

RESEARCH ARTICLE



Socio-Economic Factors Influencing Broiler Marketing in Benin City Metropolis, Edo State, Nigeria

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Abstract

This study examined the socio-economic factors influencing broiler marketing in Benin City metropolis, Edo State, Nigeria. Purpose sampling of three major markets (Oba, Oliha and New Benin markets) in the study area was carried out. Twenty broiler marketers were randomly selected from each of three markets from the sampling frame, making a total of 60 marketers. Questionnaire were administered and scheduled interview conducted to collect all the relevant information from the respondents. Analytical techniques used were percentages, frequency counts, gross margin, profitability and multiple regression analysis. The results of the data analysis showed that majority (93%) of the broiler marketers were female. The average age of the respondents was 42 years and the mean number of schooling years of the respondents was 8 years. The mean marketing margin per week was ₦350 (\$2.17) while the mean gross margin per week was ₦5, 150 (\$32). However, the average net returns per week for the entire markets were ₦4, 600 (\$28.6). The result of the multiple regression analysis showed that the semi-log model gave the best fit with an adjusted R² of 0.857 (85.7%) and an F-ratio of 70.245. The age of broiler marketers, level of education and marketers income had positive coefficients. Thus, increase in these variables will increase the number of broilers handled per purchase. Major problems faced were loss of weight of broilers and mortality of broilers. Finance and processing were minor constraints faced by the marketer. The study recommended adequate feeding of broilers to maintain market weight, proper weighing of broiler chicken during sales, increase awareness about the need to purchase live broilers instead of frozen chicken and encouraging marketers into backward integration to increase profitability of the business. These recommendations would help to develop the poultry industry and increase marketing efficiency.

Keywords: Socio-economic, Broiler, Marketing, Benin City Edo State, Nigeria.

1. Introduction

Poultry is the most commonly reared livestock and over 70% of those who rear them keep mostly chicken [2]. The poultry industry in Nigeria has evolved from subsistence farming to commercial farming over the past decade. Poultry farming is now a huge business that is divided into hatcheries, broiler farms for meat production and pullet farms for egg production. Livestock output growth remained at 6.4 per cent in 2011, as in 2010. Analysis of the sub-sector however showed that poultry and beef production increased by 5.2 and 8.7 per cent, respectively, when compared with their levels in 2010. The growth in the sub-sector was propelled by the support provided by government to expand the livestock value-chain, including the continued utilization of modern abattoirs, and sanitary sales outlets established across the country. Other factors were improved control of livestock diseases, and increased investment in poultry farming [3]). It is no surprise why the broiler business is booming and has

increased income and profits for those that are in the business.

Authors [7] and [8] defined marketing as the performance of business activities that direct the flow of goods and services from producers to consumers in order to satisfy customers and accomplish the farm objectives. Thus marketing embraces activities relating to the product itself, the pricing, distribution, communication, promotion, post-sale matters, marketing research and sales forecasting. An important aspect in broiler marketing is the weight of the bird because it determines the pricing of the chicken. Broiler are weighed either as live or dressed depending on the seller and the consumer preference but unfortunately the marketing system is quite informal and poorly developed in this regard.

[6] noted that marketing is an all-embracing function that links the business with customer needs and wants in order to get the right product to the right place at the right time. Marketing is about meeting the needs and wants of customers, it is a business wide

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function, and it deals with understanding customers and finding ways to provide products or services which customers demand.

With the banned on poultry products importation in Nigeria, which took effect from 2002 by the Federal Government, the country has focused on raising livestock locally for its populace. However, with the ever growing population, the rate of demand for poultry product is higher than supply. This challenge causes marketers to seek alternatives to meet consumer needs. This problem poses a very serious competition among broiler marketers not only in Edo State but the nation at large. This study therefore seeks to address some research questions in relation to broiler marketing in Edo State, Nigeria. For example, what are the socio-economic characteristics of broiler marketers in Edo State? What are the marketing margins? What are the factors influencing broiler marketing and is broiler marketing profitable in the study area? Thus, the main objective of this study was to examine the socio-economic factors influencing broiler marketers in Benin City metropolis of Edo State, Nigeria.

2. Materials and Methods

The study was carried out in Benin City metropolis of Edo State. Benin City is the capital of Edo State, Nigeria. The State has a land mass of 19,794 km square. Its geographical coordinates are 5° 44' North and 7° 34' North latitudes, 5° 4' East and 6° 45' East longitudes. It is bounded by Delta State in the south, Ondo State in the West, Kogi State in the North and Kogi and Anambra in the East. The State has eighteen local Government Areas divided into three senatorial districts which are the Edo North, Edo Central and Edo South.

Primary data for this study were collected from three markets within Benin City metropolis. Copies of questionnaire were administered to marketers as well as scheduled interviews for the illiterate ones. A multistage sampling method was used in this study. The First stage involved the purposive sampling of three major markets, namely; Oba, New Benin and Oliha markets. The choice was due to the high concentration of broiler marketers in these markets. The second stage was the use of the simple random sampling method to select 20 broiler marketers in each market using the lucky deep method. This was to give each broiler marketers equal chance of been selected. A total of 60 respondents were selected from these markets which represented about 60% of the population of the entire marketers. Oba market had a

sampling frame of 32 marketers, while New Benin market had a sampling frame of 40 and Oliha market had a sampling frame of 28 marketers. This gave a total sampling frame of 100 broiler marketers.

Data collected from the study area were analysed using descriptive statistics such as mean, frequency counts and percentages. Also, marketing margin, gross margin analysis, profitability and multiple regression analysis were used to analyse the data obtained.

Marketing margin was expressed as:

$$MM = Sp - Pp \tag{1}$$

Where MM= Marketing margin

Sp= selling price

Pp= purchase Price [9]

It can also be expressed in percentages by relating it to the broiler prices as:

$$MM = Sp/pp \times 100 \tag{2}$$

Gross Margin was expressed as:

$$GM = TR - TVC \tag{3}$$

GM = Gross Margin

TR = Total Revenue

TVC = Total variable cost

[5]

It can also be expressed as:

ATC = Average Total Cost = Total Cost/Number of Respondent

AFC = Average Fixed Cost = Total Fixed Cost/ Number of Respondents

AVC = Average Variable Cost = Total Variable Cost/ Number of Respondents

Multiple regression analysis was used to ascertain the effect of the socio-economic characteristics (independent variables) of the broiler marketers that significantly contributed to output. That is the quantity of broilers marketers handled per purchase in the study area. The multiple regression model is implicitly specified as:

$$OUT = F(X_1, X_2, X_3, X_4, X_5, U) \tag{4}$$

Where OUT = Quantity of broilers handled by marketers per purchase

X₁ = Age of marketers (in years)

X₂ = Trading experience (in years)

X₃ = Family size (number of person)

X₄ = Educational level (in Year)

X₅ = Income (Naira)

U= Stochastic random term.

The production function was fitted in three functional forms namely linear, semi logarithm and double logarithm.

$$1. Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \tag{5}$$

$$2. \text{Ln}Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \epsilon \quad (6)$$

$$3. \text{Ln}Y = \beta_0 + \beta_1\text{Ln}X_1 + \beta_2\text{Ln}X_2 + \beta_3\text{Ln}X_3 + \beta_4\text{Ln}X_4 + \beta_5\text{Ln}X_5 + \epsilon \quad (7)$$

The lead equation was chosen on the basis of conformity with *a priori* expectations of parameters, statistical as well as econometric criteria such as the magnitude of R^2 and F-ratio, the t-values of the estimates and the number of significant variables in each estimated equation [10] and [4]

3. Results and Discussion

The results of the socioeconomic characteristics are presented in Table 1.

Table1: Socioeconomic Characteristics of Broiler Marketers Benin City Metropolis, Edo State, Nigeria

	Item	Frequency	%
Sex	Male	4	7
	Female	56	93
	Total	60	100
Age	20-29	4	6.7
	30-39	12	20
	40-49	18	30
	50-59	20	33.3
	> 59	6	10
	Total	60	100
Marital Status	Married	58	96.6
	Single	2	3.4
	Total	60	100
Household Size	1-5	9	15
	6-10	44	73.3
	> 10	7	11.7
	Total	60	100
Educational Level	NoFormal	15	25
	Education		
	Primary	21	35
	Secondary	18	30
	Tertiary	6	10
	Total	60	100
Experience	1-5	2	3
	6-10	11	18
	11-15	34	57
	> 15	13	22
	Total	60	100

Source:Field Survey Data, 2014

Socio-economic Characteristics of Respondents:

The result indicated that there were more female (93%) involved in the marketing of broiler as against male (7%) in the study area. This implied that marketing of broilers in the study area was gender sensitive. However, this does not agree with Adesiyan *et. al.* (2007) who observed that majority of broiler

marketers were male in the study area. The results also indicated that the age bracket of 50-59 years had the highest percentage (33.3%) of broiler marketers. However, approximately 58% of the respondents were in their active age (20-49 years). The mean age of all respondent was 42 years. This implied that the respondents are in their active and productive age and should be well able to withstand the rigor in the business venture. The results as presented in Table 1 also showed that majority (99.6%) of the respondents were married and 3.4% were single. The educational level of the respondents indicated that 25% did not have any formal education. This implied that majority (75%) of the respondents had a form of education. This result also implied that broiler marketers in the study area should be open to innovation and adoption of new and better ways of marketing their products. The study also revealed that majority (57%) of the respondents had broiler marketing experience of between 11-15 years. Only 22% of the marketers had broiler marketing experience of above 15 years. This result showed that the broiler marketers in the study area are quiet knowledgeable and experienced about the venture.

Trading Cost of Respondents:

The result of the data analysis indicated the various costs in broiler marketing per week. The average total cost per week per 22 broilers was N40, 500. The cost of purchase of broiler from major farms for sale accounted for 92.34% of the total cost, while transportation and broiler feed accounted for 3.0 and 3.3 percentages respectively. This high variation in cost implies that the cost of purchase of broiler is a major factor in broiler marketing.

Marketing Margin of the Respondent per Broiler Purchased:

The result of the marketing margin of the respondent in the study area is shown in Table 2. The result indicated that the average purchasing price per broiler was ₦1, 700 and the average selling price per broiler was ₦2, 050. The difference which is the marketing margin was ₦350. This result indicated that broiler marketing is profitable in the study area.

Profitability Analysis of the Respondents per 22 Broilers Purchased:

The result of the profitability analysis is presented in Table 3. On the average total revenue obtained from the sale of broiler per week per 22 broilers was ₦45, 100, while the average total variable cost was ₦39, 950. The result showed that broiler

marketing is a profitable venture with a gross margin of ₦5, 150 (\$32) and net returns of ₦4, 600 (\$28.6). Thus, broiler marketers (Mostly female) in the study area live above the poverty level of \$1.25 perday.

Table 2: Marketing Margin of Broiler Marketers in Benin City Metropolis

Unit price per Broiler (₦)	Number of Broilers purchased at a time	Purchase price for Broilers (₦)	Selling price per Broiler (₦)	Revenue from Broilers (₦)	Marketing Margin per Broiler
1,700	22	37,400	2050	45,100	350

Source: Field Survey Data 2014

Table 3: Profitability Analysis of Broiler Marketing per 22 Birds in the Study Area

Items	Amount(₦)
Average Total Revenue	45,100
Average Total Variable Cost	39,950
Average Total Fixed cost	550
Gross Margin	5,150
Net Returns	4,600

Source: Computed from Field Data 2014

Marketing Constraints Faced by Broiler Marketers:

The major constraints identified by the marketers were lost of weight of bird and mortality of birds during marketing. About 80% of the respondents indicated these as major constraints faced by them. Other identified constraints were processing of broilers and finance.

Factor Influencing Broiler Marketing:

The multiple regression analysis was used to determine the factors influencing broiler marketing. Three functional forms were applied namely; linear, semi-log and double-log forms. From the results of the analysis as presented in Table 4 the semi-log model appeared to have given the best fit, using statistical and econometric criteria of the value of R², number of significant variables, the F- ratio and significant F. Though the semi-log function has the lowest adjusted R square of 0.857 (that is about 85.7% of the variance in the number of birds handled by marketers was explained by the independent variables) the semi-log had more significant variables. The F –ratio (70.245) for the semi-log functional form was significant at 5% level. This implied that the functional form was adequate and could be used for further analysis. Thus the mode explains the deviations in the dependent variables. The coefficients with positive signs (age, educational level and income) implied that increase in the usage of

these factors will result to an increase in the number of broilers handled by marketers per purchase. While the coefficients which were negative imply that a unit increase in these variables will result in reduction in the number of broilers handled by marketers per purchase. The result of the semi-log model estimate was:

$$\text{Log Y} = 2.598^* + 0.010X_1^{**} + -0.014X_2 + 0.008X_3 + -0.010X_4^{**} + 6.374E-6 X_5^*$$

(10.752) (2.135) (-0.701) (0.015)
(-19.13) (18.497)

F-ratio = 70.245*
Adjusted R² = 0.857 (85.7%)

Table 4: The Regression Results of volume of Broilers Handled by Marketers per Purchase

Explanatory variables	Linear	Semi- Log	Double Log
Intercept	-2.915(-.0378)	2.598* (10.752)	- 7.777*(11.829)
Age	0.221 (1.514)	0.010**(2).135)	0.235 (1.532)
Family size	0.426 (0.678)	-0.014 (-0.701)	-0.151 (-1.300)
Level of Education	-0.120 (-0.402)	0.008 (0.015)	0.078 (0.819)
Marketers experience	-0.368**(-2.211)	-0.010** (-1.913)	-0.018 (-0.371)
Income	- 0.000*(32.200)	6.374E-6* (18.497)	0.928*(22.189)
R ²	0.952	0.869	0.941
Adjusted R ²	0.947	0.857	0.933
F ratio	210.327**	70.245*	120.647*
Dugbin Watson	1.759	1.980	1.586

Source: Computed from Field Survey Data 2014.

*and ** indicates significant at 1% and 5%. Parenthesis indicate T-ratio

4. Conclusions

The marketing of broilers in Benin City metropolis of Edo State Nigeria is a profitable enterprise as indicated from the results of the gross margin, net returns and marketing margin analysis. Factors such as age, marketing experience and income influenced the number of broilers handled by the marketers positively as increase in these variables were found to increase the number of broiler birds handled by marketers per purchase. With proper understanding of the marketing system also, this venture will not only help to create jobs for interested youths but also alleviate poverty in the Benin City and Edo State in general.

5. References

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