MARKETING OF MAIZE AMONG FARMING HOUSEHOLDS IN AGRICULTURAL DEVELOPMENT PROGRAMME ZONE C, KWARA STATE

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ABSTRACT

This study analyzed marketing of maize among farming households in Agricultural Development Programme Zone C, Kwara State, Nigeria. Multistage sampling techniques were used for sampling of respondents. A total number of 150 respondents were interviewed with structured questionnaire. Data collected were analyzed using descriptive statistics market margin analysis and independent two-sample *t*-test. Most of the respondent (83.3%) use bargaining method to fix price for maize. About 90% of the respondents sell maize at the market square. Eighty percent indicated that pest invasion reduced the market value of their produce (maize). The marketing margin of an average maize marketer in the study area was 16.67%. Government should therefore support increase in demand of maize by enhancing the expansion and growth of agro-allied industries and reduce export duty on exportation of maize.

Keywords: Market margin, market structure and retailer.

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Introducton

The potential contribution of agricultural marketing towards improved rural incomes in developing countries has been a source of concern to both businessmen and researchers (Oladapo *et al*., 2007). A distributive system that guarantees favourable prices facilitates the exchange of commodities for additional earnings improves the margin. Agricultural marketing assumes greater importance in the Nigeria economy because the excess production from the farm must be disposed off in order to earn some income with which farmers can purchase their goods and services not produced by them (Adekanye, 1988).

Objectives of the study:

- examine the market structure of maize marketing in the study area;

- analyze the distribution channels of agricultural produce marketing in the study area;

- identify the constraints to agricultural produce marketing in the study area; and

- determine the marketing margin of maize marketing in the study area

Hypothesis testing**:**

$H_{o1:}$ There is no significant difference between farm price and retail price of maize

Theoretical　　　　and　　　　Conceptual　　　　Framework

The portion of the consumer's food expenditure that goes to food marketing is referred to as the marketing margin. It is in a sense the price of all utility adding activities and functions performed by the food marketing system. Relatively, few studies have addressed the micro-economic behaviour of market participants, such as individual traders or forms (Brycesson, 1993; Barret, 1997; Madhin-Gabre, 1991; Fafchamps and Minten, 1999). These studies highlight the importance of transaction costs facing individual traders, the role of intermediaries and of relationships. This study will in addition link trader characteristics and market behaviour with standards of market performance.

In market literature, researchers have questioned the reason for low margin accrued to marketers and they identified market imperfection and not competitive practices as factors

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contributing to low returns from marketing (Okereke, 1988). Okunmadewa (1990) asserted that an efficient marketing system is a stimulant to the development of nation's economy. Fafchamps and Minten (2001), stressed the importance of transaction cost for the reduction of marketing cost. They noted that, food markets are operating in a weak institutional environment where institutions are deficient and the small scale nature of most of the transactions further constrain the effectiveness of existing formal institutions. Fafchamps and Madhin-Gabre (2001) showed that transportation costs forms a large share of total marketing costs. Onu (2000) discovered marketing imperfections with respect to cotton marketing in Nigeria. He found a high marketing margin and confirmed that the performance of the markets exhibits pricing inefficient and high degree of independence.

Methodology

This study was carried out in Agricultural Development Programme (ADP) zone C of Kwara State, Nigeria. Kwara State comprises of ADP zones; A, B, C, and D's. Kwara State lies within the north central geopolitical zone of Nigeria. It has a land area of about 34,467,536 square kilometers (NPC, 2006). According to the 2006 National Population Census figure, Kwara State has a total population of 2,365,353. This is made up of 1,193,783 males and 1,171,570 females. Majority of the people are involved in small scale farming. The State is bounded in the North by Niger State, in the South by Osun and Ondo States, in the East by Kogi State and in the West by Oyo State. Kwara State shares an international boundary with the Republic of Benin (Taiwo, 2005). Kwara State is located between latitudes $7^0$45'N and $9^0$30'N and longitudes $2^0$30'E and $6^0$35'E. The topography is mainly plain lands to slight gentle rolling. The annual rainfall ranges between 1000mm and 1500mm. Average temperature ranges between 30 and 35^0C (KWADP, 1996).

Population comprises of all the retail marketer of maize in Agricultural Development Programme Zone C, Kwara State, Nigeria. Multistage sampling techniques were used for sampling of respondents. The first stage was the purposive sampling of Kwara State. The second stage involved purposive sampling of Agricultural Development Programme (ADP) zone C out of the four zones in the State: which comprises of ADP Zones; A, B, C, and D's. The third stage was purposive sampling of one (1) Local Government Area from the Zone. The fourth stage was random selection of three villages in the Local Government Area. The fourth stage was the

purposive sampling of fifty (50) respondents in each of the villages. A total number of 150 respondents were interviewed.

Data collected were analyzed using both descriptive statistics and inferential statistics. Furthermore, t-test analysis will be used to test the null hypothesis. The analytical tools elucidation were as follows.

Descriptive Statistics:

Descriptive statistics such as frequency distribution and percentage were used.

Market margin:

The market margin or the farm-to-retail price spread is the difference between the farm value and the retail price. It represents payments for all assembling, processing, transporting, and retailing charges added to farm products. Marketing margin can be computed using the formula:

$$\frac{selling\ price - supply\ price}{selling\ price} \times 100$$

Where,

Selling price is the retail price at the consumer end

Supply price is the farm price at the producer end

This test is only used when both:

The two sample sizes (that is the number, n, of participants of each group) are equal;

It can be assumed that the two distributions have the same variance.

The t statistic to test whether the means are different can be calculated as follows:

$$t = \frac{Y_1 - Y_2}{F_{x1x2} \cdot \sqrt{\dfrac{2}{n}}}$$

Where

$$F_{x1x2} = \sqrt{\frac{1}{2}(F_{x1}^2 + F_{x2}^2)}$$

Here F_{x1x2} is the grand standard deviation (or pooled standard deviation),

1= group one, 2= group two. The denominator of *t* is the standard error of the difference between two means.

For significance testing, the degree of freedom for this test is $2n - 2$ where n is the number of participants in each group.

Results and Discussion

In Table 1, all the respondents (100%) agreed they experienced freedom of entry and exit in the marketing of maize in the study area. Non of the respondent did not agree that marketing information. This is an indication that that maize marketing could be embarked upon by any farmer and non-farmer who desire to engage in it. Thus, there were no monopoly in maize marketing. Most of the respondent (83.3%) use bargaining method to fix price for maize in the study area.

Table 1: Market structure of maize

Characteristics	Frequency	Percentage
Freedom of entry and exit		
Agree	150	100
Disagree	0	0

Free flow of market information		
Agree	150	100
Disagree	0	0
Price fixing		
Barganing	125	83.3
Current price	25	16.67

Field survey, 2013.

The result from Table 2 shows that, most of the respondents (86.67%) sell maize to the wholesalers. Most of the respondents (90%) sell at the market square. The farmers probably prefer selling their produce at the market square to increase their profitability.

Table 2: Distribution channels of maize marketing

Characteristics	Frequency	Percentage
Distributors		
Marketing agent	20	13.33
Wholesalers	130	86.67
Channels of sales		
Market square	135	90
Farm gate	15	10

Field survey, 2013.

In Table 3, most of the respondents (80%) indicated that pest invasion reduced the market value of their produce (maize), while 6.67% complained that high taxes affect their economic gain on their marketing of maize.

Table 3: Constraints to maize marketing

Characteristics	Frequency	Percentage
High taxes	10	6.67
Pest invasion	120	80.00
Others	20	13.33

Field survey, 2013.

Table 4 revealed the marketing margin of an average maize marketer in the study area; the result shows that the average farm price of maize was ₦ 256.67 while the retail price was ₦ 308. The marketing margin of an average maize marketer in the study area was 16.67%. This implies that 100% retail price paid by final consumer result in farm-to-retail price spread of 16.67%. Furthermore, an average maize marketer in the study area earns a market margin of ₦ 0.16 for every ₦ 1 retail price paid by the final consumer in the marketing process. This includes payment for all transporting, processing, assembling and retailing charges added to the farm products.

Table 4: Market margin of maize

Variable (₦)	Value of maize
Farm price (mean)	₦256.67
Retail price (mean)	₦308.00
Marketing margin	16.67%

 Field survey, 2013.

The hypotheses of the study were stated in the null forms and the corresponding analysis was stated in Table 5. The first hypothesis stated that, there is no significant difference between farm

price and retail price of maize was rejected because the difference of means of t-test statistics between them is significant at 1% level.

Table 5: Test of hypothesis

	Retail price	**Farm price**
Mean	₦308.00	₦256.67
Observations	150	150
Hypoythesized mean	-65.64	-37.02
Degree of freedom	1.000	1.000
t-statistics	-7.088***	-51.33***

*** 1% level of significance, ** 5% level of significance, * 10% level of significance

Source: Field survey, 2013.

Conclusions and Recommendations

All the respondents experienced free flow of marketing information. Both the government and non-governmental organizations should encourage dissemination of information that could aid in enhancing profitability of maize marketing. They should also, encourage the maize marketer on how to export maize. An appreciable number of the respondents sell maize at the market square. Therefore government should rehabilitate feeder roads to ease transportation of agricultural produce to the market square. The invasion of pest was the major constraint to economic viability of maize marketing. Therefore government subsidize the prices of pesticides, this will make it affordable to farmers. The market margin of maize indicate a profit of 16 kobo on farmers' investment of ₦1. Increase in demand will increase the price of a commodity. Therefore, government should support increase in demand of maize by enhancing the expansion and growth of agro-allied industries and reduce export duty on exportation of maize.

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