



ANALYSIS OF THE STRUCTURE AND PERFORMANCE OF EGG MARKETING IN DAMATURU METROPOLITAN AREA, YOBE STATE OF NIGERIA

L.M. Sulumbe¹, A.A. Bappa² and B. Mustapha³

¹Department of Agricultural Economics, University of Maiduguri

²Bukar Abba Ibrahim University Research Farm, Damaturu, Yobe State

³Department of Physics, Kashim Ibrahim College of Education, Maiduguri

ABSTRACT

This paper determines the structure and performance of egg marketing in Damaturu metropolis, Yobe State of Nigeria. Data were collected using well-structured questionnaire from 60 purposively selected egg marketers. Descriptive statistics, Ginni co-efficient, gross margin and marketing margin analysis were used to analyze the data. Results show that the egg market approaches pure competition in nature, with a Ginni co-efficient of 0.5154 and a marketing margin of 6.42%. It is revealed further that egg marketing was profitable with a gross margin of ₦45/crate. The marketing channel analysis showed that the market comprise of the centralized and decentralized channel. It was observed that the problems of egg marketing in the area included high supply cost, high cost of transportation and inadequate capital. The study therefore, recommends that marketers should form functional cooperatives so as to reduce the cost of transportation. Government should provide loan and credit facilities to marketers of egg so as to increase their scale of operations.

Keywords: Egg; Market Structure; Market performance

INTRODUCTION

Egg is a round oval body laid by the female of many animals consisting of an ovum surrounded by layers of membranes and an outer casing which acts as nourishment and protects the developing embryo and its nutrients (Schaafsma and Beleen, 1999). Most edible eggs consist of a protective egg shell, the albumen (egg white), the vitellus (egg yolk) and various thin membranes. Every part is edible although the egg shell is generally discarded.

Egg is one of the most important sources of protein in human diet and Nigeria like many other developing nations is experiencing a rapid population growth and expanding urban population, both of which are making increasing demands on eggs (Iliyasu, 1998). Egg production has witnessed increased output but because of the increase in consumption demand due to increase in population, the gap between domestic supply and demand is still wide. Marketing of egg is done in open spaces or in covered stalls built either by individuals along the street or wholesalers or retailers in the market.

According to Hays (1988), the agricultural marketing system encourages the participation of a large number of individuals at the various exchange points where the marketing services of assembly, storage, transportation and bulk-breaking are performed. An important variable in market structure analysis is concentration which depicts a situation in which a few firms have the largest share of business.

Tomek and Robinson (1981) indicated that increase in concentration implies more scope for the middlemen to exploit either the consumers by charging high price or the producers by paying them lower price. Lower producer price tend to discourage farmers from going into production.

The middlemen in performing the role of marketing are being accused of earning higher profit in the marketing system (Hewith de Alcantara, 1993). The effect of market structure and performance can go a long way in affecting the supply response of an agricultural product especially egg. This paper analyzes the structure and performance of egg marketing in Damaturu Metropolitan Area, Yobe State of Nigeria.

MATERIALS AND METHODS

Study Area

This study was conducted in Damaturu Metropolitan Area, Yobe State. Damaturu is a city in north eastern Nigeria. It is the capital of Yobe State. It has an estimated population of 275,966 persons (NPC, 2006). Geographically, Damaturu lies between latitudes 11.74⁰ N and 13.89⁰ N and longitudes 11.96⁰ E and 12.66⁰ E (The world perspective, 2008). It has a mean temperature of 37⁰C and the rainfall most often than not, is experienced between May and October (Nigerian Metrological Service 2008). Damaturu has a relative humidity of 27% and an average elevation of 456m above sea level (Nigerian Metrological Service, 2008). It shares boundaries with Ngelzarma town to the west, Tarmuwa to the North, Buni-Yadi to the South and Warsala village to the East (Ministry of Land and Survey, 2008). The town lies in the dry savannah belt of Nigeria and therefore, hot for most part of the year. Although, all Nigerian major tribes are found in Damaturu, principal ethnic group is Kanuri. Hausa is widely spoken while English is the official language. Primary occupations of the people include farming and trading. The major crops cultivated include vegetables, maize, millet, cowpea, while the livestock include cattle, sheep, goat and poultry.

Data Collection and Analysis

A total of 60 respondents were selected for the study. The respondents were selected from a list of 183 egg marketers provided by egg marketers association in Damaturu. Data were collected by a set of well-structured questionnaire administered using interview technique and analyzed using Ginni co-efficient, gross margin and market margin analyses.

The formula for Ginni co-efficient is expressed as follows:

$$G = 1 - \frac{\sum XY}{n}$$

Where:

G = Ginni Co-efficient

X = Percentage of marketers/period of study

Y = Cumulative % of sales by marketers.

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If the co-efficient is zero (0), it implies perfect equality in earnings. If the co-efficient is one (1), it means perfect inequality in earnings. The actual value of the Ginni Co-efficient lies between 0 and 1. The closer the value is to unity, the greater is the degree of inequality and therefore, the higher the level of market concentration. Higher market concentration signifies that a market is monopolistic or oligopolistic in nature with few individuals controlling the market (Okereke and Anthonio, 1988).

The gross margin and market margin were used to determine the performance of egg marketing in the study area. The gross margin is expressed as follows:

$$GM = \sum P_1 Q_1 - VC$$

Where:

GM = Gross Margin (₦)

P_1 = Price in naira per crate of egg (₦)

Q_1 = Quantity of eggs in crates

VC = Variable cost in naira

The marketing margin is the difference between the price paid by the consumer and that received by the producer. It is expressed as follows:

$$\text{Marketing Margin} = \frac{\text{Selling price} - \text{Supply Price}}{\text{Selling Price}} \times 100$$

RESULTS AND DISCUSSION

The marketing channel for egg in the study area is shown below. The analysis of marketing channel was intended to provide a systematic knowledge of the path which egg follow from the point of production to the point of consumption. According to Olukosi *et al.* (2005) marketing channel helps in assessing the importance and performance of the marketing machinery. If the route is too long, it means that the marketing costs are likely to be high.

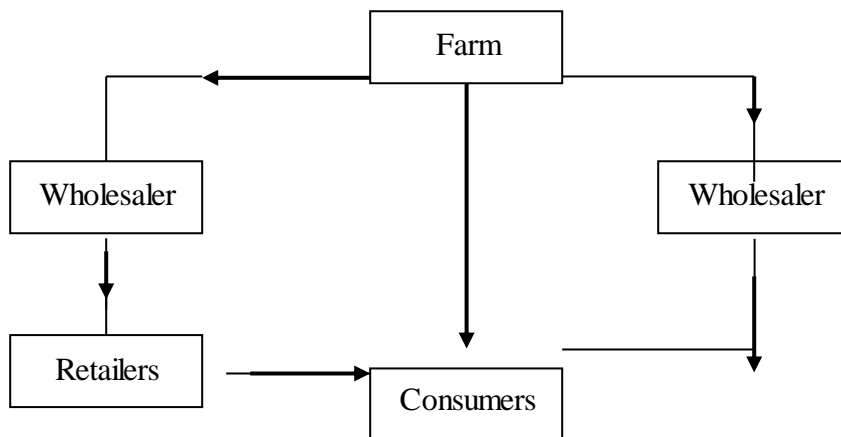


Figure 1: Marketing channel for eggs in Damaturu metropolis

The study revealed that the market channel is both centralized and decentralized. It is central because the farmer's produce are brought together in a large central market where they are purchased by wholesalers from commission agents. The wholesaler has a central role to play in marketing system (Ejiga, 1979). They purchase the product from farmers and sell to retailers. The retailers in turn sell to the final consumers. On the other hand, some consumers buy directly from the producers without passing through a central market thus making it decentralized channels.

Sales of Egg

The Ginni Co-efficient was found by computing the weekly sales value of the respondents.

Table 1: Weekly Sales Distribution of Egg Marketing in Damaturu Metropolis

Sales Range (₦)	Sales	Midpoint (₦)	No. of marketers	Total Sales
14,000 – 28,000		21,000	19	399,000
29,000 - 41,000		35,000	21	745,500
43,000 - 56,000		49,000	9	445,500
57,000 - 69,000		63,500	6	381,000
70,000 – 101,000		85,500	5	427,500
Total			60	2,398,500

Source: Field survey, 2008.

Analysis indicated a Ginni co-efficient of 0.5154. Although the G.C is 0.5154, however, considering the characteristics of the market with regards to homogeneity of the product, large number of buyers and sellers in the market, absence of barriers to entry and exit and knowledge of market conditions, the market can thus, be said to be approaching pure competition.

Performance of Egg Marketing in Damaturu Metropolis

An analysis of the performance of egg marketing in the study area is shown below. Gross margin is a proxy for profitability especially in small scale agricultural operations where fixed costs are negligible (Sulumbe *et al.*, 2007).

Table 2: Average cost and return for egg marketing per crate

Item	Value (₦)
Gross Income	700.00
Cost of empty crate of egg	20.00
Cost of crate of egg	630.00
Cost of Labour/crate	5.00
Total variable cost	655.00
Gross margin/crate	45.00
Gross margin/egg	1.50

Source: Market Survey, 2008.

The study revealed that egg marketing in the study area was profitable with a gross margin of ₦45 per crate of egg. This amounts to 6.9% returns on capital invested, which was low considering the cost of capital in the economy at about 21% interest rate (CBN, 2006). The low return on capital invested in egg marketing may exert negative supply response on egg marketing as farmers will be discouraged from going into it.

Marketing Margin Analysis

The average selling price of a crate of egg was ₦700 while the average cost was ₦655.00. Therefore, $MM = \frac{700 - 655}{700} \times 100 = 6.42\%$

Result indicated a market margin of 6.42%. The marketing margin consists of market cost as well as profit realized by the marketers from their marketing activities. The low marketing margin of 6.42% signified fairness in the distribution of income which buttresses the findings that the market is competitive in nature.

Problems of Egg Marketing

Egg marketing is associated with a number of problems, which to some extent influence the profitability. The egg marketers were therefore, asked to rank the problems they face in their marketing efforts based on magnitude (with 1 = most important followed by 2 etc.). Table 3 shows the different problems encountered by egg marketers and their ranks.

Table 3: Problems of egg marketing

problems	Frequency	Percentage*	Rank
High supply cost	34	56.67	1
High transport cost	30	50.00	2
Lack of capital	29	48.33	3
Breakages	27	45.00	4

Source: Market survey, 2008

Table 3 showed that high supply cost was the major problem faced by egg marketers with 56.67% of the respondents indicating so. This was followed by high cost of transportation with 50% of the respondents; lack of capital was third with 48.33% as well as problem of breakages was fourth with 45%. These problems if not attend to, affect the marketer's profit by reducing the returns generated by their marketing effort. Furthermore, inadequate capital impacts on marketer's holding and marketing scope leading to low income.

CONCLUSION

The study has shown that egg marketing in Damaturu approaches pure competition with a gross margin of ₦45.00 per crate of egg. Although, egg market was profitable, the profit was, however low considering the cost of borrowing fund (interest rate of 21%) in the

economy. The low marketing margin of 6.42% was an indication that there were no barriers to entry giving rise to the competitive pricing within the market. It is recommended that loans and credit facilities are made available to egg marketers to increase their scale of operations. This will improve their profit margin exerting a positive supply response leading to increase egg production. Also, egg marketers should form functional co-operative societies so as to reduce the cost of transportation.

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