of storage	35,550
Transportation cost	48,300
Total variable cost (TVC)	203,450
Gross margin (GM = TR-TVC)	723,350

Source: Field Survey, 2018

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Table 3: Constraints associated with kolanut marketing

Constraints	Yes	No
Seasonality of the product	78 (97.5)	2 (2.5)
Insufficient capital	69 (86.3)	11 (13.8)
High cost of transportation	78 (97.5)	2 (2.5)
Poor storage facilities	28 (35.0)	52 (65.0)
Price fluctuation	72 (90.0)	8 (10.0)
Deforestation	69 (86.3)	11 (13.8)
Low demand	78 (97.5)	2 (2.5)
Climatic problem	78 (97.5)	2 (2.5)
Possible solutions to the problem		
No suggestion	76 (95.0)	4 (5.0)
Government should give out loan	1 (1.3)	79 (98.8)
Enlightening People	1 (1.3)	79 (98.8)
Capital for business	1 (1.3)	79 (98.8)

Source: Field Survey, 2018

All figures in parentheses are in percentage