Performance of broiler marketing in Umuahia area of Abia State, Nigeria

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Abstract. This study examined the performance of broiler marketing in Abia State of Nigeria.The specific objectives of the study were to examine the performance of broiler marketing in terms of the marketing cost and returns, marketing margin and marketing efficiency, as well as identify factors affecting the income of broiler marketers in the study area. Primary and secondary data were used for this stud. Forty- five respondents from each category; producer-marketers and sole markers were selected both purposively and randomly from the population across the major markets and production areas in Umuahia North and Umuahia South Local Government Areas of the state. The result of the study showed that the business was profitable though with high marketing margin .In terms of economic efficiency, the marketing was efficient. The significant variables influencing the income of the producer-marketers were marketing experience, purchase cost, feed cost, and other variables such as electricity, depreciation and rent. For the sole marketers, the significant variables influencing their income were marketing experience, ages, experience, feed cost and level of formal education. It is recommended that Government should put into consideration the significant variables in policy formulations and provide conducive environment for the private sector to invest in this business in order to address the meat demand of the citizenry.

Keywords: Performance, broiler, marketing

Introduction

One of the most fundamental challenges facing Nigeria today is ensuring that Nigerians have ample food supply to sustain rural and urban livelihoods. However, this seems to be seriously endangered by the ever increasing demand for food which stems from the fast growth in the population of the country. Most studies have shown that domestic food production on the aggregate has been growing and at the rate of 2.5% per annum, while demand for food on the other hand has been growing at the rate of 3.5% per annum. (Ojo, 2003). There is a wide gap between domestic food supply and food demand (Ajibefun, 2003).

A large proportion of the population in developing countries are living under poverty line whose problems apart from getting three "Square Meals" per day include, shelter, clothing, minimum nutritional requirements and of course optimal health care. The growing scarcity and cost of animal protein gradually getting out of the reach of many Nigerians, leading to several steps to increase the rate of agricultural food production by the government. To this end, the poultry industry in Nigeria has played and has continued to play an important role in producing ample protein for the growing population in order to solve malnutrition problem. (Effiong and Onuekwusi, 2006). Poultry business has witnessed great change in Nigeria. It has graduated from subsistence to commercial poultry farming. In Abia State, most poultry farms established are small scale, while the few large scale farms are predominantly owned by corporate bodies and wealthy individuals. The primary motive of any business is to maximize profit. The success of any poultry farm depends on the management efficiency, the market situations amongst other influences. Maximum poultry production depends partly on the environment, technical know-how and the quality of resources employed in the production process. (Nayer, 1989).

Due to Government programmes in the last decades on livestock development in Nigeria, many poultry farms producing meat and eggs were established. This development brought about the emergence of broiler farming raised specifically for meat production. Modern commercial broilers, typically known as Cornish crosses or Cornish – Rocks are specifically bred for large scale, efficient meat production and grow much faster than egg or tradition dual purpose breeds. They are noted for having very fast growth rates, a high feed conversion ratio and low levels of activating. Broilers often reach a harvest (slaughter) weight of 4-5 pounds (1.5 – 3kg), dressed in only eight weeks (Nayer, 1989).

Fatuga (1996) observed that broiler contributes about 10% of the national meat production. According to him, poultry have ranked the fourth major source of animal

proteins consumed in Nigeria. This is largely due to the fact that in comparison to other livestock enterprises, broiler production has the advantage of fast growth rate, cheap, high feed conversion efficiency, can be eaten by one family, and is not forbidden by any culture or religion in Nigeria. The production level of broiler meat is currently on the rise, and if given proper attention, it can be relied upon in a short run for ameliorating the deficit in protein supply as well as the poor means of livelihood for most farmers in the country. Therefore, boosting production of broilers can be encouraged when the entrepreneurs have adequate information on the marketing of poultry products in Nigeria.

The American marketing association (AMA), defined marketing as the performance of all business activities that direct the flow of goods and services as they move from produces to consumers. Marketing plays a crucial role in a market economy, (Mejeha et al., 2000). Its roles become more important in areas where there is high level of commercial activities and high rate of urbanization (Olukosi and Isitor, 1990). Increasing marketing activities enhances the provision of more and better poultry products at low prices, to increasing numbers of people. The marketing process enables poultry farmers and other people who engage in agricultural marketing to generate income, thereby increasing their welfare. In trying to explain the role of marketing, Busch and Huston (1985) propounded the gap theory which is based on the premise that marketing need not exist until a social economy reached the point where producers of economic goods are not the consumers of the same goods. This situation creates a separation or gap. It is in response to the need to bridge this gap that we have marketing.

In a competitive economy, agricultural development cannot occur without improved marketing. This is because agricultural marketing is concerned with all the economic activities involved in the production and distribution of agricultural products (Odii and Obih 2000). In Nigeria, the huge costs involved in the marketing of broiler products have drastically reduced the margin realizable from the enterprise. Considerable improvements in broiler production have been made by the application of modern techniques. However, there have been significant failures within developing countries to understand the inter-relationship between broiler production and broiler marketing, since efficient marketing stimulates production. The objectives of the study were to estimate the marketing costs and returns, marketing margin as well as marketing efficiency, and to identify factors affecting the income of broiler marketer

Materials and Methods

The research was conducted in Umuahia Zone of Abia State, Nigeria, comprising of Umuahia North and South Local Government Areas. The study covered two categories of broiler marketers in Umuahia zone of Abia State, Nigeria. The first category included those in the production and marketing of broilers, while the second group involves those who market broilers only.

This study employed purposive sampling techniques in selecting the respondents. A total of Ninety respondents were selected purposively from the study area. Forty five respondents will be from both categories as mentioned above. Data collected were analyzed some statistical tools. To analyze the performance of broiler marketing, net return, marketing margin and economic efficiency models were used. They are stated as follows:

NET RETURN = TOTAL RETURN – TOTAL COST

$$\text{MARKET MARGIN} = \frac{\text{SELLING PRICE} - \text{SUPPLY PRICE}}{\text{SELLING PRICE}} \times \frac{100}{1}$$

The formula for marketing efficiency as given by Odii and Obih, (2002), is as follows;

$$\text{ECONOMIC EFFICIENCY} = \frac{\text{TOTAL REVENUE (₦)}}{\text{TOTAL COST (₦)}}$$

The activities are said to be efficient if the operations in which these ratios are computed are greater than one and inefficient when it is less than one (Odii and Obih, 2002). Factors influencing the income of broiler marketers were analyzed using multiple repressions. The model specification for the regression is as follows:

$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8,)$

Where Y = income from broiler sales in naira, X_1 = Age in years, X_2 = Marketing Experience in years, X_3 = Cost of broiler purchase in naira, X_4 = Transportation cost in naira, X_5 = Cost of

Feed in naira, X_6 = Incidence of Disease (yes=1, 0 = otherwise), X_7 = Level of Education in Years, X_8 = Other Variables (Electricity Costs, Sanitation Costs, etc)

Results and Discussion

This section discusses the net returns, marketing margin, technical and economic efficiencies. It also discusses factors influencing the income of broiler farmers as well as the major challenges limiting against broiler marketers in the study area.

Table 1. Cost and Returns Analysis for Both Categories of Respondents.

	Producer-Marketers	Marketers only
Average Supply Price (₦)	170.4	1,232.2
Average Selling Price (₦)	1,218.8	1,487.8
Average Total Cost (₦)	280,658.7	361,428.7
Average Income (₦)	359,422.2	529,480
Marketing margin (%)	86	17.18
Net Returns (₦)	78,763.5	68,051.3
Economic Efficiency	1.28	1.47

Table 1.0 above showed a net return of (₦) 359,422.2 and (₦) 529,480.0 for producer-marketers and sole marketers respectively implying that the business was profitable. Thus, the sole broiler marketers made more profit than the producer-marketers. Marketing margins were high compared to the acceptable standards, (Scarborough and Kydd, 1992) .The economic efficiency for these group were1.28 and 1.47, showing that they were economically efficient in their operations, as the ratios were greater than one. Therefore, the business could be said to be profitable, viable and economically efficient (Salako *et al*, 2007).

Factors influencing the income of broiler marketers

The multiple regression result of factors influencing marketing efficiency of broiler marketing is presented in Table 2 below:

Table 2.Multiple Regression Result for Factors Affecting Producer- Marketers.

Variables	Linear	Exponential	Double-Log	Semi-Log
Constant	210.348 (9.322)***	11.471 (47.569) ***	1.605 (1.809)*	11.471 (47.569)***
X_1 (Age)	- 990.886 (-.456)	-.004 (-. 472)	- 174 (.840)	- . 004 (-.472)
X_2 (Mktg Experience)	4303.743 (1.371)	.031 (2.617)***	.075 (1.205)	. 031 (2.617)***
X_3 (Purchase Cost)	.300 (. 371)	4.29E -006 (1.432)	.147 (1.733)*	4.29E -006 (1.432)
X_4 (Trans Cost)	66.460 (3.227)***	-3.34E -005 (-.438)	.029 (.400)	-3.34E -005 (-. 438)
X_5 (Feed Cost)	1.351 (6.238)***	2.35E – 006 (2.928)***	. 617 (7.163)***	2.35E – 006 (2.928)***
X_6 (Incid of Disease)	- . 411 (- 1.288)	- 4.94E - 007 (- .418)	- . 008 (- . 742)	-4.94E -007 (- . 418)
X_7 (Education)	.005 (.133)	1.53E -008 (.110)	- .019 - 1. 471	1.53E – 008 (.110)
X_8 (other cost)	3.695 (1.853)*	1.53E – 005 (2.068) **	.133 (1.846)*	1.53E – 005 (2.068)**
R^2	.960	.923	.970	.923
R^{-2}	..952	.906	.963	.906
– ratio	109.149***	53.729***	143.159***	53.729***

*** = Significant at 1%, ** = Significant at 5%, * = Significant at 10%,+ = lead equation. The figures in parenthesis are t-ratios.

From Table 2 above, based on the number of significant variables, the semi log regression model was chosen as the lead equation. The F- ratio and the value of R^2 conform

to apriori expectation. The value of F-ration was significant which indicates the overall significance of the study result. The value of R^2 was 0.923, which implies that about 92% of the explanatory variable in the income of broiler marketing was as a result of the explanatory variable, while only 0.08 or 8% was attributed to error or variables not included in the model. The result further showed that marketing experience, purchase cost, feed cost and other cost variable such as electricity, depreciation of equipment, rent were the significant variables that influenced the income of broiler marketers in the study area. The number of years spent in the business had a direct relationship on the income of the marketers meaning that greater experience brings about greater marketing income. The cost of purchase of broiler chicks or broiler for resale and feed cost had a direct negative relationship on marketing income as the higher the cost of purchase of broiler chicks and feed, the lower the income of marketers. This conforms to apriori expectation as a higher cost of inputs brings about reduced income of marketers.
The marketing experience and cost of cost of feed were significant at 1%, while other costs were significant at 5%. Other variables like incidence of disease, education, and age were not significant determinants of marketer's income.

Table 3. Multiple Regression Result for Factors Affecting Marketers Only.

Variables	Linear	Exponential	Double-Log	Semi-Log
Constant	-41421.802	11.569	- . 116	4933857.3
	(-.605)	(48.763)***	(- . 147)	(6.319)***
X_1 (Age)	743.777	.012	.106	-99907.870
	(.370)	(1 . 761)*	(.766)	(-3.728)***
X_2	55.366	-.005	-.031	1012.255
	(.020)	(- .491)	(- .786)	(.026)
X_3 (Purchase Cost)	1.205	2.36E - 006	.976 (27.928)**	426783.97
	(23.065)***	(13.O40) ***		(12.308)***
X_4 (Trans Cost)	16.281	2.13E – 005	-.6.43E -006	13.237
	(.758)	(.286)	(- .183)	(.381)
X_5 (Feed Cost)	.180	5.93E – 006	.029	- 304.441
	(.180)	(.774)	(.753)	(-2.580)***
X_6 (Incidence of Disease)	2031.784	.003	. 036	24174.380 (.816)
	(1.920)*	(.897)	(1.213)	4020.631
				(2.739)***
X_7 (Education)	.675	3.32E – 006	- . 002	
	(.206)	(.292)	(-.182)	
X_8 (other cost)	-2.857	-1.73E – 005	- .003	32163.832 (.537)
	(-.800)	(1.395)	(- . 053)	
R^2	.954	.884	.970	.858
R^{-2}	.944	. 854	.963	.827
F – ratio	93.923***	34.277***	143.458***	27.258***

*** = Significant at 1%,** = Significant at 5%, * = Significant at 10%, + = lead equation. The figures in parenthesis are the t –ratios.

The result in Table 3.0 for sole broiler marketers only showed that the variables of significance were age of the marketers, purchase cost, feed cost, and level of formal education acquired by the marketer. These entire significant variables had direct relationship to the income of broiler marketers. The F- ratio was significant at 1% which showed the overall significant of the result. The marketing experience, age, cost of feed, and levels of education attained by marketers were all significant at 1%. the value of R^2 was 0.97, meaning that 97% of the variation in the income earned by the respondents who engage in marketing of broiler only was attributed to the explanatory variables, while the other remaining 3% was due to the error term. The result also showed that education was a necessity for improved marketing, as earlier stated by Oni and Yusuf, (1999).

Conclusion

This work has been able to identify that the marketing of broiler in the study area is efficient to a good extent, yet it is pertinent to solve the problems facing the marketing of this commodity Based on findings from the study it is recommended that the government should cooperate with the private sector in order to set up poultry hatcheries in the South Eastern part of the country in order to eliminate the problem of delays arising from the transportation of day old chicks from hatcheries in the South West of the country. The private sector should be encouraged and provided with incentives to invest in commercial feed formulation and distribution in order to reduce the cost of feed.

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